



Research Reactor Center  
University of Missouri-Columbia

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Dr. Magdy El-Sibaie  
Associate Administrator for Hazardous Material Safety  
East Building, PHH-30  
1200 New Jersey Ave S.E.  
Washington, D.C., 20590

2 July 2012

Dear Dr. El-Sibaie,

Pursuant to Section 8.c. of DOT SP-14657, Third Revision, dated July 22, 2011, the University of Missouri Research Reactor (MURR) provides the following revision to the update on package transition activities for the **2<sup>nd</sup> Quarter of 2012**.

The packages referred to below are the Croft SAFKEG-LS (NRC Docket #71-9337) and SAFKEG-HS (NRC Docket #71-9338).

“Croft” refers to Croft Associates, Ltd., the radioactive material package design and manufacturing firm that was awarded the contract.

#### **Progress During Q2 2012**

1. Croft and their subcontractor for manufacturing of the SAFKEG-LS design (Croft Model 3979A), Columbiana Hi-Tech (CHT), have successfully conducted leak tests on the Inner Containment Vessels of the LS packages. Lead pouring and shielding tests are to be carried out in July. Final welding and finishing processes will follow, then delivery.

The final report on the NRC QA visit conducted March 12<sup>th</sup> through March 15<sup>th</sup> was issued, confirming that the Quality Program is sufficient for production of these packages.

2. A revision to the SARP for the SAFKEG-LS was submitted in order to bring the document into agreement with clarifications requested during NRC QA inspections as well as to address minor issues that have been identified with regards to the FEA modeling used in the initial submission.
3. MURR continues to implement a training program to prepare for the arrival of the LS packages as well as to prepare materials to help familiarize our customers with this new package.



## **Program Status**

**SAFKEG-LS:** We estimate that the SAFKEG-LS (model 3979A) will be fabricated and delivered to MURR for deployment in Q4 of 2012. Please note this has slipped again from Q3 of this year as reported in the update of Q1 activities. We continue to be told that the delays are related to issues related to Croft's manufacturing subcontractor's efforts to either verify provenance of materials used or to address issues related to the tolerance of components such as o-rings.

**SAFKEG-HS:** We now project that the SAFKEG-HS (model 3977A) packages will be approved and the fleet in-service by Q2 2014. The HS SARP submission has been tied directly to the progress of the LS package, resulting in one-for-one schedule slippages. We had implemented a plan to capture any and all improvements that were identified during the LS SARP review and manufacturing periods. This decision to wait and incorporate all improvements is being revisited and Croft has been tasked to develop a plan to rapidly submit the HS SARP. When the vendor provides a potential new schedule for submission, it will be provided to DOT.

## **NRC Public Meeting**

On Tuesday, June 26<sup>th</sup>, Mr. Chris Allen with NRC contacted MURR and stated that NRC was considering revoking permission to ship radioactive materials under SP-14657 after December 31, 2012. A public meeting has been scheduled for July 11<sup>th</sup>, at NRC Headquarters, from 10 a.m. to 1 p.m., Eastern time.

MURR will be sending Mr. Ralph Butler (Reactor Director), Mr. John Ernst (Associate Director, Regulatory Assurance), and Mr. Michael Flagg (Assistant Director, Business Development and Special Projects). We will be presenting on the status of the program and describe to NRC the impact to life, health, and safety that such a revocation would cause.

## **Estimate of Shipments to be Made in DOT Specification Packaging After the Deployment of the SAFKEG-LS Fleet**

After the SAFKEG-LS package is implemented at MURR, we will continue to need to use both the 6M and 20WC-1 packages for portions of our radioactive materials transport needs. The needs are estimated to be:

- 18 shipments per quarter of Ir-192 in a 6M
- 12 shipments per quarter of P-32 in 20WC-1
- 9 shipments per quarter of Ir-192 in 20WC-1
- 12 shipments per quarter of Cs-131/Ba-131/Ba-135m in 20WC-1

**Appendix A**, provided as an attachment, gives an overview of the project timeline and tasks.



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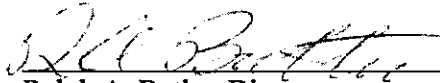
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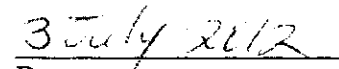
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If you have any questions, concerns or need more details on this revision of the transition activities listed above, please contact Mr. Michael Flagg, technical lead for this project at MURR. He may be reached at [flaggm@missouri.edu](mailto:flaggm@missouri.edu) or 573-882-5364.

Thank you for your time and attention to this communication.

Sincerely,

  
\_\_\_\_\_  
Ralph A. Butler, Director  
MU Research Reactor

  
\_\_\_\_\_  
Date



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Item	Q2 2012			Q3 2012			Q4 2012			Q1 2013			Q2 2013			Q3 2013			Q1 2014			Q2 2014		
Manufacture of LS & LS Inserts	*	*	*	*	*	*	*	*																
Delivery of LS & LS Inserts								*																
Delivery of CALT 9 [COMPLETE]																								
LS - Liquids Contents – additions to SARP										*	*	*												
LS - NRC review of Liquids Contents												*	*	*										
LS - Issue of NRC certificate with Liquids Contents added													*											
HS - SARP Compilation	*	*	*	*	*	*	*	*																
HS - NRC review of SARP								*	*	*	*	*	*	*	*	*								
HS - Issue of NRC certificate															*									
Manufacture of HS& HS Inserts															*	*	*	*	*	*	*	*		
Delivery of HS & HS Inserts																						*		

**Appendix A: Regulatory and Manufacturing Timelines for the Croft LS and HS Packages for Delivery to MURR**