

**SAFETY INSPECTION REPORT
AND COMPLIANCE INSPECTION**

1. LICENSEE Isomedix Operations Services		2. NRC/REGIONAL OFFICE U.S. Nuclear Regulatory Commission Region I, 475 Allendale Road King of Prussia, Pennsylvania 19406-1415	
REPORT NUMBER(S) 2006-002			
3. DOCKET NUMBER(S) 03020159	4. LICENSE NUMBER(S) 39-23004-01	5. DATE(S) OF INSPECTION C. Gordon	

(Continued)

On the day before the actual procedure a dry run was performed involving staff from both licensees. The crane operator practiced hoisting and lateral movement of the empty transfer bells and shipping casks without experiencing problems. Duratek staff were strategically positioned behind the concrete wall and in other shielded locations to demonstrate work functions during simulated exposures. Access to the area was tightly controlled by Steris. Workers role-played operations management and radiological control task assignments, and tested equipment to be used during the actual procedure. An administrative dose goal was set at 300 mR for all participants. Overall, coordination between licensee staff appeared effective throughout the dry run.

Before beginning the actual transfer the Duratek PM gave individual staff briefings covering final arrangements related to RWPs, logistics, and emergency considerations. The licensees proceeded with plans but experienced severe weather throughout the day. This caused a delay in the first transfer but it was completed as planned in about one hour. Dose rates measured by the inspector and licensee during the transfer were 3 mR/hr for most of the procedure and up to 20 mR/hr for short periods.

After the sources were transferred the storage cask was surveyed. The licensee found there was no exposure coming from the cask, and upon further examination with remote video it was found to be empty. All the sources had apparently been moved into the disposal liner within the first shipping cask. Since the volume of the source basket was almost equal to the available space inside the liner, encapsulation media (cement) to stabilize the shipment during transit could not be introduced. A modification to the work plan was developed so that the shipment to the Barnwell disposal site could be made by stabilizing the sources inside the liner with rigid wood planking. Packaging, final preparations, loading on the trailer, and radiation surveys of the shipping cask were performed acceptably.

The shipment was made under Chem Nuclear's SC license on June 25, 2006. Licensee staff met with South Carolina officials so that the SC license could be amended to permit acceptance of the increased source activity within the type B cask prior to arrival at Barnwell. By letter dated July 10, 2006, Steris notified NRC that the shipment was received at Barnwell; by letter dated July 20, 2006, Energy Solutions notified the NRC that the shipment was processed and disposed of as class B waste.

Although the licensees encountered unexpected work plan changes and associated delays, they performed effectively to complete the cask transfer. Staff of both licensees worked well together and with the NRC to keep each other apprised of current status and plan changes. No issues or violations were found.