



U.S. Department of Transportation HMIT Grant Pipeline and Hazardous Materials Safety Administration

Grant HM-HMI-0036-16-01-00

07/01/2016 – 12/30/2018

Project Objective Title: To Train CCCHST and NESHTA trainers, Tribal and Pacific Rim educators and military personnel preparing to transition to private sector employment, on the requirements of Hazardous Materials Regulations.

- 1. A summary of the activities and outputs that have taken place during the reporting period (courses, students, contact hours).**

The following objectives were identified for this project. We provide activities and outputs, shown in bold face, for each objective.

Objective A. During the time period July 1, 2016 to June 20, 2017, PETE will train a total 205 CCCHST and NESHTA instructors, Tribal and Pacific Rim educators, and military personnel offering a total 9,680 contact hours of training (6,240 hours in class and 3,440 online).

As of January 31, 2018, given an extension to the original closing date, 120 CCCHST and NESHTA instructors and 60 military personnel, a total of 180 instructors, successfully completed 5,990 total contact hours of training (5,582 hours in class and 408 hours online.) One Pacific Rim educator participated. A breakdown of these numbers follows by objective:

- Thirty (30) CCCHST and NESHTA instructors and fifteen (15) Tribal and Pacific Rim educators will successfully complete a five-day, **40-hour** DOT HazMat Regulations and Instructional Technology program with two days devoted to regulations and three days to instructional technology (using DOT examples and applications.)

As of January 31, 2018, 54 CCCHST and NESHTA educators successfully completed a 40-hour DOT HazMat Regulations and Instructional Technology Program, for a total 2,160 contact hours of training.

- One-hundred (100) Army personnel, transitioning to private employment at three different bases (Riley, Sill, Carson) with which PETE has existing MOAs and military authorized instructors, will successfully complete a five-day, **40-hour** DOT HazMat Regulations and Instructional Technology program with two days devoted to regulations and three days to instructional technology (using DOT examples and applications.)

Sixty (60) Army personnel at Fort Riley and Fort Sill successfully completed the 40-hour DOT HazMat Regs and Instructional Technology Program (Two of the sixty completed only a 24-hour Regs course) for a total 2,368 contact hours of training. Participants are not allowed to miss any class. Conflicting appointments have caused students to miss class and drop the course. There were two classes scheduled in the Fall of 2016, but Ft. Riley canceled one of the courses because of deployments.

- A minimum 60 CCCHST/NESHTA instructors will attend a **two-hour** DOT HazMat Regulations Awareness course to be offered to all CCCHST and NESHTA instructors at three annual CCCHST/NESHTA Instructor Refresher Conferences to generate further interest in the 16-hour and 40-hour courses.

Seventeen (17) CCCHST and NESHTA instructors have attended a two-hour Haz Mat Regs Awareness course offered in conjunction with PETE Refresher Conferences, for a total 34 contact hours of training.

- All instructors except for Awareness-level participants will successfully complete a **16-hour online** HazMat Regulations before attending class.

The estimated time to complete the online modules is 8 hours. Fifty-one (51) participants have completed the online course for a total 408 contact hours. Those instructors who

enroll in the course who can verify their experience and prior knowledge are granted waivers from the pre-requisite.

Objective B. In accordance with 49 CFR § 172.704 (HMR), hazmat trainers and employees will be trained in the following areas:

- General awareness/familiarization training providing familiarity with the requirements of the HMR and enabling the hazmat employee to recognize and identify hazardous materials, consistent with the hazard communication requirements of the HMR;
- Function-specific training concerning the requirements of the HMR specifically applicable to the functions performed by the hazmat employee;
- Safety training including measures to protect the employee from the hazards associated with the hazardous materials to which he or she may be exposed in the workplace;
- Application of the DOT regulations in order to effectively communicate the hazards associated with the materials being transported through marking, labeling, placarding, and documentation.
- Interpretation of the carrier requirements for hazardous materials according to the Title 49 CFR by railcar, aircraft, vessel, and motor vehicle.
- Security awareness training providing an awareness of the security risks associated with the hazards;
- In depth security training relating to a company's security plan and its implementation, if applicable;
- General awareness/familiarization of rail and air transport regulations;
- General awareness/familiarization of driver regulations related to hazmat;
- Familiarization of EPA regulation related to hazardous waste transportation;
- Reporting procedures to complete DOT's Incident Reporting Form.

Students are tested on the specified course content at the conclusion of class. All students have successfully completed testing and have received excellent scores as shown in the class rosters above.

Objective C: Pre- and post-evaluations and satisfaction surveys will show that trainers and employees are very satisfied with DOT training and that have gained valuable skills and knowledge needed to perform their jobs.

Evaluations and effectiveness of training is addressed by Steve Fenton, External Evaluator. His final report notes that the effectiveness of the overall project was measured and

evaluated in several ways including: (1) Student performance was measured by a demonstration of 100 percent skills attainment in hands-on and at least 70 percent correct completion written and verbal testing of students, (2) Student perception of course effectiveness through completion of course evaluations, (3) Student follow-up of transitioning soldiers to determine how many obtained training related employment.

NOTE: On-line 8-hour DOT Regulations Pre-requisite: Instructors taking the 40-hour course and 16-hour course were required to complete 8 hours of online DOT HazMat Regulations coursework before participating in classroom learning. The online course was also made available to CCCHST/NESHTA/Tribal and Pacific Rim instructors so that they could use online resources in blended learning courses that they conduct. This is a free online course offered by DOT PHMSA as the pre-requisite to the DOT course. Since it isn't a course PETE created or has any control over, no formal evaluations were collected. However, PETE staff gathered informal feedback on this course from instructors throughout the process and shared that information with project staff.

A summary of the training provided during this grant project was as follows:

Location	Date	# of Students	# of Evaluations	*Test Score Average
DOT Hazmat Regulations 16-20 hour Course				
St. Louis, MO	July 28-20, 2016	10	10 (100%)	Pilot Course
Portland, ME	May 10-11, 2017	19	15 (79%)	88 – 100%
DOT Hazmat Regulations & Instructional Design 40-hour Course				
Rochester, NY	September 12-16, 2016	8	7 (88%)	86 – 100%
Fort Pierce, FL	January 9-13, 2017	27	26 (96%)	93 – 100%
Oakland, CA	April 24-28, 2017	16**	16 (94%)	84 – 100%
DOT Hazmat Regulations & Instructional Design 40-hour Course (Military Students)				
Fort Riley, KS	Sep 26 – Oct 18, 2016	9	9 (100%)	-
Fort Riley, KS	Feb 27 – Mar 3, 2017	24	23 (96%)	86 – 100%
Fort Sill, OK	May 8-12, 2017	17	17 (100%)	80 – 100%
Fort Riley, KS	June 26-30, 2017	8	8 (100%)	80 – 100%
DOT Hazmat Regulations 24-Hour Course (No Cost Extension Period)				
Amarillo, TX	September 26-28, 2017	11	10 (91%)	89 – 100%
Davenport, IA	November 7-9, 2017	9	9 (100%)	88 – 100%
Fort Riley, KS	December 5-7, 2017	2	2 (100%)	-
TOTALS***		160	152 (94%)	

*Post Course Examinations: After the course, students were administered DOT, IATA, and IMDG examinations, and all students scored between 88-100% on their examinations. These are excellent results and reinforced the conclusion that the students understood the content delivered.

Three additional students audited the 40-hour class held in Oakland, CA but did not take the post course examinations. **Those 3 students are not shown in the Evaluator's count.

*****Evaluations were not kept for instructors attending the 2-hour Awareness course offered at PETE Conferences, therefore the total number of students counted by the Evaluator is 17 fewer than noted Objective 1 above.**

Evaluation Summary: A separate evaluation instrument was used for the 16-20 hour DOT Hazmat Regulations course and the 24-hour Instructional Design course. For the 40-hour combined course, the same instruments were used. The 24-hour DOT Hazmat Regulations course offered during the no-cost extension period used the same evaluation instrument as the 16-hour DOT course. While there were some differences in the evaluation instruments used, the following topics were covered in all evaluation instruments:

Organization and Contents of the Course

Instructor(s) Qualities

Instructional Materials (Printed Materials & Audiovisual Materials)

Course Presentations

Overall Satisfaction Level of the Course

While a complete analysis of evaluations (by class) is addressed in the Final Report, on file in the National PETE office, a summary is provided here. The evaluation instruments used during the training were a modified Likert Scale in that some questions were asked that required students select: "Excellent, Above Average, Average, Below Average, Unsatisfactory or Not Applicable." Other questions were asked that required a written response such as "What was the Strength/Weakness" of the course? Students were also asked to comment on their overall impressions of the course. On those evaluation questions requiring that students select Excellent, Above Average, Average, Below Average, Unsatisfactory or Not Applicable, most of responses (approximately 90% or higher) were either Excellent or Above Average. When asked to identify the Strengths of the course, the most frequent answers provided included the quality of instruction, or specifically the instructor, and the course content. The only weakness of the course cited by students was the length of the course. Several students commented that because there was so much information provided in the DOT 16-hour course, they wished the course were longer in duration. It should be noted here that project staff expanded this course to 24-hours during the no-cost extension phase of the project in direct response to students desire to see the course expanded. In reviewing all the general comments also provided on the

evaluation, most of the responses were very complimentary of the instructor and satisfaction with the course.

Consequently, the primary conclusion drawn by the evaluator is that the training provided to students during this grant project went remarkably well. It's important to note that there was no clear distinction between the evaluations reviewed from the training held regardless of location even though there were different instructors delivering the training. In addition, examinations administered after the course clearly indicate that the students understood the content delivered with scores ranging from 88-100%. The instructors selected to provide this training were premier trainers delivering high quality training to their students. The expertise and knowledge of the instructors is well documented, the course content was determined as excellent and at the appropriate level, and students were very well satisfied with their learning experience. No deficiencies or major concerns are noted. The full report is on file at the National PETE office.

Objective D: Upon completion of trainer training, CCCHST and NESHTA Instructors will provide 50,000 documented contact hours of employee training at the businesses and industries they serve prior to the end of the grant fiscal year.

Instructors completing PETE's DOT Regulations courses returned to their organizations and provided 86 DOT Haz Mat Regulations classes, for 937 workers, offering a total 14,944 contact hours of training

Objective E. Upon completion of training, 100% of soldiers who received DOT HazMat Regulations and Instructional Skills training will attest to having gained the employability skills and knowledge needed to transition to careers requiring knowledge of Hazardous Materials transportation regulations, 50% will have attained jobs requiring use of DOT HazMat regulations, and 25% will serve as DOT HazMat instructors within their places of employment.

Sixty military students completed the DOT course through Barton Community College and eleven (18%) responded to follow-up efforts. While the percentage of responses was lower than anticipated, it should be noted that most soldiers are still on active duty and it is anticipated that responses will continue to increase over time. All of the comments from those students who responded to the evaluator's request for information are included the evaluator's Final Evaluation Report.

Since the overwhelming majority of students are still in the Army, there is not enough data to draw any meaningful conclusions as to the project's overall success. However, responses received from students are instructive because they indicate students have benefited from having the training because it has led to new positions within the US Army and for those who have obtained jobs that are either training-related or not training-related believe that having

the training on their resumes was instrumental in their being hired. So there have been some unintended positive consequences of having the training. As more students transition out of the Army in the coming months, there should be more data to assess the projects overall success.

Soldiers were asked to respond to the following questions in the follow-up effort.

- (1) Do you feel that the training you received provided you with the employability skills and knowledge needed for you to transition to careers requiring this knowledge?
- (2) What is your current employment status?
- (3) If you have transitioned out of the armed forces, are you currently employed?
- (4) If so, does your job require the knowledge and skills you received in training?
- (5) In your opinion, did this training help you secure the new job?

The following is one soldier's response, given as an example of responses:

- (1) I absolutely feel that this training will help me find employment once I transition out of the Army.
- (2) I am currently active duty military, getting ready to retire at the end of this year, however my transitional leave will start late this summer.
- (3) N/A
- (4) This training applies to the job that I currently have as I am a transportation logistician and I deal with hazardous cargo (tankers and ammunition on occasion) and more oversize & over height loads and deal with state agencies on a regular basis for clearances to travel on public roadways. This training gave me a deeper knowledge base I wish I had had years ago and could have been teaching the next generation.
- (5) Since I have not secured a new job as of yet, I feel that this job will make me more competitive in the job market once I do start job hunting.