

Planned Shipping Activities

Site	FY-2013	FY-2014
Argonne National Laboratory	35	44
Idaho National Laboratory	372	497
Los Alamos National Laboratory	185	246
Savannah River Site	178	110
Oak Ridge National Laboratory	0	62
Totals	770	959

New Initiatives

NRC TRUPACT-II Revision 23 and HalfPACT Revision 6

- Submitted April 2012
- Approved June 2013
 - New payload container the Critically Control Overpack (CCO)
 - Higher Fissile Gram Equivalent (5,320 FGEs per shipment maximum, 380 FGEs per container)
 - Reclassification of TRUPACT-II/HalfPACT outer vessel from containment to confinement
 - Addition of normal conditions of transport activity limits
 - Revisions to fabrication and maintenance drawings to facilitate repairs

The diagram, titled "Critically Control Overpack", illustrates the internal structure of the container. It shows a central cylindrical vessel surrounded by a thick, multi-layered overpack. Labels indicate various components such as the "Inner Vessel", "Overpack", "Support Structure", and "Seal". The diagram is a technical cross-section showing the arrangement of these parts.

New Initiatives cont.

- Increase funding for WIPP infrastructure improvements
- Obtain approval for two additional disposal panels
- Conduct Salt Experiments
- Resume ORNL shipments
- Begin TRUPACT-III shipments from LANL and INL

Accomplishments

- Received 700th RH shipment
- Received first shipment of Shielded Containers
- Initiated the Southeast New Mexico Roadway Safety Integrated Project
- Assisted LANL in meeting the New Mexico Framework Agreement (removal of 2,600 m³)
- Received NM Mine Operator of the Year award



7

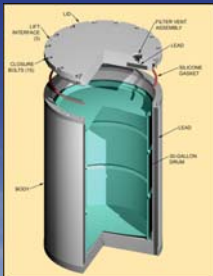
1st WIPP Shielded Container Shipment

- Argonne National Laboratory
 - September 9, 2013
- Three HalfPACT's
- Waste transported and disposed of like contact-handled waste
- Each HalfPACT
 - One shielded container assembly
 - Three shielded containers
- 9 containers per shipment
- Potential to reduce number of RH 72-B shipments



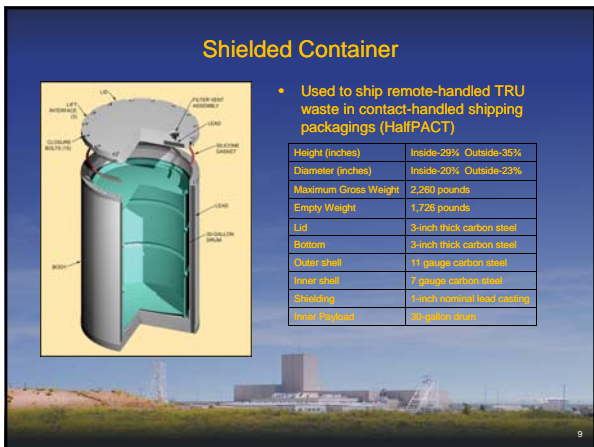
8

Shielded Container



- Used to ship remote-handled TRU waste in contact-handled shipping packagings (HalfPACT)

Height (inches)	Inside-29% Outside-35%
Diameter (inches)	Inside-20% Outside-23%
Maximum Gross Weight	2,260 pounds
Empty Weight	1,726 pounds
Lid	3-inch thick carbon steel
Bottom	3-inch thick carbon steel
Outer shell	11 gauge carbon steel
Inner shell	7 gauge carbon steel
Shielding	3-inch natural lead casting
Wheels	50-gallon drums



9

Shielded Container Being Surveyed at ANL



10

WIPP Status

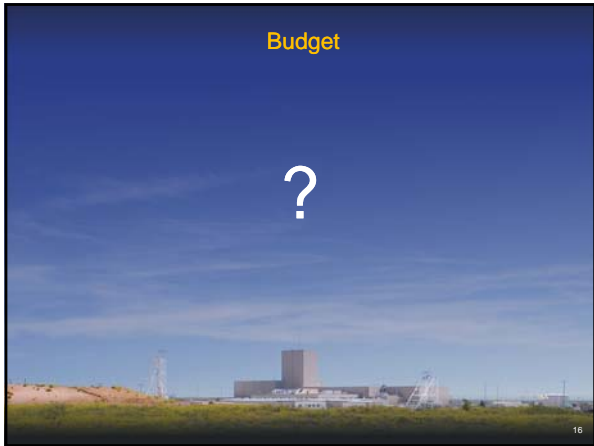
- Disposal capacity of 6.2 million cubic feet
 - Current volume disposed: approximately 3.2 million cubic feet
- Over 14 million loaded miles
 - Shipments expected to continue up to 2050 time frame
 - Dependent on waste identification/acceptability
- 22 generator sites cleaned of all legacy TRU waste
- WIPP maintenance outage scheduled for 2/14/14 – 3/10/14 (no shipments during outage)

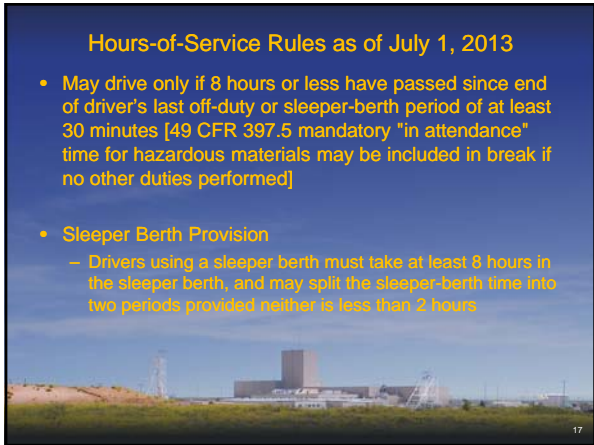
11

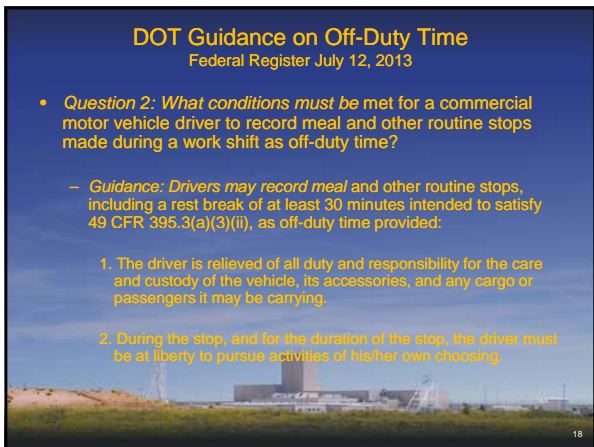
Total Shipments (as of December 2, 2013)

Contact Handled	11034
Remote Handled	724
Total	11,758

12

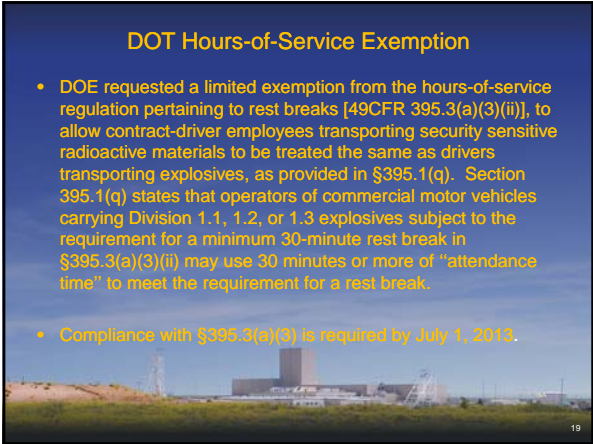







DOT Hours-of-Service Exemption

- DOE requested a limited exemption from the hours-of-service regulation pertaining to rest breaks [49CFR 395.3(a)(3)(ii)], to allow contract-driver employees transporting security sensitive radioactive materials to be treated the same as drivers transporting explosives, as provided in §395.1(q). Section 395.1(q) states that operators of commercial motor vehicles carrying Division 1.1, 1.2, or 1.3 explosives subject to the requirement for a minimum 30-minute rest break in §395.3(a)(3)(ii) may use 30 minutes or more of "attendance time" to meet the requirement for a rest break.
- Compliance with §395.3(a)(3) is required by July 1, 2013.



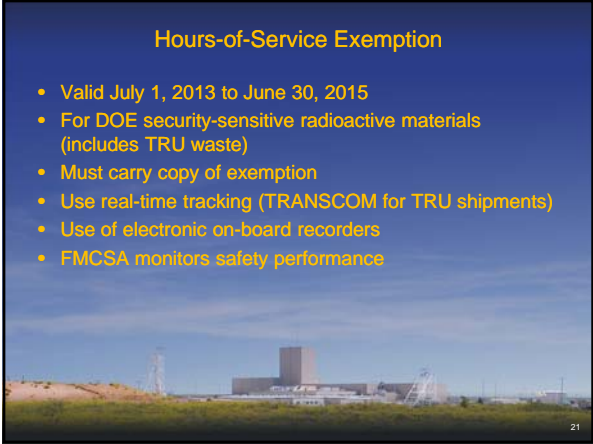
WGA Surveillance Requirement

- WGA PIG Requirement: "Carrier and its drivers must provide constant surveillance of all loaded (TRU waste) shipments."
- Note: The term "constant surveillance" is explicitly defined in the contract and generally requires at least one driver to remain awake in the front of the tractor cab or to stay within 100 feet of the vehicle and keep it in constant unobstructed view.



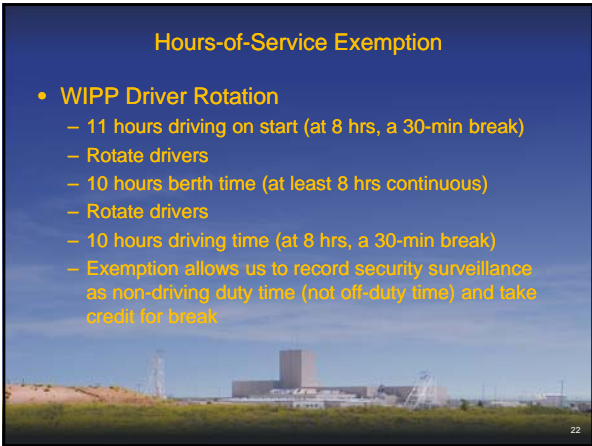
Hours-of-Service Exemption

- Valid July 1, 2013 to June 30, 2015
- For DOE security-sensitive radioactive materials (includes TRU waste)
- Must carry copy of exemption
- Use real-time tracking (TRANSCOM for TRU shipments)
- Use of electronic on-board recorders
- FMCSA monitors safety performance



Hours-of-Service Exemption

- WIPP Driver Rotation
 - 11 hours driving on start (at 8 hrs, a 30-min break)
 - Rotate drivers
 - 10 hours berth time (at least 8 hrs continuous)
 - Rotate drivers
 - 10 hours driving time (at 8 hrs, a 30-min break)
 - Exemption allows us to record security surveillance as non-driving duty time (not off-duty time) and take credit for break





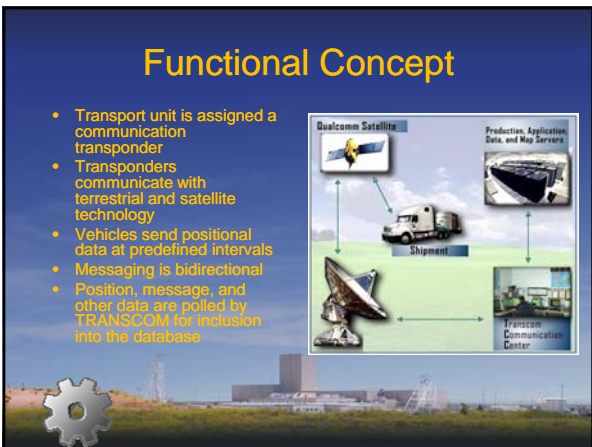
TRANSCOM

Overview of Changes and Status



Functional Concept

- Transport unit is assigned a communication transponder
- Transponders communicate with terrestrial and satellite technology
- Vehicles send positional data at predefined intervals
- Messaging is bidirectional
- Position, message, and other data are polled by TRANSCOM for inclusion into the database



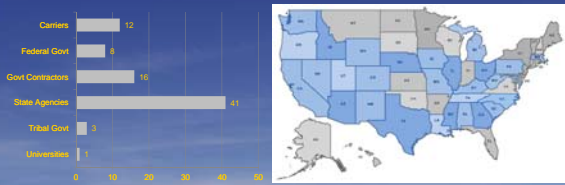
TRANSCOM Communication Center

TRANSCOM Communication Center (TCC)

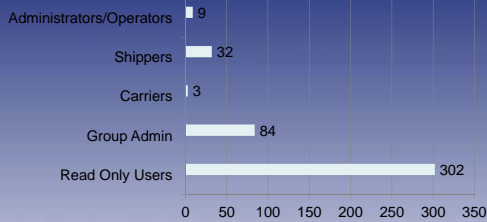
- Operators
 - Staff monitoring center and help desk 24/7
 - Maintain system operability
 - Track shipments, log anomalies, set security controls
 - Liaison with shippers, carriers, and DOE stakeholders
 - Manage communication and status changes within application
- Coordinate outages for maintenance of system
- Set up training simulations, provide classroom training and maintain on-line training

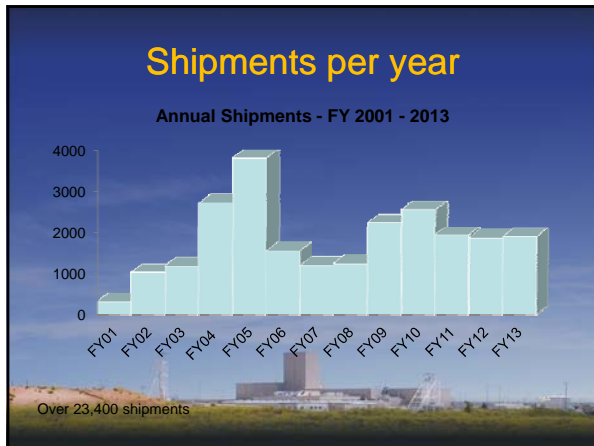


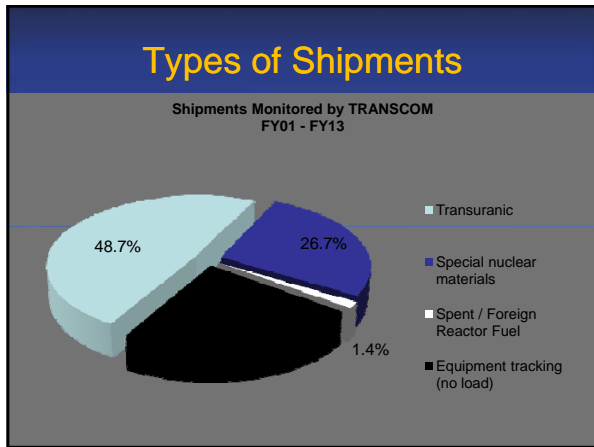
81 Organizations in 29 States



430 Total Users







Status – Nov 2013

- TRANSCOM system 3.0 released December 2012
- Basic System Features:
 - modern MCP200 transponders from Qualcomm
 - data service from Omnitrac
 - terrestrial and satellite feeds,
 - logical data hub
 - Oracle DB
 - standardized maps and TRANSCOM data layers,
 - web interface (no client side software)
- – New 5-year contract award made to MaChis LCITE on November 14, 2013, for TRANSCOM system and communication center

Features/TRANSCOM 3.0

- Access shipment details from the status board: vehicle information, latest position, messages, copy of BOL, and view route
- User preferences (e.g., email shipment status changes, audible alerts, etc.)
- Enhanced mapping: Road distance between 2 points, access to shipment details, messaging, weather report for shipment location, Google API interface
- New system alerts improve transportation security for TCC (e.g., shipment stops, transponder stops updating, driver is not authenticated when vehicle starts, etc.)

Features (cont.)

- Compatible with mobile web devices (Tested: iOS and Android)
- Reporting output available PDF or CSV format
- Organization account management module – allows designee (Group Administrator) to add/remove read-only users from their organization

New TCC Help Site

- **Features**
- On-line training
- User forms
- Announcements
- Newsletter

User Training

On-Line TRANSCOM Training

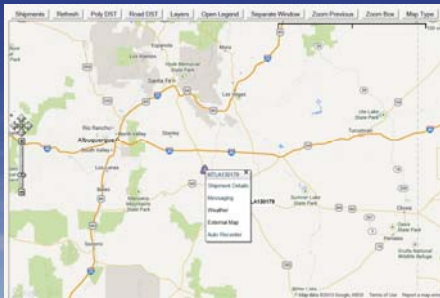
- Access to training on the TCC support site at <http://tcc.transcom.energy.gov>
- Step-by-step videos with narrative for each user type
- Screen casts provide visual guidance for each topic covered
- Self-paced exams are available at same link with immediate feedback

Classroom Training

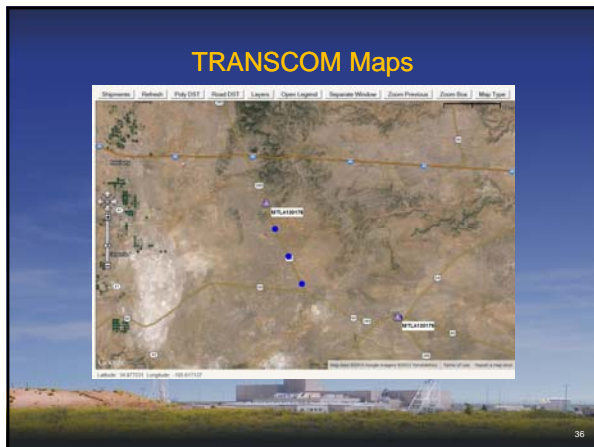
- 2014, there will be a reduction the number of traditional classes
- Users will be asked to provide their own interface devices (iPad, laptop, etc.)

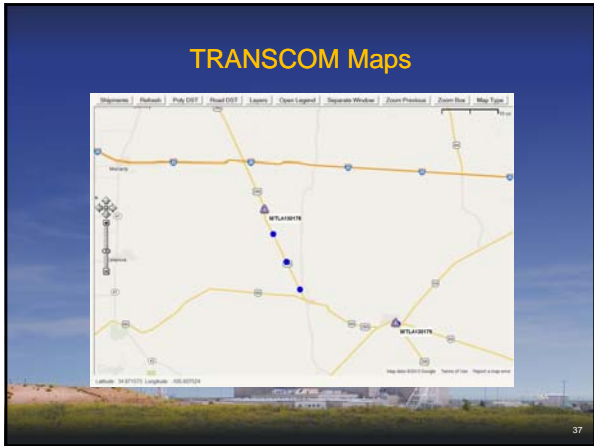


TRANSCOM Maps



TRANSCOM Maps





Security Controls



Layers of controls in place to protect information:

- Access: authentication, role-based access to shipping types, and user privileges matched to application modules to fit needs
- Data: encryption employed at database and web application
- Physical: DOE monitored and guarded facility
- Virtual: Redundant data feed, with layered network infrastructure
- Administrative: Access controlled on a need to know basis. TCC staff trained, tested on security procedures
- Other: COOP site for backup, two locations for emergency ops

Contacts



DOE TRANSCOM Program Manager:

- Stephen Casey (steve.casey@cbfo.doe.gov)
- 575.234.7643

TRANSCOM Contractor:

- Ma-Chis, Lower Creek Indian Tribe Enterprises
- Project Manager - Sharon Taylor
- Help Desk Support 575.234.7105

User help site: <http://tcc.transcom.energy.gov/>

TRU Transportation Incidents/Accidents (September 2012 through September 2013)

Date	Carrier	Shipment	Trailer	Tractor	Event Type	Delay?	Other info.
9/7/12	VS	IN120225	330		Out of Service Violation		On 9/7/2012 we received an Out of Service violation in Idaho with shipment IN120225 on trailer 330 due to a tie-down adjustment. The driver readjusted the tie-down to meet the specifications and was released.
9/11/12	VS	IN120229	379	V04	Shipment Delays	5.5 hrs	On 9/11/2012 we had shipment delays at two separate locations with shipment IN120229, truck 404 and trailer 379. The first was 2 hours due to a windshield replacement in Cheyenne WY. The second was 3.5 hours due to a tire blow-out on trailer 379 at Hiramsville, NM.
9/17/12	VS	IN120237	351	V25	Tractor became disconnected while repositioning 5th wheel	4 hrs	Shipment was reshipped from the District Truck Center. Tractor and trailer were inspected by a mechanic from the District Truck Center.
9/17/12	VS	IN120237	351	V25	Inspection Statements		Please see the attached statements for the issue of trailer 351 with shipment IN120237 that was shipped onto the back tractor frame of V25. Both the drivers and the Repair mechanics from District Truck Center have inspected the units and have found them to be in good condition. At this point the Idaho State Inspectors have completed the Level VI inspection and passed both units by the Level VI standards.
9/26/12	CAST	MTN120244	356	C81	Tractor engine problems	5.5 hrs	Replacement tractor dispatched from "Cardinal" Terminal.
9/27/12	CAST	MTA1212030	4400N	N/A	Tie issue on trailer	2.5 hrs	Tread separation, damaged fender and brackets.
10/9/12	CAST	MTN120295	N/A	C27	Tractor Check Engine light	1 hr	Replacement tractor dispatched from Terminal.
10/8/12	VS		303		Inspection Violation		On 10/8/12 we received a violation on Trailer 303 under code 393.11 for inadequate reflective tape on the side of the trailer with the trailer length "144ft" and it was stated that it only had 150" of tape required. After measuring the measurement we have found the trailer to have 250" was more than enough to meet the requirements.
10/17/12	CAST	MTK1212055		C15	Tractor mechanical issue		C-15 experienced a loss of power due to a fuel system problem. The tractor was taken to Birmingham, AL, Kenworth for diagnostic and repair.

40

TRU Transportation Incidents/Accidents (September 2012 through September 2013)

Date	Carrier	Shipment	Trailer	Tractor	Event Type	Delay?	Other info.
11/7/12	CAST	MTSR12064		V20	Check engine light on	7 hrs	Driver called at approximately 1000 hrs and stated while performing a safety check, he noticed one of the check engine lights had come on. He was directed to driver on with location to Atlanta, GA. Unit was repaired for a faulty plug connection to one of coolant sensing units and back on the road at approximately 0815 a.m.
12/3/12	VS	AER12035	8H02		Weld repair	24 hrs	3-Cam bracket on front left axle had a broken weld. ANI, central shops group completed repair in 3 hours. Shipment delay 24 hrs due to escort coordination.
12/10/12	CAST	MTSR12080		C80	Mechanical	29 hrs	Repair of broken wind shield, passenger side and improving engine breakdown, tractor issued to Augusta, GA. Return to service 8.45. 12/11/12.
1/7/13	VS	IN130007	N/A	V26	Broken Windshield	24 hrs	TRU had fire impact on windshield and pulling empty shipment to INL. Windshield replaced. Loaded shipment delayed 24 hours due to inspector scheduling.
1/10/13	CAST	MTL130005	N/A	C8		3hrs	Tractor had mechanical problem and was replaced remotely by carrier replacement tractor.
1/15/13	CAST	SR12008	701	C27	ABS issue	10 hrs	Tractor ABS system error codes would not clear line to replace ECM and wheel sensors.
4/6/13	CAST	MTN132030		C31	Tractor Replacement		Tractor C31 developed a severe exhaust leak and was replaced by spare tractor C24 which was shipped to Idaho.
4/9/13	VS	SR13023	704	V21	Tire failure	1.44 hrs	Tractor had tire blow-out which damaged the splash panel. Tire and splash guard were replaced and shipment continued on to WYSP.
5/2/13	VS	IN130047	N/A	V29	Route Deviation	20 min	Driver missed and from I-25 onto US-265 south. Driver disciplined.
6/28/13	CAST	IN130119	369	C37	Low tire pressure	N/A	CVSA inspector discovered low tire pressure. Driver repaired on site.
7/10/13	VS	SR130260	N/A	V30	Broken alternator cable	2 hrs	Alternator cable broke while enroute. Replaced in Longview, Texas.
7/13/13	VS	IN130135	364	V23	ABS issue	6 hrs	Driver had repairs completed in Cheyenne, Wyoming before CVSA inspection, therefore no OOS violation.

41

TRU Transportation Incidents/Accidents (September 2012 through September 2013)

Date	Carrier	Shipment	Trailer	Tractor	Event Type	Delay?	Other info.
7/27/13	CAST	IN130149	322	C31	Minor Accident	N/A	Shipment was parked at the Flying J Truckstop in Cheyenne, WY. Awaiting Colorado inspector support at the POE when another CMV impacted the rear bumper of the trailer while pulling into parking area. Damage was limited to the rear placard holder and toolbox. Shipment was CVSA VI inspected by WY state police and allowed to resume trip.
8/9/13	VS	SR13066	N/A	V33	Minor Accident	N/A	Loaded TRUPACT III shipment from Savanna River Site. Truck rolled up and bumped the vehicle in front of him. There was no damage to either vehicle, and no injuries involved. WYSP driver was cited for following to close. Post accident Drug and Alcohol screen testing was performed per the carrier contract. Also per the carrier contract if convicted of this violation the driver will be removed from eligibility to drive under the WYSP carrier contract.
8/28/13	CAST	IA130125	N/A	C40	Tractor wheel seal leak	1 hr	Tractor C40 driver discovered tractor wheel seal leak prior to CVSA inspection. Repairs completed and shipment was able to depart with 1 hr delay.
9/14/13	VS	AER13024	RH-006	V33	Air line leak	1 hr	Unit was placed OOS with an audible air leak. Unit was repaired and placed back in service.
9/27/13	VS	SR13069	N/A	V31	Tractor suspension air leak	1.83 hr	Shipment was delayed at Ranger, Texas while unit was repaired.

42