

EFCOG Best Practice #235

Best Practice No.: KAPL-01

Facility: Knolls Atomic Power Laboratory and Kesselring Site

Best Practice Title: Expectation for Clean and Compliant Waste Transport Vehicles

Point of Contact: Chris Corbari, (518) 395-4456, christopher.corbari@unnpp.gov

Brief Description of Best Practice:

Fluor Marine Propulsion (FMP) has fostered a mutual understanding of expectations for clean and compliant vehicles with its waste shippers that has resulted in the waste shippers dedicating certain known clean and compliant vehicles for the site's waste shipments. This practice efficiently and proactively ensures that trailers and transport rigs used for these shipments meet applicable shipping requirements and DOT regulations.

FMP proactively performs comprehensive surveys of trailers and transport rigs for operability and radioactive contamination (via direct frisk for alpha, beta, and gamma radiation) before allowing them to be used for shipping Naval Nuclear Propulsion Program (NNPP) radioactive waste. Trailers and transport rigs that are not free of radioactive contamination are rejected. The program uses <50 Alpha pCi/100cm², <450 pCi/100cm² Beta/Gamma to make this determination.

Over the years, FMP has fostered a mutual understanding of these expectations with its shippers, who now dedicate certain known clean and compliant vehicles for use at NNPP sites. These practices ensure that trailers and transport rigs used for NNPP waste shipments are releasable per applicable NNPP requirements and DOE and U.S. Department of Transportation regulations.

FMP uses highly-rated transporters to ship their radioactive material/waste. FMP evaluates their transporters annually and authorizes them for use. This evaluation is based on the DOE Motor Carrier Evaluation Program reports, Federal Motor Carrier Safety Administration SAFER system reports, and internal tracking system deficiencies FMP identifies during the year while using that carrier. Once a carrier is selected and is requested, FMP requires the vehicle and trailer to have passed a CVSA NAS Level V or a 49 CFR 396 Appendix G inspection by an independent company. In addition, when a carrier is selected, FMP requests that only new or "like new" equipment is used. This ensures that only top-quality drivers, transport vehicles and associated equipment will be used.

Why the Best Practice was used?

During the initial decade of the 2000s, FMP routinely used a transporter that frustrated both shippers and government oversight personnel. The advantage was

that the transporter was local and inexpensive; the disadvantage was that the equipment, vehicles and trailers were sometimes substandard and would be rejected. This would delay the shipment and frustrate the engineers involved. As a result of this experience, FMP developed the requirement to evaluate their transporters and hold them to expected standards. For the past 10 years, FMP has been using carriers selected under more stringent guidelines.

What are the benefits of the Best Practice?

Vehicles are rarely rejected and shipments are no longer delayed based on vehicle quality and contamination. Based on about 10 years of experience in utilizing certain transporters, FMP has a very good relationship with those transporters and has shared expectations for vehicle, equipment, and driver quality.

What problems/issues were associated with the Best Practice?

New transporter locations, usually out of state, typically increase the cost for deadheading to sites. Carrier selection is also limited, since fewer transporters have the ability to provide high quality vehicles, equipment and drivers that meet enhanced FMP/NNPP standards.

How the success of the Best Practice was measured:

Success is measured by on time and successful shipments. KAPL has not had to track shipment execute/load times or rejection rates, as these are no longer issues for concern. KAPL has not missed any shipment dates or regulatory dates due to vehicle conditions/rejections.

Description of process experience using the Best Practice:

KAPL carrier vehicle quality and condition have improved since they implemented process changes. If there are issues with the transport vehicles, the carriers are very responsive to fix them and meet KAPL's shipment date needs. KAPL does not need to track shipment execute/load times or rejection rates, as these are not issues for concern. KAPL has not missed any shipment dates or regulatory dates due to vehicle conditions/rejections.