

Commercial Vehicle Safety Alliance



Safety and Efficiency in the Transportation of Radioactive Materials

CVSA Level VI Training & WIPP Inspection Data Update

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CVSA/DOE-OCRWM

Cooperative Agreement

- In 1986 OCRWM and CVSA entered into a cooperative agreement that includes:
 - Developing enhanced inspection procedures for shipments of spent nuclear fuel
 - Developing curriculum and conducting training courses
 - Developing recognizable decal for units passing inspection
 - Creating and implementing an outreach program

CVSA/DOE-OCRWM

Cooperative Agreement (Con't.)

- Conduct a pilot study:
 - Perform enhanced inspections on selected shipments
 - Collect and analyze data
 - Make any changes in procedures based on data
 - Determine the number of inspections needed for maximum safety





CVSA/DOE-OCRWM

Cooperative Agreement (Con't.)

- **October 1999**
Published a final report on the cooperative agreement including the inspection data received (copies available at www.cvsa.org)
- **October 2002**
Published an interim report of the cooperative agreement activities and inspection data since the final report (copies available at www.cvsa.org)
- **April 2004**
Updated report of WIPP shipment inspection data from the Interim Report (copies available at www.cvsa.org)

Training Activities

- Training curriculum changed to modules
- Level VI inspector training classes
- Requirements for maintaining Level VI certification
- Train the trainer classes: state and industry representatives are trained to conduct their own refresher courses to meet the requirements of certification



Summary of Level VI Inspector Training Classes Since September 1999

Class No.	Date	Location	Total Number of Attendees	Number of Attendees from Industry and Other Government	Number of Inspectors Certified
32	October 1999	Kennewick, WA	12		10
33	May 2000	Batavia, NY	13	5	7
34	June 2000	Knoxville, TN	11		11
35	August 2000	Albuquerque, NM	27	7	12
36	October 2000	Bloomington, IL	45	16	28
37	January 2001	Albuquerque, NM	31	4	21
38	January 2001	Las Vegas, NV	27		19
39	May 2001	Framingham, MA	26	14	12
40	June 2001	Jefferson City, MO	10	1	9
41	June 2001	Sacramento, CA	11		11
42	September 2001	Aiken, SC	27	13	11
43	October 2001	Bloomington, IL	34	3	27
44	November 2001	Goodyear, AZ	23	18	5
45	February 2002	Las Vegas, NV	10	4	4
46	April 2002	Carlsbad, NM	24	7	10
47	May 2002	Carlsbad, NM	10	5	4
48	June 2002	Denver, CO	14	2	12
49	June 2002	Carlsbad, NM	19	13	6
50	September 2002	Carlsbad, NM	9	9	

Summary of Level VI Inspector Training Classes Since September 1999 (Con't.)

Class No.	Date	Location	Total Number of Attendees	Number of Attendees from Industry and Other Government	Number of Inspectors Certified
51	October 2002	Springfield, IL	23		23
52	March 2003	Ft. McCoy, WI	14	3	11
53	May 2003	Austin, TX	24	5	14
54	June 2003	Forsyth, GA	10	2	6
55	June 2003	Oak Ridge, TN	18	9	4
56	July 2003	Santa Fe, NM	16		15
57	August 2003	Sacramento, CA	23		21
58	September 2003	Linthicum Heights, MD	21		15
59	October 2003	Salina, KS	21		21
60	November 2003	Kennewick, WA	14		12
61	January 2004	Sacramento, CA	27		22
62	March 2004	Springfield, IL	14	2	11
Total for all classes (1-62)			1138	170	852

Level VI Certification Maintenance Requirements

- Successfully complete the CVSA Level VI refresher course within a 24 month period of the basic Level VI course, or
- Demonstrate proficiency by performing a minimum of eight CVSA Level VI inspections of radioactive shipments per year

If the inspector does not complete one of the above requirements then certification is suspended. To become recertified, the inspector must attend and successfully complete the basic CVSA Level VI inspector training class.



Level VI Training Status

- Summary of current CVSA Level VI inspectors by state – 592 inspectors in 35 states (15 April 2004)
- Industry personnel trained – since March 1998 have had 11 classes/59 students
- Recent efforts on changes to training curriculum



Summary of CVSA Level VI Inspections of WIPP Shipments

(inspections conducted between 24 March 1999 and 30 September 2002, updated April 2004)

Table 1. WIPP Shipments: Number of inspections by state and type of inspection

	IR*	UR*	IR	UR	IR	UR	IR	UR
State	Point of Origin		En Route		Point of Destination		Total	
Colorado	677	677	477	477			1154	1154
Idaho	501	500			1	2	502	502
New Mexico	27	26	1181	1191**	73	73	1281	1290
South Carolina	13	13					13	13
Washington/Oregon	11	11					11	11
Total Number of Inspections	1229	1227	1658	1668	74	75	2961	2970

*Interim Report (IR); Updated Report (UR)

** The inspection for the accident outside of Carlsbad is not included in the Updated Report

Summary of CVSA Level VI Inspections of WIPP Shipments

(inspections conducted between 24 March 1999 and 30 September 2002, updated April 2004)

Table 2. WIPP Shipments: Number of violations identified by state, type of Inspection and type of violation

State/Type of Inspection	No. of <u>Inspections</u> Identifying Violations		No. of <u>Violations</u> Identified		NOT Out-of-Service Violations		Out-of-Service Violations				No. of <u>Inspections</u> Identifying Critical Violations	No. of <u>Critical</u> <u>Violations</u> Identified		
							NAS		Level VI				Total	
	IR*	UR*	IR	UR	IR	UR	IR	UR	IR	UR	IR	UR	UR	UR
<u>Colorado</u>														
Point of Origin	7	7	11	11	8	8	2	2	1	1	3	3	3	3
En Route	37	37	42	42	26	26	3	3	13	13	16	16	12	12
<u>Idaho</u>														
Point of Origin	128	127	166	166	139	139	9	9	18	18	27	27	35	37
<u>New Mexico</u>														
En Route	79	78	115	110	68	64	7	4	40	42	47	46	35	41
<u>South Carolina</u>														
Point of Origin	2	2	3	3	2	2	1	1			1	1	2	2
Total	253	251	337	332	243	239	22	19	72	74	94	93	87	95

*Interim Report (IR); Updated Report (UR)

Summary of CVSA Level VI Inspections of WIPP Shipments (inspections conducted between 24 March 1999 and 30 September 2002) (Cont.)

Table 3: WIPP Shipments: Percentage of inspections identified as Critical, no violation and with violations

State/Type of Inspection	Number of Inspections	Critical Violations	NO Violations	Violations
<u>Colorado</u>				
Point of Origin	677	0.4%	99%	1%
En Route	477	2.5%	92.2%	7.8%
<u>Idaho</u>				
Point of Origin	500	7%	74.6%	25.4%
Point of Destination	2	0%	100%	0%
<u>New Mexico</u>				
Point of Origin	26	0%	100%	0%
En Route	1191	2.9%	93.5%	6.5%
Point of Destination	73	0%	100%	0%
<u>South Carolina</u>				
Point of Origin	13	15.4%	84.6%	15.4%
<u>Washington/Oregon</u>				
Point of Origin	11	0%	100%	0%

Point of Origin, En Route, Point of Destination Inspection Data

Table 4. WIPP Shipments: Percentage of point of origin and en route inspections with no violation and with violations*

Inspection Location	Number of Inspections	NO Violations	Violations
Point of Origin	1227	88.9%	11.1%
En Route	1668	93.1%	6.9%
Point of Destination	75	100%	0%

*Violations are CVSA Level I and Level VI – Level VI being the higher standard.

Comparison with Federal Motor Carrier Safety Administration Data

Table 5. WIPP Shipments: Comparison with FMCSA inspection data

FMCSA Roadside Inspection Data for the Year 2001*			FMCSA HAZMAT Inspection Data for the Year 2001*			CVSA Level VI Inspection Data for WIPP Shipments (March 24, 1999 – September 30, 2002)		
Inspection Activity	Number	Percent	Inspection Activity	Number	Percent	Inspection Activity	Number	Percent
Number of Inspections	2,758,008		Number of Inspections	213,498		Number of Inspections	2,970	
With NO Violations	749,960	27.2%	With no Violations	168,876	79.1%	With no Violations	2,719	91.5%
With Violations	2,008,048	72.8%	With Violations	44,622	20.9%	With Violations ***	251	8.5%
Driver OOS** Rate		7.6%	OOS Rate		6.1%	Driver OOS Rate ***		0.1%
Vehicle OOS Rate		23.3%				Vehicle OOS Rate***		2.8%

* Data Source: FMCSA Motor Carrier Management Information System September 28, 2002 data snapshot

** OOS = Out-of-Service

*** Violations are CVSA Level I and Level VI – Level VI being the higher standard.

Comparison with Federal Motor Carrier Safety Administration Data (Cont.)

- 8.5% of the CVSA Level VI inspections found any violations while 20.9% of all HAZMAT inspections found violations and almost 73% of the FMCSA roadside inspections found violations.
- Comparing the out-of-service rates for CVSA Level VI inspections of WIPP shipments to those published by FMCSA in Table 5, it may be concluded that vehicles and drivers subject to the Level VI inspection criteria are significantly safer than other HAZMAT carriers and other motor carriers traversing the nation's highways.
- The CVSA Level VI inspection program assures the motoring public that vehicles and drivers transporting select radioactive materials are the safest motor carriers on the nation's highways.



Updated Report Conclusions

- The ultimate goal of any safety program is a low number of accidents and incidents. (1 non-chargeable accident and 1 incident)
- The states, shippers and WIPP site can be proud of:
 - The excellent safety program that keeps driver and vehicle OOS rates very low.
 - The 91.5% rate of inspections with no violations (more than 3 times higher than the national average)



Updated Report Conclusions (Cont.)

- This high level of safety should be expected and should continue with point of origin CVSA Level VI inspections.
- States are encouraged to honor Level VI Decal when placed at the Point of Origin for a shipment
 - Not conduct another Level VI inspection of shipment while it is en route to point of destination
 - Exception would be when an obvious defect is observed



Updated Report Conclusions (Cont.)

- Random Inspections
 - Even though CVSA guidelines are that once a shipment is inspected to the “defect free” level, it does not need to be re-inspected to the same degree while en route, some states may still feel a need to do random CVSA Level I and CVSA Level VI inspections on en route shipments.
 - Random inspections are an ideal way to help make sure carriers continue to take proactive steps to prevent problems that might not otherwise be detected, while at the same time reducing the amount of time the shipments are in transit to their destination.



Updated Report Conclusions (Cont.)

- By following the CVSA guidelines for Level VI inspections, and for those states desiring to do random en route inspections the WIPP shipping campaign can continue to be one of the safest truck shipments on the nation's highways.



Future Activities

- Level VI Training Schedule for 2004
 - Sacramento, California - January 26-28
 - Phoenix, Arizona - Level VI Instructors' Meeting, February 16-17 and the Level VI "Train the Trainer" Refresher Course, February 18-19
 - Springfield, Illinois - March 15-18
 - Flagstaff, Arizona - April 26-30
 - Albuquerque, New Mexico – May 17-20
 - Meridian, Idaho - June 21-25
 - Oak Ridge, Tennessee – July 12-15
 - Columbia, South Carolina - August 2-5
 - Ft. McCoy, Wisconsin - September 13-16
 - Linthicum Heights, Maryland – October 12-15
 - Albany, New York – November 15-18



Future Activities (Con't.)

- Basic training class – new version ready July 2004
- Security module added to Level VI course
- Data uploading to SafetyNet



Summary



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