



WILCOX

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Director, Division of Physical and Cyber Security Policy
ATTN: Fuel Cycles and Transportation Security Branch
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

RE: Immobilization System for Transportation Unit

Wilcox Truck Line, Inc. is an MCEP approved truck carrier sponsored by the Idaho National Laboratory. We are approved to transport security-sensitive materials nation-wide for the Contractors located at the Idaho National Laboratory. To meet certain requirements to transport these materials a vehicle immobilization device is required. All of our transport vehicles have installed the PACAR certified internal electrical "103T Digital Failsafe starter Kill"

I have attached the documentation for application, critical circuitry, and fail-safe operation. The vehicle will maintain non-operation and if tampered with will automatically activate all lights and horn alarms silenced only via disarming the vehicle by proprietary method. The vehicle unit cannot be moved until properly disarmed at which time normal starting and movement is possible.

We believe this system meets all of sections 3.3., 3.3.1, 3.3.2., 3.3.3., and 3.4. of the NRC Regulations for Physical Protection of Shipments of Irradiated Reactor Fuel, Final Report.

The documents and diagrams are very straightforward, however if any questions arise, we will be pleased to answer and respond as might be needed.

Thank you for the opportunity for this review, and look forward to be of service to this highly important materials transportation.

Very Sincerely,

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Physical Protection of Shipments of Irradiated Reactor Fuel

Final Report



If a citizens' band (CB) radio is being used, all escorts and drivers should be knowledgeable of the specific CB channels normally monitored by the LLEA and Radio Emergency Associated Communications Teams (REACT) as they pass through different jurisdictions on the shipment route. If an emergency arises, the occupants of each transport or escort vehicle are then capable of independently contacting the LLEA by CB radio. This information should be indicated on the route overview.

In addition to voice communication, 10 CFR 73.37(c)(6) requires licensees to ensure that shipments are continuously and actively monitored by a telemetric position monitoring system or an alternative tracking system reporting to a movement control center. The movement control center shall provide positive confirmation of the location, status, and control over the shipment. Additionally, the movement control center shall implement preplanned procedures in response to deviations from the authorized route or a notification of actual, attempted, or suspicious activities related to the theft, loss, or diversion of a shipment. These procedures will include, but are not limited to, the identification of and contact information for the appropriate LLEA along the shipment route.

✓ 3.3. Immobilization of Transport Vehicle ✓

As required by 10 CFR 73.37(c)(4), the transport vehicle must be equipped with NRG-approved features that permit immobilization of the cab or cargo-carrying portion of the vehicle. This requirement applies equally to all transport vehicles used in a single shipment. In this requirement, immobilization means rendering the loaded transport vehicle incapable of movement under its own power.

The purpose of this requirement is to deny an adversary who may succeed in gaining control of a transport vehicle the ability to move or flee with the vehicle. The immobilization technique should be implemented only when it is apparent that an attempt is being made to gain unauthorized control over the shipment. Immobilization should not be initiated in a way that would endanger the driver, escorts, or members of the public.

Immobilization procedures should be included in the contingency and response procedures developed in accordance with 10 CFR 73.37(b)(4). As required by 10 CFR 73.37(c)(5), operation of the immobilization technique and the procedures governing its use must be covered in both the training course for escorts and the familiarization program for drivers.

r/ 3.3.1. Immobilization Device Performance Criteria ✓

The immobilization device should meet each of the following criteria:

The immobilization device and procedure should be able to be operated and performed from inside the cab of the transport vehicle by one person.

Immobilization should occur shortly (several seconds) after the immobilization procedures are initiated.

After immobilization is accomplished, skilled technical personnel should require at least one-half hour to return the transport vehicle to normal operating conditions. It should not be possible, by coercion of the drivers or escorts, for an adversary to bypass the effects

of the immobilization or to significantly shorten the time needed to make the transport operational again.

The device should pose no significant safety hazard before, during, or after the immobilization.

3.3.2. Immobilization Device Design

Devices employed to effect immobilization may be mechanical or electrical. They should be relatively simple and reliable to operate, so that they can be activated quickly under stressful conditions. The following are some techniques that may form the basis for acceptable immobilization procedures:

severing the main wire harness under the dashboard

disabling a critical portion of the ignition system by overloading or dismantling a key component of the ignition system or starting system

disabling the gear shifting mechanism

- using an electronic ignition control system with a procedurally irreversible time delay feature

3.3.3. Format of Approval Request

The licensee shall submit a letter to the NRC requesting approval of the intended immobilization device in advance. The device specification shall be attached to the letter and protected in accordance with 10 CFR 73.21 and 10 CFR 73.22.

3.4 Training Program for Drivers

Transport vehicle drivers are required in 10 CFR 73.37(c)(5) to be familiar with and capable of implementing transport vehicle immobilization, communications, and other security procedures.

The extent to which drivers may become involved in the physical protection of the shipment depends on the arrangements made between the carrier and the shipper or receiver (licensee). The greatest degree of driver involvement would occur when the driver is also a fully trained armed escort and alternately assumes driving and physical protection responsibilities with other armed escorts. However, in other circumstances, the driver may have only minimal responsibilities in protecting the shipment. In all cases, as required by Section 73.37(c)(5), the licensee must ensure that the driver is familiar with the basic security functions of transport vehicle immobilization, redundant communications systems, and any other security procedures that would affect the driver's operation of the transport vehicle.

The licensee should review the roles and responsibilities of the driver and ensure that the required training is conducted before the SNF shipment commences.