



# INSPECTION News

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## WE'VE MADE PROGRESS But there's Much More to Do

By CVSA President  
Paul Claunch



Had I followed my instincts, this would have been a very circumspect article in which I recognize our members and associate members for all they have done in the name of highway safety during my term as CVSA President. Since I can do that personally and publicly at the Annual Conference in Albuquerque, I will resist the temptation, and move directly to the point.

As I mentioned in my first Guardian article, I am frequently asked, "What or who is CVSA?" If nothing else has become clear to me since last April in Little Rock, I now have a clear view of the Alliance and its mission. That is to say, regardless of position or title – if a Memorandum of Understanding has been signed with your jurisdiction or if you are a current Associate Member, you are the glue and nails that hold the Alliance together. We are CVSA. We are "it." Now for the pivotal question – do you want complacent cohesiveness – or do you want "it" to continue to improve?

"It" is a very powerful word." In the case of CVSA, "it" is the most basic of basics. In the truest sense, "it" is absolute commercial vehicle safety and security. It isn't just about churning out impressive statistics to the public or to those providing financial support for safety programs - nor is it about the establishment or advancement of professional or personal legacies. "It" is all about what is happening right now on our local expressway, toll way, county road or city street. Is there a vehicle out there at this very hour and minute in critical need of repair? Will it be involved in a fatal crash within the next ten minutes? Does the driver have the proper training and credentials to safely operate the truck? Is he or she well rested and alert? Will he or she crash tomorrow if the trip continues today without the opportunity for sleep?

While I was relatively cognizant of commercial motor vehicle safety goals, this past year brought me to the solid realization of what we endeavor to achieve as government agencies — whether local, state, provincial or federal. We make every effort to use available resources within our juris-

isdiction to prevent the things mentioned above from occurring. Whether it be on I-5 in California or I-70 in Missouri, we, CVSA, are the individuals who can choose to either say, "We're doing all we can do," or, "There is much more to do, and we will be proactive in getting 'it' done."

I have often been asked questions such as, "When is CVSA going to"... or "What is CVSA's policy or opinion about...?" They are both fair questions. However, the unsettling aspects are not the questions – it's the people who are inquiring- namely, CVSA members! It's the individuals who participate in the Alliance, including you and me.

We have numerous members who step up and take an active role. However, like any large group, we also have those who take a "wait and see" attitude. While we have a tremendous staff working on our behalf, they should not be the ones solely responsible for attaining the Alliance's safety and security goals. If that attitude exists among us, that way of thinking should change and change quickly. If you're not the person in your organization to move toward that change, at least use the power of input or suggestion to encourage your superiors. The advantages to the unification of effort are often overwhelming and the results have literally spurred revolutionary change in governments and ideologies around the world. Just think of the impact it could have on commercial motor vehicle safety! ■

This newsletter is published quarterly by the Commercial Vehicle Safety Alliance (CVSA). The CVSA is an association of state, provincial and federal officials responsible for the administration and enforcement of motor carrier safety laws in the United States, Canada and Mexico.

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If you have editorial suggestions, comments, concerns, or you would like to be added to our mailing list, deleted from the mailing list, or have an address change, please contact:

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## CVSA RAM SUBCOMMITTEE to Meet in Albuquerque

The CVSA RAM Subcommittee will meet at 1 p.m. April 17 in the National Atomic Museum, 1905 Mountain Road, Albuquerque, New Mexico during the CVSA Annual Conference. Chairman Gary Trujillo, New Mexico Motor Transport Division, has outlined the following agenda:

- Update on DOT/FMCSA Hazardous Materials Safety Permit Program Compliance: January 1, 2005
  - HRCQ shipments needing a pre-trip Level VI Inspection
  - Carriers registered with RSPA
- Report on CVSA's 5-year grant from DOE-RW on the Level VI Program for shipments to Yucca Mountain
  - Public Outreach
  - Level VI Program Peer Review
- WGA's request for CVSA to conduct an analysis and publish a report on the Level VI data from October 2002 to December 31, 2004
- Report from States on random en-route Level VI Inspection per the recommendations from the CVSA/DOE Cooperative Agreement Interim Report-Update on WIPP Shipments dated April 2004
- Level VI Training Classes for 2005
- Report on the revised Security Module that was rolled out in January 2005
- Report on the 2005 Level VI Instructors Meeting and "Train the Trainer" Course
- Report on the ASPEN & SAFETYNET upload and reports for the Level VI Inspection Data
- Presentations from Industry
  - NUCSAF
  - Berkeley Nucleonics
- RAM Subcommittee Ad-hoc Committees
  - Security
  - ITS
- DOE WIPP Updates
- DOE RW Updates
- Other Business ■

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## **NEW CVSA-DOE COOPERATIVE AGREEMENT** **To Focus On Public Outreach And A Comprehensive Peer Review** **Of The North American Standard Level VI Inspection Program**

The Commercial Vehicle Safety Alliance has a new cooperative agreement with the U.S. Department of Energy (DOE) Office of National Transportation on Level VI inspections of spent nuclear fuel and high-level radioactive waste shipments into Yucca Mountain.

Under this agreement, CVSA is greatly enhancing its efforts to get information out to the public on the very successful CVSA North American Standard Level VI Inspection Program for Transuranic Waste and Highway Route Controlled Quantities (HRCQ) of Radioactive Materials. CVSA will be traveling throughout the United States to implement a public outreach program that will include participating with DOE stakeholders at various local and national meetings. A complete listing of the meeting schedule is shown at right.

The North American Standard Inspection for Transuranic Waste and Highway Route Controlled Quantities (HRCQ) of Radioactive Material is an inspection for select radiological shipments, which include inspection procedures, enhancements to the North American Standard Level I inspection, radiological requirements, and the North American Standard Out-of-Service Criteria for Transuranic Waste and Highway Route Controlled Quantities (HRCQ) of Radioactive Material.

As of January 1, 2005, all vehicles and carriers transporting highway route controlled quantities (HRCQ) of radioactive material are regulated by the U.S. Department of

Transportation (DOT) and required to pass the North American Standard Level VI Inspection at the point of origin. Previously, DOE voluntarily complied with the North American Standard Level VI Inspection Program requirements.

Select radiological shipments include highway route controlled quantities (HRCQ) of radioactive material as defined by Title 49 CFR Section 173.403. And, because only a small fraction of transuranics are HRCQ, the DOE decided to include its transuranic waste shipments in the North American Standard Level VI Inspection Program.

CVSA also will be conducting a Peer Review on the Level VI Program. This review will be a comprehensive review of five states' Level VI Inspection Program. A team leader and a five-member peer review group who are members of the CVSA RAM Subcommittee and representatives of the Western Governors Association, Southern States Energy Board, The Council of State Governments Midwestern and Northeast Offices, WIPP Carriers and DOE will conduct the review.

As of this time, South Carolina State Transport Police, Colorado State Patrol and Port of Entry and the Tennessee Highway Patrol have accepted our invitation to participate in the Level VI Inspection Program.

For additional information on the North American Standard Level VI Inspection Program contact Larry D. Stern, CVSA/DOE Program Director, at [larrys@cvsa.org](mailto:larrys@cvsa.org) or 304-292-1601. ■

### **PUBLIC OUTREACH SCHEDULE**

U.S. Council of Mayors Winter Meeting  
January 17-19  
Washington, DC

Commercial Vehicle Safety Alliance  
Cooperative Hazardous Materials  
Enforcement Development  
January 22-27  
Fort Lauderdale, Florida

Department of Energy Transportation  
External Coordination  
April 4-5, 2005  
Phoenix, Arizona

Department of Energy Technical Training  
Workshop  
April 5-8, 2005  
Phoenix, Arizona

Commercial Vehicle Safety Alliance  
Annual Conference  
April 15-21, 2005  
Albuquerque, New Mexico

International Association of Fire Chiefs,  
International Hazardous Materials  
Response Teams Conference  
June 2-5, 2005  
Hunt Valley, Maryland

National Congress of American Indians  
Mid-Year Session 2005  
June 12-15, 2005  
Oneida, Wisconsin

International Association of Fire Chiefs  
August 11-15, 2005  
Denver, Colorado

National Conference of State Legislatures  
August 16-20, 2005  
Seattle, Washington

American Association of Motor Vehicle  
Administrators  
August 28 - September 1, 2005  
Fort Worth, Texas

Commercial Vehicle Safety Alliance Fall  
Workshop  
September 23-29, 2005  
Biloxi, Mississippi

Department of Energy Transportation  
External Coordination Fall Meeting  
TBD



## 2005 Basic Level VI Classes Scheduled

Under the cooperative agreement with the U.S. Department of Energy, CVSA has scheduled the 2005 CVSA Basic Level VI Classes to certify inspectors on all motor carrier shipments of transuranic waste and Highway Route Control Quantities (HRCQ) of radioactive materials. CVSA provides the Level VI Training to jurisdictional inspectors who meet the prerequisite of being Level I and HAZ MAT Certified.

### This is the remaining 2005 schedule:

- Albuquerque, New Mexico—May 16-19
- Austin, Texas—June 6-9
- Mendota Heights, Minnesota—July 18-21
- Grand Island, Nebraska—August 15-18
- Blythewood, South Carolina—September 12-15
- Oak Ridge, Tennessee—October 17-20
- Linthicum Heights, Maryland—November 14-17

Any state or federal agency that is interested in sending inspectors to the scheduled classes is asked to contact Larry D. Stern, CVSA/DOE Program Director at [larrys@cvsa.org](mailto:larrys@cvsa.org) or at 304-292-1601. ■

## CVSA BASIC LEVEL VI Training Classes Held



The Pennsylvania State Police hosted a class in Harrisburg, January 10-13 and the Missouri State Highway Patrol hosted a class in Jefferson City, March 14-17. Trainees were from the Pennsylvania State Police, PUC and BRP, Ohio PUC, Missouri State Highway Patrol, Nevada Highway Patrol, FMCSA and representatives from Tri State Motor Transit.

As reflected by the evaluations and comments received, the instructors — Carlisle Smith and

Rob Rohr, Ohio PUC; Pat Fiori, California Highway Patrol and Jacob Raley, New Mexico Motor Transport — did a great job instructing the classes. CVSA appreciates having instructors such as Carlisle, Rob, Pat and Jacob and the support of their individual departments that allowed them time to instruct these important classes.

CVSA also appreciates DOE, Tri State Motor Transport and CAST Transportation for taking the TRUPACT II to the training sites so it was possible to have practical exercise. And, thanks to Thomas Hughes, Pennsylvania Emergency Management Agency and Jerry Baker, Missouri State Highway Patrol, who arranged for the classes and provided assistance throughout the classes. ■



## WHY YUCCA MOUNTAIN?

*(Second article of a two-part series about Yucca Mountain)*

### **Allowing the Environmental Cleanup of Cold War Weapons**

**Facilities**—The production of nuclear weapons during World War II and the Cold War resulted in a legacy of high-level radioactive waste and spent nuclear fuel that is currently stored in Washington, South Carolina and Idaho.

In past years, large volumes of high-level radioactive waste were created when spent nuclear fuel was reprocessed to extract plutonium for weapons use. The high-level waste left over from that process exists in liquid and solid form. Federal sites where this liquid waste has been stored, and in some instances has leaked from holding tanks, require varying degrees of remediation. The cleanup and decommissioning of the former weapons-production sites will require permanent disposal of all these materials, including solidified liquid waste.

**Protecting the Nation**—Deep geologic disposal will safeguard radioactive waste from deliberate acts of sabotage or terrorism. No reasonably conceivable attack at the surface of a repository could have a significant impact on the high-level waste contained in robust metal containers some 1,000 feet underground. In addition, the Yucca Mountain site is remotely located on federal land with restricted access and is adjacent to the Nevada Test Site.

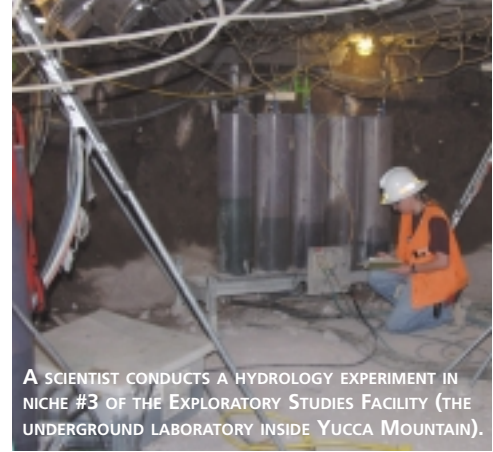
The United States has conducted over 800 nuclear weapons tests at the Nevada Test Site, which has a highly trained and effective rapid-response security force and is surrounded on three sides by the Nellis Air Force Range, all with restricted air space.

Many of our nation's large naval vessels are powered by nuclear reactors that generate a small but strategic amount of spent nuclear fuel. The waste from naval operations is currently being stored at the Idaho National Environmental and Engineering Laboratory while awaiting final disposal. This waste must be disposed of in order to maintain our naval vigilance now and in the future.

The United States has provided fuel for use in research reactors in both the U.S. and foreign universities and laboratories. To support a nuclear non-proliferation objective, these laboratories are required to return the spent fuel. These domestic and foreign spent fuels are being stored at Savannah River, South Carolina and at the Idaho National Engineering and Environmental Laboratory while awaiting disposal in a repository.

The end of the Cold War brought the welcome challenge of disposing approximately 50 metric tons of surplus weapons-usable plutonium. Nuclear materials would be secure in a closed and sealed geologic repository where unauthorized removal would be virtually impossible. By permanently disposing of its own surplus nuclear materials, the United States would encourage other nations to do the same.

**Providing Support to a Sound Energy Policy**—Preserving the capabilities to generate electric power using nuclear energy is important to a balanced energy policy. Not only does nuclear power decrease our depend-



A SCIENTIST CONDUCTS A HYDROLOGY EXPERIMENT IN NICHE #3 OF THE EXPLORATORY STUDIES FACILITY (THE UNDERGROUND LABORATORY INSIDE YUCCA MOUNTAIN).

ence on foreign oil, it also keeps the price of other energy alternative at a low level. The preservation of energy options will not be possible without permanent disposal of the spent nuclear fuel.

As utilities have moved more and more spent fuel out of crowded cooling pools into outside above-ground storage casks, the amounts of spent fuel stored onsite are rapidly approaching limits agreed upon between utilities and state governing bodies. When these limits are reached, new or additional storage will need to be renegotiated. In some cases, the reactors may have no option but to close down prematurely. Consumers then will have to pay the increased costs of replacement power. Moreover, the costs for additional onsite dry storage have been rising rapidly.

### **How Do We Know It's Safe?—**

The natural barriers work in concert with additional man-made barriers to isolate waste from the accessible environment for tens of thousands of years. Scientists have identified five key attributes that are important to long-term disposal systems:

- **Limited water entering emplacement tunnels**—the climate at Yucca Mountain is arid, with precipitation averaging about 7.5 inches per year. Future climates during the regulatory compliance period are expected to be slightly cooler and produce a mean annual precipitation of about 12.5 inches. Little of this precipitation percolates into the mountain; nearly all of it (about 95 percent) runs off, is picked up by the root systems of vegetation, or is lost to evaporation. This significantly limits the amount of water available to infiltrate the surface, move down through the thousand feet of unsaturated rock, and seep into emplacement tunnels.

Yucca Mountain consists of alternating layers of welded and non-welded volcanic tuff; welded tuff at the surface, welded tuff at the level of the repository, and layers of nonwelded tuffs above and below the level of the repository. These non-welded units contain few fractures; thus, they delay the downward flow of moisture into the welded tuff layer below, where the repository would be located. At the repository level, water in small fractures has tendency to remain in the fractures rather than flow into large openings, such as tunnels.

- **Long-Lived Waste Package and Drip Shield**—The DOE has designed a titanium drip shield and a waste container to work in concert with the natural barriers in the Mountain. The drip shield and Alloy 22 outer barrier of the waste package would be expected to have long lifetimes in a repository environment. Alloy 22, the outer barrier material of the waste package, is very corrosion-resistant, with general corrosion expected to penetrate only about 0.03 inches of this outer layer of material in 10,000 years. The Titanium Grade 7 also is corrosion-resistant, with general corrosion expected to penetrate only about 0.08 inches of the 0.16 inches, in 10,000 years. Only about one percent of the waste packages are projected to lose their integrity during the first 80,000 years.
- **Limited Release of Radionuclides From the Engineered Barriers**—Even though the waste packages and drip shields are expected to be long-lived in the repository environment, the advanced computer simulations predict some eventual loss of waste package integrity. Even if water was to penetrate a waste package, several characteristics of the waste forms and the natural character of the repository rocks and water would limit radionuclide release. In the early periods after closure, because of the warm temperatures, much of the water that penetrates the waste package will evaporate. The solid waste forms will not dissolve rapidly in the water expected in the repository environment. In addition, crushed tuff, which would be placed under the waste package and support pallet, would also delay the movement of radionuclides.
- **Delay And Dilution Of Radionuclide Concentrations By The Natural Barriers**—Eventually, the engineered barrier systems could suffer some loss of integrity, and small amounts of water could contact waste, dissolve it and carry some radionuclides out of the repository and into the rock below. The repository level is in the unsaturated zone, where the microscopic holes in the rock are only partially filled with water. On average, the water table lies 1,000 feet below where the host rock is fractured and these fractures provide the main pathways for water and radionuclide transport through this zone. As water flows through fractures, radionuclides are dissolved. It would diffuse into and out of the pores in the rock, increasing both the time it takes for radionuclides to move from the repository and the likelihood that they will be exposed to sorbing minerals that attract and hold them.

Rock units in both the unsaturated zone and the saturated zone at Yucca Mountain contain minerals called zeolites that work like activated charcoal to absorb and delay many radionuclides. The degree of delay introduced by the saturated zone differs greatly for various radionuclides, depending on their capacity to sorb onto mineral surfaces and colloids (very small particles of clay or other material). Strongly sorbing radionuclide species have transport times that range from tens of thousands to millions of years, and do not significantly

contribute to calculated doses during the 10,000-year period of regulatory compliance. In contrast, nonsorbing and weakly sorbing radionuclides have the potential to be carried to the accessible environment by groundwater thousands of years in the future — when the waste package and the waste forms have lost their integrity.

Flow paths from beneath the repository are generally southerly toward the Amargosa Desert. Radionuclide migration through the saturated zone results in dilution and reduced radionuclide concentrations in groundwater. Additionally, the water in the Amargosa Desert is in an isolated hydrologic basin that does not connect to any lakes or rivers that discharge into the ocean.

- **Low Mean Annual Dose Considering Potentially Disruptive Events**—Yucca Mountain provides an environment in which hydrogeologic conditions important to waste isolation (e.g., a thick unsaturated zone with low rates of water movement) have changed little, if at all, for millions of years. The DOE considered three specific disruptive processes and events (i.e., volcanism, ground motion from seismic events, and nuclear criticality) that could impact the performance of a repository at Yucca Mountain.

Of the three, volcanism resulted in a low but calculable dose during the regulatory period. The likelihood of the repository being disrupted by a volcano is extremely small (about 1 chance in 70 million per year) and the estimated probability weighted dose would be less than one percent of the NRC and EPA radiation protection standards. The NRC requires all nuclear facilities to withstand expected natural phenomena like earthquakes. Criticality was found to have such a low likelihood that it is not necessary to consider further according to regulations. ■

## 2005 REFRESHER

### "Train the Trainer" Class Held In Arizona



The CVSA Level VI Refresher "Train the Trainer" class was held in Phoenix, Arizona, on February 23-24 at the Hilton Phoenix East/Mesa Hotel. The attending representatives were from the Maryland State Police, Kentucky Vehicle Enforcement, North Carolina Highway Patrol, New York State Police, New Mexico DPS/MTD, South Carolina State Transport Police, Wyoming Highway Patrol, Illinois State Police, Michigan State Police, Georgia Department of Motor Vehicle Safety, Virginia State Police, Ohio PUC, California Highway Patrol, Pennsylvania State Police, WV PSC, and Tri State Motor Transit.

The class was modeled after the National Trainer Center Instructor Development Course. Each student was assigned a section of the Level VI Course to teach. They then were video taped and evaluated the Level VI Instructors and other students. The students were taken to a room to view the video and to discuss the written evaluation with a Level VI Instructor. Also, this year we had David W. Pstrak, Transportation and Storage Project

Manager Nuclear Material Safety and Safeguards Spent Fuel Project Office for the U. S. Nuclear Regulatory Commission (NRC) present to the class the updates and new regulations pertaining to DOT's HM-230 Final Rule, Summary of the 10 CFR Part 71 Final Rule, and NRC's Role in Transportation of Radioactive Material and Spent Nuclear Fuel.

The attendees received the materials and knowledge necessary to conduct their respective state or industry refresher courses for Level VI Inspections. Gary Trujillo and Jacob Raley, New Mexico DPS/MTD; Carlisle Smith and Rob Rohr, Ohio PUC; Carl Briggs, Virginia State Police; Reggie Bunner, WV PSC; Pat Fiori, California Highway Patrol; Todd Armstrong, Illinois State Police; and Rion Stann, Pennsylvania State Police, provided the knowledge and instructional tutoring that representatives can use to complete their respective refresher course. They worked hard to develop and provide the state representatives with a viable and useful refresher-training program. ■

## UPCOMING CVSA EVENTS

2005 Annual Conference  
**April 16-21, 2005**  
Hyatt Regency Albuquerque &  
Albuquerque Convention Center  
3003 Tijeras NW  
Albuquerque, NM 87102

Operation Air Brake 2005  
**Unannounced Date May 2005**

Roadcheck 2005  
**June 7-9, 2005**

NAIC 2005  
**August 15-21, 2005**  
Hyatt Regency Tampa  
211 North Tampa Street  
Tampa, FL 33602

Brake Safety Awareness Week 2005  
**August 28-September 3, 2005**

2005 Fall Workshop  
**September 24-29, 2005**  
Beau Rivage  
875 Beach Blvd.  
Biloxi, MS 39530

2006 COHMED Conference  
**January 22-26, 2006**  
Hyatt Regency Islandia Hotel & Marina  
1441 Quivira Road  
San Diego, CA 92109

# CVSA TO PUBLISH REPORT On WIPP Inspection Data By May 1

Through the DOE/WIPP Cooperative Agreement, CVSA has contracted with Nathan W. Christiansen of NWC Associates to input the WIPP Level VI Inspection data, analyze the data and publish a report on our findings from the inspection data during the period of October 2002 to December 31, 2004.

The report will be presented to the members of the RAM Subcommittee for their review and approval on April 17 in Albuquerque. The report will be published and distributed by first week in May. For additional information on the WIPP Inspection Data Report contact Larry D. Stern, CVSA/DOE Program Director, at [larrys@cvsa.org](mailto:larrys@cvsa.org) or 304-292-1601. ■

## CVSA's Level VI Instructors Met In Phoenix

The CVSA's Level VI Instructors met with CVSA/DOE Program Director in Phoenix, Arizona on February 21-22 at the Hilton Phoenix East/Mesa Hotel. The attending instructors were Gary Trujillo and Jacob Raley, New Mexico DPS/MTD; Carlisle Smith and Rob Rohr, Ohio PUC; Carl Briggs, Virginia State Police; Todd Armstrong, Illinois State Police; Reggie Bunner, WV PSC; Pat Fiori, California Highway Patrol, and Rion Stann, Pennsylvania State Police.

The most of the 2-day meeting was devoted to advanced radiation and radioactivity training to enhance the level of training for the CVSA Basic Level VI Certification Instructors by Herbert Cruickshank, U.S. DOE, O.W. "Lynn" Eaton, Manager External Emergency Management, Marsha Beekman, Radiological Assistant Program Coordinator, and Ron Macaluso, Senior Training Coordinator External Emergency Management, of the Washington TRU Solutions LLC., U.S. DOE Contractors from the WIPP Facility in Carlsbad, NM. ■

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