

Safety and Health Investment Projects FINAL REPORT REQUIREMENTS

The purpose of the final report of your SHIP project is to:

1. Evaluate and document the achievements, challenges, and shortcomings of the project for the constructive benefit of others interested in learning from SHIP projects; and
2. Provide the Division of Occupational Safety and Health with information that shows:
 - a. The outcomes specified in the project application were met; and
 - b. The grant was used for the purpose(s) for which it was approved and in accordance with relevant WAC rules and any special conditions or requirements; and
 - c. The outputs of the project have been disseminated as specified in the application.

The report format has four sections:

1. Cover Sheet
2. Narrative Report (part I)
3. Financial Information (part II)
4. Attachments (part III)

Please provide complete and detailed information in the final report. If you have questions, please call your SHIP grant manager.

REMINDER!!: All products produced, whether by the grantee or a subcontractor to the grantee, as a result of a SHIP grant are in the public domain and can not be copyrighted, patented, claimed as trade secrets, or otherwise restricted in any way.

SAFETY AND HEALTH INVESTMENT PROJECTS FINAL REPORT

Confined Space Entry Training for Decentralized Wastewater Workers in Washington

2014XA00272

July 31, 2014 – Sept. 30, 2015

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Washington On-site Sewage Association

9-31-2015

John Thomas
Executive Director



Funding and support for this project has been provided by the State of Washington, Department of Labor & Industries, Safety & Health Investment Projects.

The Washington On-site Sewage Association is solely responsible for the content of and views expressed in this report and related materials unless they have been formally endorsed by the Washington State Department of Labor and Industries.

PART I

Narrative Report

Abstract:

Present a short overview of the nature and scope of the project and major findings (less than half a page).

Confined space exposures in the On-site Sewage industry have been poorly documented for many years. Fatality and accident reporting has been further complicated by inconsistent characterization of accident profiles to industry category in state and federal agency reporting databases. Prior to the completion of this project, availability of a coherent and industry specific training program for typical confined spaces has not existed. Industry interviews of On-site system service providers have found little to no programmatic approaches to address compliance to the CSE rule in Washington. Further, because of the limited resources of small business practitioners, development of written programs, and implementation of appropriate workplace training and mitigation is limited or non-existent. As a result, compliance is low and no central resource or education exists. The need for an industry specific resource to address awareness, education and workplace resource tools is apparent and highlighted by the recent fatality in Washington of a worker (business owner) in 2014. The need to address identification of actual confined space exposures, written program development, safety management planning and implementation of procedures to address training, evaluation of work procedures or identification of appropriate PPE to manage or eliminate risk is funded under this LNI SHIP Grant.

Purpose of Project:

Describe what the project was intended to accomplish.

The primary object of the project has been to develop and deliver a confined space entry training program that is specific for the On-site industry. The creation and delivery of training and education materials to facilitate small business to develop internal CSE programs that are compliant with all elements of the CSE rule is the outcome. This resource will allow industry service providers access to an industry specific CSE program framework that will be used to develop compliant and company specific CSE programs that address the administrative and record keeping requirements of the CSE rule, and practical skills training on industry specific confined space requirements for assessment, monitoring, PPE selection and use. The practical skills element of the training will also create a reliable proficiency evaluation of the respective roles of entrant and attendant in rule and in practice.

Statement and Evidence of the Results:

Provide a clear statement of the results of the project include major findings and outcomes and provide evidence of how well the results met or fulfilled the intended objectives of the project.

All objectives of the project have been met or exceeded and delivered within the approved budget and scope of the grant.

During the first phase of the project, key activities that were accomplished included identification of known and potential materials handling hazards and an assessment of workplace and field activities associated with confined space entry and excavations. This effort provided base information for the development of the training resource that came later in the project. Additionally, field observations by the grantee of work practices during live confined space entries allowed verification of common practice of typical work tasks.

A total of 4 different companies participated in this element of the study. Service providers with CSE exposures included companies with industry certifications for Installation, Pumping, Operations and Maintenance and OSS Inspection. During the field study phase, 14 individual confined space entry's were observed and reviewed.

Applying the results of the field study and observations, and a review of existing programs in 9 representative companies, the next phase of the project evaluated and created a gap analysis in current industry approaches to the CSE rule and applications. The principle conclusions that were determined upon review of the analysis were that companies either had no awareness of the CSE rule and requirements, or were aware of the requirements and had implemented some but not all elements of the rule.

This evaluative process, provided additional focus to development of the education and training resource, that was submitted and reviewed by the technical support liason from the SHIP program. Supporting program documents and handouts for the upcoming classes were also developed in an editable format for future participants to use as a template for company specific CSE programs.

Four classes were presented during the final two quarters of the grant period in addition to open discussion training forums in conjunction with other training. Two of the full day classes were presented to individual companies with larger workforces and geared toward their specific CSE programs and defined spaces. The other two classes were open enrollment and allowed for smaller companies to participate and interact with like sized companies doing similar work. This approach allowed us to refine the training approach and presentation of critical learning objectives in different learning environments. Course evaluations were completed by participants at the end of each session and course improvements and messaging were incorporated into each successive version.

Another key deliverable accomplished, was the production of three testimonial videos that were created and incorporated into the final two training sessions. These allowed us to create additional high impact messaging with local service providers real experiences in confined space entry's gone wrong. All classes included live training and practical skills assessment of an actual tank entry. Demonstrated skills of entrant and attendant of PPE, air

quality monitoring, ventilation and use of non-entry rescue equipment were practiced and evaluated.

Measures to Judge Success:

If relevant, state what measures or procedures were taken to judge whether/ how well the objectives were met and whether the project or some other qualified outside specialist conducted an evaluation.

Current rule review

A comprehensive review of WAC 296-809 and associated applications to materials handling and excavations in context to the specific applications in the on-site industry confirmed the lack of understanding of the requirements by industry.

Field Observations

Field observations and interviews of field staff revealed the challenges of implementation of the applicable rule. This provided focus for the content and structure of the education and training resource that was developed.

Education Resource development and delivery

LNI Staff support

Throughout the project we met or teleconferenced with LNI SHIP grant staff to review progress of milestone deliverables. The LNI Technical Specialist for the grant reviewed the educational resources during development and offered comments that were incorporated into final documents and interpretation and guidance on rule application in several specific applications and work procedures common to the industry. Her insight and expertise on the subject matter to answer questions and provide feedback were invaluable to the success of the project. The grant administrator and technical advisor attended one of the final classes to gauge effectiveness and provided good commentary back on their perceptions of the class, attendee participation and content.

Relevant Processes and Lessons Learned:

Specify all relevant processes, impact or other evaluation information which would be useful to others seeking to replicate, implement, or build on previous work

AND

Provide information on lessons learned through the implementation of your project. Include both positive and negative lessons. This may be helpful to other organizations interested in implementing a similar project.

Having a working knowledge of field practice and complete understanding of the target audience is critical to building a quality product (in this case education/training). In this project, a regulatory requirement and expert knowledge or access to it, framed the core foundation of the program elements in the training resources. Development of effective tools that provide insight to actual field practice allows appropriate understanding of content needs and an appropriate method of “transfer of knowledge” to the topic. Creating and using evaluation tools that leverage the project deliverables should be structured so that as they are used, they leverage subsequent phases of project deliverables.

Lessons Learned:**Positives:**

Having a positive working relationship with industry service providers and their willingness to identify and solve problems has been foundational to our ability to develop and deliver training solutions that are effective and specific to the need. It also facilitated the support for in-kind donations committed to in the grant.

Understanding the limitations of small business capacity to develop internal programs has also helped us stay focused on developing useful tools that are easy to use and simple to understand. Having a high level of organizational and project planning experience to create education resources development and thousands of hours in training experience greatly facilitated the development and transition of the education deliverable.

Negatives:

An industry bias to the need for regulatory oversight and application persists in this arena will be overcome in time as additional training and clarification on rule emerges. It will be important that LNI compliance officers have a clear understanding of the application of CSE rules to the onsite industry. An example, given by one of the grant participants, was the interpretation of rule communicated to the service provider during an audit by an LNI compliance officer, that “allowed” the service provider to make internal repairs to a septic tank (by definition, a confined space) exempt to the CSE rule as long as the surface depth to the top of the tank (lid) was less than 24 inches. Allowance of an exemption that is so clearly outside the scope of the CSE rule, promotes the confusion of industry perceptions of the rules applicability.

Product Dissemination:

Outline of how the products of the project have been shared or made transferrable.

All of the training resources including the powerpoint presentation are created in currently available software in Microsoft "Office" and were printed and distributed at the various classes that were offered as part of the grant. Editable electronic copies are available to the industry upon request and will eventually be uploaded to the LNI website as another point of access. All of the handouts were designed to be used by industry, and are scoped for use by any industry organization regardless of size or number of employee's. We will continue to offer this program going forward and any industry company or employees may either attend a regularly scheduled class or if they have a need to do "in-house" training, will have access to the WOSSA demonstration site, to use the training stations for the CSE practical skills as an annual refresher.

Feedback:

Provide feedback from participants, trainees, individuals who have used your products/processes, as well as any reports from an independent evaluator on the project.

Each class participant was provided with an opportunity to provide feedback on course content, presentation method, presenter, applicability to them individually in their present position and open comment feedback on the program overall (see course evaluation forms). Post course interviews were held with business owners to reinforce the CSE requirements and answer questions on interpretation of rule to various job tasks.

Project's Promotion of Prevention:

Explain how the results or outcomes of this project promote the prevention of workplace injuries, illnesses, and fatalities?

Awareness to CSE hazards unique to the on-site industry is increased significantly by participation in the CSE class. Providing a typical field application, and practical skill assessment of entrant and attendant allows participants to immediately apply and demonstrate the skills and use of equipment needed that were presented in the classroom setting. Understanding the requirements of the rule, and allowing participants to immediately practice the applied knowledge will increase the safety of the entrant during confined space activities, excavations and other workplace tasks involving materials handling. Our expectation is that companies participating in this program will be enabled to create their own company specific CSE programs or will be able to use the resources to enhance existing programs already in place.

Uses:

How might the products of your project be used within the target industry at the end of your project?

Is there potential for the product of the project to be used in other industries or with different target audiences?

With an estimated industry turnover of at least 25-30% annually, the benefit from this training need will become a permanent offering in the WOSSA curriculum in the future. This training resource will be an effective training tool indefinitely and will be kept current to rule or work environment changes through our internal course review process. Further, we explore arrangements to have it be available to the National Onsite Wastewater Association for distribution nationwide to their affiliate (state) organizations. Additionally, there is significant potential for use of this training resource with minor modifications of the training resource, to any employer needing CSE training and registration will be open to all.

Organization Profile:

For awarded organizations, to include partners and collaborators, provide a brief description of each organization. Mission, vision, and purpose for each of the organizations who applied (this includes partners and collaborators) for the grant.

The Washington Onsite Sewage Association is a non-profit industry organization with a primary focus on education of industry practitioners established in 1990. This includes Designers, Regulators, Installers, Operations and Maintenance, System Inspectors and Pumpers that find work in this industry. With over 400 member companies, it represents a significant portion of the working industry and since the start of the Association Training center in 1996, WOSSA has been the primary source of education resources for service providers in the industry and is recognized by the State DOH, DOL and Local Health Jurisdictions in this role.

Additional Information

Project Type <input type="checkbox"/> Best Practice <input type="checkbox"/> Technical Innovation <input checked="" type="checkbox"/> Training and Education Development <input type="checkbox"/> Event <input type="checkbox"/> Intervention <input type="checkbox"/> Research <input type="checkbox"/> Return to Work <input type="checkbox"/> Other (Explain):	Industry Classification (check industry(s) this project reached directly) <input type="checkbox"/> 11 Agriculture, Forestry, Fishing and Hunting <input type="checkbox"/> 21 Mining <input checked="" type="checkbox"/> 22 Utilities <input checked="" type="checkbox"/> 23 Construction <input type="checkbox"/> 31-33 Manufacturing <input type="checkbox"/> 42 Wholesale Trade <input checked="" type="checkbox"/> 44-45 Retail Trade <input type="checkbox"/> 48-49 Transportation and Warehousing <input type="checkbox"/> 51 Information <input type="checkbox"/> 52 Finance and Insurance <input type="checkbox"/> 53 Real Estate and Rental and Leasing <input type="checkbox"/> 54 Professional, Scientific, and Technical Services <input checked="" type="checkbox"/> 55 Management of Companies and Enterprises <input type="checkbox"/> 56 Administrative and Support and Waste Management and Remediation Services <input checked="" type="checkbox"/> 61 Educational Services <input type="checkbox"/> 62 Health Care and Social Assistance <input type="checkbox"/> 71 Arts, Entertainment, and Recreation <input type="checkbox"/> 72 Accommodation and Food Services <input type="checkbox"/> 81 Other Services (except Public Administration) <input type="checkbox"/> 92 Public Administration
Target Audience: Small Business OSS Service Industry and Gov't.: LHJ Regulatory, Designers, Installation/Construction, Operations and Maintenance/Inspectors for Decentralized Wastewater Systems	
Languages: English	
Please provide the following information - - <i>(information may not apply to all projects)</i>	
# classes/events:	8
# hours trained	40
# students under 18	0
# workers	
# companies represented	
# reached (if awareness activities)	
Total reached	
Have there been requests for project products from external sources? No <i>If Yes, please indicate sources of requests:</i>	

List, by number above, industries that project products could potentially be applied to.
 5

Potential impact (in number of persons or companies) after life of project?
 3,000 plus (persons)

PART II

Financial Information Budget Summary

Project Title:	Confined Space Entry Training for Decentralized Wastewater Workers in Washington		
Project #:	2014XA00272	Report Date:	Sept. 30, 2015
Contact Person:	John Thomas	Contact #:	253.770.6594
Start Date:	July 31, 2014	Completion Date:	Sept. 30, 2015

1.	Total original budget for the project	\$ <u>208,052.00</u>
2.	Total original SHIP Grant Award	\$ <u>148,356.00</u>
3.	Total of SHIP Funds Used	\$ <u>148,356.00</u>
4.	Budget Modifications (= or - if applicable)	\$ <u>≡</u>
5.	Total In-kind contributions	\$ <u>60,616.47</u>
6.	Total Expenditures (lines 3+4+5)	\$ <u>208,972.47</u>

Instructions:

- Complete the Supplemental Schedule (Budget) form first (on the next page).
- The final report must include all expenditures from date of completion of interim report through termination date of grant.
- Indicate period covered by report by specifying the inclusive dates.
- Report and itemize all expenditures during specified reporting period per the attached supplemental schedule.
- Forms must be signed by authorized person (see last page).
- Forward one copy of the report to Anar Imin **SHIP Grant Manager** at **PO Box 44612, Olympia, WA 98504-4612**

PART II *(Continued)*

Financial Information

Supplemental Schedules (Budget)

Project Title:	Confined Space Entry Training for Decentralized Wastewater Workers in Washington		
Project #:	2014XA00272	Report Date:	Sept. 30, 2015
Contact Person:	John Thomas	Contact #:	253.770.6594
Total Awarded:	\$148,356.00		

ITEMIZED BUDGET: How were SHIP award funds used to achieve the purpose of your project?

	Budgeted for Project	Amount Paid Out	Difference
A. PERSONNEL	88,440.00	92,253.62	3,813.62

Explanation for Difference and other relevant information:

As additional potential safety hazards associated with OSS workers exposure to Confined Space Entries were identified, the training materials needed to be further edited with new and updated information prior to the final report.

In Milestone 4 we submitted a modification request of Travel and Publications budgets in order to transfer funds to the Personnel budget. The amount adjusted in the Personnel budget was used to cover the costs associated with the further editing of the training materials.

	Budgeted for Project	Amount Paid Out	Difference
B. SUBCONTRACTOR	N/A	N/A	N/A

Explanation for Difference and other relevant information:

	Budgeted for Project	Amount Paid Out	Difference
C. TRAVEL	3,576.00	1,382.38	2,193.62

Explanation for Difference and other relevant information:

As the project neared completion we realized that we were not going to need the full amount of funding within the Travel budget as estimated. We were able to consolidate our field observations, which reduced the amount of travel necessary.

In Milestone 4 we submitted a modification request of Travel and Publications budgets in order to transfer funds to the Personnel budget. The amount adjusted in the Personnel budget was used to cover the costs associated with the further editing of the training materials.

	Budgeted for Project	Amount Paid Out	Difference
D. SUPPLIES	3,600.00	3,600.00	0.00

Explanation for Difference and other relevant information:

	Budgeted for Project	Amount Paid Out	Difference
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E. PUBLICATIONS	13,740.00	12,120.00	1,620.00
Explanation for Difference and other relevant information:			
<p>WOSSA was willing to complete articles for the Pipeline expenses with no additional cost to the grant. This allowed for a portion of the publications budget to be transferred to the Personnel budget. These funds were used for the final editing of the training materials due to the training documents being continuously edited with new information as we learn more about the hazards associated with OSS workers exposure to Confined Space Entries.</p> <p>In Milestone 4 we submitted a modification request of Travel and Publications budgets in order to transfer funds to the Personnel budget. The amount adjusted in the Personnel budget was used to cover the costs associated with the further editing of the training materials.</p>			

	Budgeted for Project	Amount Paid Out	Difference
F. OTHER	39,000.00	39,000.00	0.00
Explanation for Difference and other relevant information:			

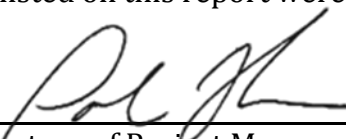
	Budgeted for Project	Amount Paid Out	Difference
TOTAL DIRECT COSTS	148,356.00	148,356.00	0.00
	Budgeted for Project	Amount Paid Out	Difference
TOTAL INDIRECT COSTS	N/A	N/A	N/A
	Budgeted for Project	Amount Paid Out	Difference
TOTAL SHIP BUDGET	148,356.00	148,356.00	0.00

	Budgeted for Project	Amount Paid Out	Difference
G. IN-KIND	59,696.00	60,616.47	- 920.47
Explanation for Difference and other relevant information:			

I hereby certify that the expenditures listed on this report were made with my approval:

09.30.15

Date


Signature of Project Manager

PART III

Attachments:

Provide resources such as written material, training packages, or video/ audio tapes, curriculum information, etc. produced under the grant.

Also include copies of publications, news releases, curriculum, posters, brochures, etc.

The above information should also be provided on a CD or DVD for inclusion in the file.

- DVD: must be in an MP4 format
Other video files must be provided in uncompressed source files.
- Publications:
PDF of publication should be provided. SHIP also needs the original publishing documents (design documents), .eps, and .psd (if any illustrations/graphics are used)

ATTACHMENTS Included in Final Report:

- **Included in Final Report:** Training Class Feedback and Laboratory Testing Results

ATTACHMENTS:

- **PowerPoint Presentation**
- **Training Video's - 3 Total**
- **Trainer Handbook**
- **Presentation Handout**
- **Training Handbook**
- **Training Resource**

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