

**Nancy Osgood**

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**From:** Boren, Mike [borenml@pgdp.usec.com]  
**Sent:** Friday, August 08, 2008 12:25 PM  
**To:** Nancy Osgood  
**Cc:** Eric Benner; Toelle, Steven A; Stadler, David  
**Subject:** RE: PTO CAR review  
**Attachments:** PTOCARQuestions and answers.doc

Nancy, attached are the answers to your questions. We understand the concerns about the condition of the cylinders considering their age, but assure you that all of the cylinders will be inspected in accordance with the standards and procedures applicable to any other cylinders shipped from the PGDP. We will not ship any cylinder that does not pass inspection.

Please contact me or Steve Toelle with any other questions you or the reviewers may have. If it would help expedite your review, we are prepared to meet with you face to face, at your convenience, to discuss this important matter.

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**From:** Nancy Osgood [mailto:Nancy.Osgood@nrc.gov]  
**Sent:** Thursday, August 07, 2008 2:49 PM  
**To:** Boren, Mike  
**Cc:** Eric Benner  
**Subject:** RE: PTO CAR review

Mike:

Our management is currently considering your request. We have not yet accepted it for technical review. Several questions have come up during our preliminary discussions. Could you provide some background information addressing these points.

There is a concern regarding the condition of the cylinders. What information do you have regarding their condition. What inspections and maintenance have been done over the past 50 years (including the 30 years that the cylinders were loaded) that would provide evidence regarding their condition. How were the cylinders stored.

What fabrication and examination methods were used, and what quality assurance-type records currently exist for these cylinders.

How will the packages be shipped, e.g., mode, number of packages per conveyance, etc.

Do the cylinders meet the current requirements of 49 CFR 173.420? If so, what documentation exists that confirm this. If not, which provisions are met and which are not.

Please contact me if you have any questions.

Thanks, Nancy

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**From:** Boren, Mike [mailto:borenml@pgdp.usec.com]  
**Sent:** Thursday, August 07, 2008 6:54 AM  
**To:** Nancy Osgood  
**Cc:** Michael Raddatz  
**Subject:** PTO CAR review

Good morning Nancy, I just wanted to check on the status of the PTO CAR review. As you might imagine the DOE folks are concerned about the schedule. Do you see any significant problems that may impact the requested approval date?

Thanks,

Mike Boren  
USEC, PGDP

## Questions and answers

Q. What information do you have regarding their condition? What inspections and maintenance have been done over the past 50 years (including the 30 years that the cylinders were loaded) that would provide evidence regarding their condition? How were the cylinders stored?

A. The subject cylinders were stored in hard gravel or concrete cylinder yards on concrete saddles. Preliminary cylinder inspections by USEC personnel showed the cylinders to be in good condition, with only normal tightly adhered surface rust. No areas with flaking or pitting that would indicate a potential challenge to minimum wall requirements were observed. No evidence of leakage from plugs or valves was observed. Detailed inspection of each cylinder will be performed prior to shipment to ensure the physical condition meets the requirements of ANSI N14.1. The guidance provided in ANSI N14.1 Appendix F will be applied to any questionable conditions identified during the inspections. Based on the observed good condition of the cylinders, USEC has no reason or intent to request DOT exemptions from minimum wall requirements.

The cylinders have been periodically inspected and maintained in accordance with the requirements for fissile cylinders.

Q. What fabrication and examination methods were used, and what quality assurance-type records currently exist for these cylinders.

A. The cylinders were fabricated in accordance with two separate DOE Job Specifications (depending on serial number). The cylinders were fabricated in accordance with ASME Section VIII Code effective (1950) for the date of manufacture. The cylinders were cleaned, inspected, and hydrostatically tested per the Job Specification. According to ANSI N14.1, this is adequate as the 48A cylinders are considered "in service" as long as they meet the inspection requirements of the current ANSI N14.1.

Q: How will the packages be shipped, e.g., mode, number of packages per conveyance, etc.

A: Mode: Ground transport via sole use commercial carrier;  
Number of Packages per conveyance: 1 PTO and cylinder per conveyance;  
Appropriate notifications of shipment, receipt, and intransit physical protection per 10 CFR 73.67 (g) (1), (2), and (3) as provided for in USEC's NRC approved Physical Security Plan for the Transportation of SNM-LSS (Chapter 3) will be performed.

Q: Do the cylinders meet the current requirements of 49 CFR 173.420? If so, what documentation exists that confirm this. If not, which provisions are met and which are not.

A: The cylinders must be in compliance with 49 CFR 173.420 in order to be shipped. The following is a specific breakdown of each condition:

173.420(a)(1) – N/A, cylinders are full

173.420(a)(2) – Cylinders were manufactured to Section VIII of ASME in effect at that time and will be inspected to ensure compliance prior to being shipped. Any nonconforming cylinders will **not** be shipped.

173.420(a)(3) – The PTO, through the NRC approved PTO SAR and CoC, meets the test criteria for a Type A(F) package which meets and/or exceeds the criteria set forth in this section.

173.420(a)(4) – the material is in solid form

173.420(a)(5) – the volume will not exceed 61%, as provided for in the technical justification submitted in the application to NRC for the PTO CoC change, volumetric capacity as conservatively calculated for each cylinder.

173.420(a)(6) – cold pressure checks will be performed to ensure compliance with being less than atmosphere as required by this section.

173.420(b) – No further testing or maintenance will be required beyond QC inspections performed for cylinders that will be shipped. No periodic testing (hydros and etc.) is currently required of the full cylinders. **As stated in the PTO Certificate Amendment Request the cylinders do not conform with the ASME code marking requirement.**

173.420(c) – N/A, no repairs plan to be made.

173.420(d) – N/A, material is fissile.