



VETERANS
of SAFETY

2017

VOS Midyear Newsletter

Message from VOS Newsletter editor Warren K Brown, CSP, ARM, CSHM:

Make sure to visit our website at <http://vetsofsafety.org/> to get more information about VOS. Have a good safe day.

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VETERANS OF SAFETY

AN INTERNATIONAL ORGANIZATION

Newsletter

VOS President's Address

July 17, 2017

Dear VOS Members,

Our President Mark Rater has been ill for some time. We are happy to report that Mark is on the mend and should be able to rejoin our VOS Board efforts in the not too distant future – Mark, we are happy you are getting back on your feet.

We have been making progress with the addition of the Safety and Health Hall of Fame International (SHHOFI) into the VOS system. We now have all the Hall of Fame plaques, files and historical documents store in one location. We are working on administrative By-Laws that will become part of the VOS By-Laws in the near future. We are also pursuing a permanent home for SHHOFI – stay tuned.

As you will read elsewhere in this newsletter, we have awarded our VOS Student Scholarship to Madeline Adams from Slippery Rock University in Pennsylvania. Congratulations to a future Safety Professional.

VOS Board member Fred Fanning is working with our IT Consultant to add some new information and looks to our VOS Web page.

The Annual VOS Board Meeting will be held on October 21, 2017 at the Courtyard Marriott Kansas City Airport, Kansas City, MO. All VOS members are invited to attend, more information to follow.

Patrick J. Conroy

VOS - Vice President

Treasure's Report 2015

Dear Members of VOS.

For the past few years, Veterans has been run by the members of the Board volunteering their time and serves to maximize the net income to further increase the scholarship fund.

For our small organization, it has been difficult to each year build a pool of scholarship applicants. You will see in the financials \$30,000.00 going to The ASSE Foundation. This transaction is now complete and the donation will not show in future financials. As a member, you can be assured, it will be used into perpetuity to award a \$1,000.00 scholarship. The ASSE Foundation has the investment capability to grow the amount each year.

Your future dues will also go to building the scholarship fund as well as improve the website, www.vetsofsafety.org, newsletter and other VOS activities. If you have any questions or comments feel free to contact me.

Jack B. Hirschmann
Treasurer

Jhirschmann@oberoncompany.com

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Mary C. Goranson

July 13, 2017

Warren Brown
Veterans of Safety
1855 Campus Dr
Fairborn, OH 45324

Dear Warren,

Greetings from the ASSE Foundation! I would like to thank you for your continued support over this past year and for helping to make our scholarship and professional education grant program a success!

Attached is your fund balance statement as of March 31, 2017. You will receive this statement each year after the completion of the Foundation's annual audit.

For fiscal year 2017 (April 1, 2016 – March 31, 2017), this statement includes the following:

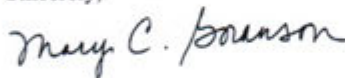
- donations made to your fund;
- scholarships and/or grants paid from your fund;
- administrative fees paid from your fund;
- investment earnings added to your fund

Donations made to your fund after April 1, 2017 are not included on this report, but will appear on the fiscal year 2018 statement.

The Foundation Board continues to monitor the investment portfolio closely and is taking measures to maintain or reduce operating expenses when needed. In addition, I am pleased to report that your fund earned 6.97%. The interest is the actual 5-year average of the entire ASSEF portfolio as measured by ASSEF's investment management firm on March 31 each year. Using a 5-year average helps each fund benefit annually from the upside of the market and will help protect each fund from a short-term decline.

If you have any questions, please feel free to contact me at 847-768-3412 or mgoranson@asse.org.

Sincerely,



Mary C. Goranson
Director, Foundation

American Society of Safety Engineers Foundation
DONOR STATEMENT
As of March 31, 2017

	9328--Veterans of Safety-Restr Corporate
	Year Ending
	03/31/2017
Beginning Fund Balance	\$30,605.76
Donations	\$100.00
Scholarships	(\$1,000.00)
Fees	(\$300.00)
Subtotal	\$29,405.76
Investment Return	\$2,049.58
Ending Fund Balance	\$31,455.34

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Member Profiles

A benefit of membership in Veterans of Safety is having your photo and bio on the web page for everyone visiting the website to see. This can help you gain credibility and presence within the profession. At the Veterans of Safety web page under "Membership," you can click on "Member Profiles" to see the current bios. You can use these bios and photos as examples for yours. If you would like to take advantage of this benefit, please forward your photo and one-page bio to Fred Fanning at fredefanning@gmail.com. Fred will work with technical staff to place them on the web page.

Member News

A benefit of membership in the Veterans of Safety is to highlight your awards, promotions, and new jobs. This can help you gain credibility and presence within the career field. At the Veterans of Safety web page under "News" is a section for "Member in the News." If you would like to have your successes made public, please send a short narrative and photo to Fred Fanning at fredefanning@gmail.com. Fred will work with technical staff to place them on the web page. To help our member who might not have known about this benefit, we will post items back to years.

2017 Veterans of Safety Scholarship from the ASSEF

Madeline Adams at Slippery Rock University of Pennsylvania majoring in Safety Management was selected. We congratulate Madeline for being selected and wish her well in her educational and professional journey!



Picture at ASSE PDC in Denver, June 20, 2017

Madeline had this to say about her scholarship: I want to take this time to thank you for the incredible gift of this scholarship. I was very worried about my financial situation at the beginning of this summer because these internships are expensive. It is very unlikely I would have been able to pay my summer bill without the Veterans of Safety's generosity. Some Information about me:

I am a senior Safety Management major at Slippery Rock University. I am currently working in the role of Environmental Health Safety Intern at Westinghouse in Newington, NH. I will graduate in December of 2017.

My career goals are to make sure every employee I work with goes home every day. I also have a goal to help every employee I work with learn something new that will help keep them safe. My last and most important personal goal is to learn as much as I can about the work the employees I work with do. Although I know my own strengths are different from theirs I find the work they do to be inspiring and know my ability to keep them safe is heavily dependent on my knowledge of everything they are or can be exposed to.

I plan to impact the safety profession by staying focused on my goals. I want to make sure I always remember that each and every employee has a life outside of work. I plan to give back to students who are striving to become Safety Professionals. I think it is extremely important that we share mistakes and help others learn. I want to help prepare students anyway I can to be ready for the responsibility of protecting another person's life. This doesn't mean I want to teach, but I want to stay connected with the ones who are teaching. I think it is important that what is being taught does not get separated from what is going on in the workforce. I plan to never stop pushing myself for as long as I live because every time I do I am amazed by what I learn.

I hope this information helps. If you have any further questions or need any other information from me please reach out. I am not always available by phone due to my internship hours, but I will make sure to either respond in email or call when I get an available moment.

Sincerely,

Madeline Adams

Safety Management Major

Slippery Rock University

What does it mean to be a Veteran?

Howard Spencer, CSP, CPSI

The dictionary lists an alternative definition, it is (an adjective): an experienced person who has been through many battles; someone who has given long service; or rendered competent through trial and experience.

I ask the question; are there “Safety Veterans? I strongly answer, yes! Why do I say that? Most individuals first thought is (a noun): a person who has served in the armed forces, or relating to former members of the military, especially those who served during wartime.

Let’s look at the meaning of a *battle*: an energetic attempt to achieve something. Any individual actively involved in our profession has tried to implement change. If your experience equates to mine it is often not an easy accomplishment. Many safety efforts receive opposition from both management and workers. I believe that qualifies as a battle. If you choose to stay in this endeavor you must be persistent to achieve the goals you strive for. Along the way you may learn a thing or two about management and safety.

Many of us have spent our careers in the pursuit of driving safety excellence! It is often a thankless job and maybe the only reward is the occasional kudo from someone you guided along the way and they recognize that your coaching meant an injury prevented.

After a few decades in this business our colleagues may alone recognize us as one who is competent through trial and experience. Well, take heart, there is an organization that was established for the purpose of supporting those of us with the tenacity to stay in the game for the long haul.

Veterans of Safety: was founded on October 9, 1941, as an international, independent, non-profit, non-commercial, non-political organization of Safety, Health and Environmental Professionals with at least **10 years** of experience as a safety professional. Our mission is the promotion of safety, health, and environmental awareness by using and making available the lifetime experience of professionals throughout the world. A brief look at our web site: <https://www.vetsofsafety.org> will show the broad range of experience of its members.

The **Safety and Health Hall of Fame International** was born of an idea promulgated by the Veterans of Safety. VOS obtained the cooperation of fourteen charter member organizations among them ASSE. To date SHHFOI has inducted 70 individuals, many names you admire.

People with the dedication to stick it out in a tough profession like ours have learned how to deal with rejection and we often pick up a few people skills along the way. These folks have paid their dues and have a few scars to prove it. They offer their expertise through a quarterly newsletter.

So I recommend that you apply to become a member of this proud group of professionals. Go to the web site and download an application. Thank you. Howard

USING PORTABLE FIRE EXTINGUISHERS

In the event of a fire, the correct use of a portable fire extinguisher could mean the difference between suffering a minor loss or a major one. Portable fire extinguishers, if used properly, can make that difference. But there are several things to consider in using fire extinguishers. For instance, you must know the class of fire involved and the correct type of extinguisher to use.

CLASSES OF FIRES AND FIRE EXTINGUISHERS: 1. Class A Involves ordinary combustibles such as paper, wood, cloth, rubber or plastics. The common extinguishing media is water or dry chemical. 2. Class B Flammable liquids, grease or gases are covered under this category. Common extinguishing media are foam, carbon dioxide or dry chemical. 3. Class C Live electrical fires are class C fires. CO2 or dry chemical extinguishers should be used. However, the actual burning product may be class A items. 4. Class D Burning metals (Mnemonic “Dynamite”) Class K Oils and Fats (“Mnemonic Kitchen”)

Remember Ashes, Barrels & Currents can be extinguished with an ABC fire extinguisher

REMEMBER P-A-S-S WHEN USING AN EXTINGUISHER: **P** - Pull. Pull the locking pin before using the fire extinguisher. **A** - Aim. Aim the fire extinguisher at the base of the fire. Not at the flames or smoke. **S** - Squeeze. Squeeze the lever of the fire extinguisher to operate and discharge. **S** - Sweep. Sweep the fire extinguisher back and forth at the base of the fire to extinguish.

ABC Fire Extinguishers length of use (5lb = 3 seconds, 10lb = 10 seconds, 20lb = 20 seconds) If the fire is larger than about the size of a trash can a 20lb ABC fire extinguisher will not put it out.

DO NOT ATTEMPT TO FIGHT A LARGE FIRE!

Inspection of an Extinguisher: 1. Is it full? Check the gauge and see if the arrow is in the GREEN, is the gauge damaged? 2. Pin? Check the pin and the keeper on the pin. 3. Label? Does it have a legible label and can you tell what type it is? 4. Damage? Is the body or the handle damaged, dented, rusted? 5. Tag? If the tag is legible and in good order and all other parts are in order update the tag with your initials or punch a hole

Submitted by Pat Conroy

S, H & E Information Update

Edited by Warren K Brown, CSP, ARM, CSHM

Sleep Deprived Worker Study

A NIOSH study of 180,000 workers indicated that about 36% of the respondents had short sleep durations which mean they averaged less than seven hours of sleep per night. Communication workers, rail transportation workers and plant and systems operators were among those most sleep deprived. To review the study go to <http://www.sh-m.ag/2oQFgfY>.

Using the Hierarchy of Control to Prevent Heat Stress Incidents

Engineering controls such as fans, air conditioning, insulation of hot surfaces and ventilation ducts at high heat sources can be effective; Personal Protective Equipment such as cooling vests and reflective clothing; Training where good work practices such as work break cycles and being able to recognize symptoms of heat stress—these methods can go a long way in allowing the workforce to deal with heat stress while effectively operating in the workplace.

CSB Video of 2016 Successes

The CSB has created a video that explains its successes in 2016 to help convince the government of their importance in light of the current budget eliminating funding for the CSB. www.csb.gov/csb-2016-impact-video.

Agricultural Dust Explosions in 2016

Although there were less dust explosions in 2016 there were three fatalities. According to a Purdue University report it is important to keep facilities prone to producing dust clean and to assure plant equipment is kept in good working order. To view the report, go to <http://sh-m.ag/2nLcA6c>.

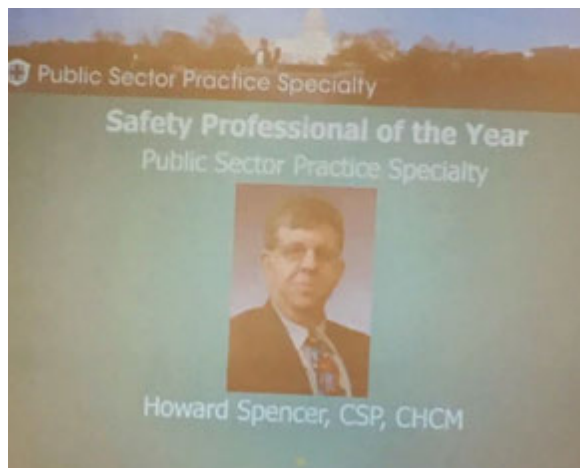
US Leads in Numbers of Robots Vulnerable to Hacking

With the fact that robots are everywhere, hacking could result in potential employee injuries if hacking alters the robot's state and the operator loses control. If the robot is reachable directly from the internet, the concern is even greater. A report prepared by Trend Micro is available at www.trend-micro.com for further study of this important issue.

CPR Training to Improve from Feedback to Students

The American Red Cross will start incorporating feedback devices in CPR training during 2018. The feedback will assure students are performing the training properly and allow for adjustment in the steps when necessary. More information is available at <http://redcross.org/apps>.

2017 Awards we are aware of:



Howard Spencer, CSP, CHCM– 2017 Safety Professional of the Year

- ASSE Public Sector Practice Specialty

Warren K Brown, CSP, ARM, CSHM- Volunteer Group Service Award- AIHA Confined Space Committee-June 2017



Pictures of VOS members at the ASSE PDC in Denver June 2017



VOS members at NSC Congress, Indianapolis, September 2017

Haws Webinar

Thank you for your interest in our webinar!

Dear Christopher,

If you missed the webinar or want to share it with colleagues, use the link below to access the on-demand recording now.

[View the On-Demand Webinar »](#)

Also, below are links to our ANSI Z358.1-2014 Compliance Checklist as well as a short white paper on increased OSHA fines.

[Download the ANSI Z358.1 - 2014 Checklist \(pdf\) »](#)

[Complimentary White Paper: A Sharp Increase of OSHA Fines »](#)

Lastly, we want to ensure all your questions were answered, so please let us know if you have any additional questions. A second follow up email will be sent next week including the Q&A from the live session.

Haws®

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info@hawsco.com

<https://www.hawsco.com>

Submitted by Chris Gates

David MacCollum Interview:

The Short History of Work Safety in the USA:

The first time industry heard of safety was around 1910 when workers' compensation laws were enacted for construction and production employers.

This affected the immediate employer and immediate injuries. The attempt was to make equipment safe to use such as tractors and cranes which Dave worked on following WW2.

However the indoctrination at the time was on worker-caused injuries and accident investigation blaming the worker for incidents.

The Corps of Engineers instead targeted tractor incidents and equipment subject to roll-overs. They created standards for equipment design and for bids, the US Army required bidders to meet those design safety standards.

That has continued till now when we are at a cross-roads with the age of automation on us and the equipment is being changed to keep people as operators out of the equation. Caterpillar is testing driverless trucks in mining operations and also Rio Tinto already has a fleet of up to 20 mining trucks. Komatsu and Caterpillar lead the way in design of vehicles with no cabs.

Development in the kitchen has dishwashing that allows the hands to remain dry. Clothes washers and driers are also more

protective. In the next two decades we will see more changes in the workplace beside automobile automation. This is because the term design-based safety will become prevalent and displace manual work and hands-on controls by design.

Global positioning will become more useful in transportation operations particularly in collision avoidance.

Dave's books include the following:

1. Crane Hazards and Prevention
2. Construction Safety Planning
3. Construction Safety Engineering Principles
4. Murder by Electrocution - novel

Dave's work experience includes US Army testing electronics and guidance systems in the early age of solid state and the internet use in weapon systems

Noted: Nigel Ellis phone discussion with Dave MacCollum on 7-27-2017

CONSTRUCTION SAFETY DESIGN SOLUTION

DESIGN CATEGORY: Roof Access

HAZARD: Falls from ladders and other climbing structures

DESIGN SOLUTION: Incorporate horizontal grab features for effective three-point control

Submitted by Nigel Ellis

Fatalities caused by falls from elevation continue to be the leading cause of death for construction workers, accounting for 345 of the 899 construction fatalities recorded in 2014.¹ Falls from ladders make up nearly a third of those deaths.² Some of these deaths can be prevented if designers incorporate horizontal grab features to enable workers to more effectively use three-point control when climbing ladders and other structures.

SOLUTIONS

Providing Horizontal Grab Features to Prevent Falls From Ladders

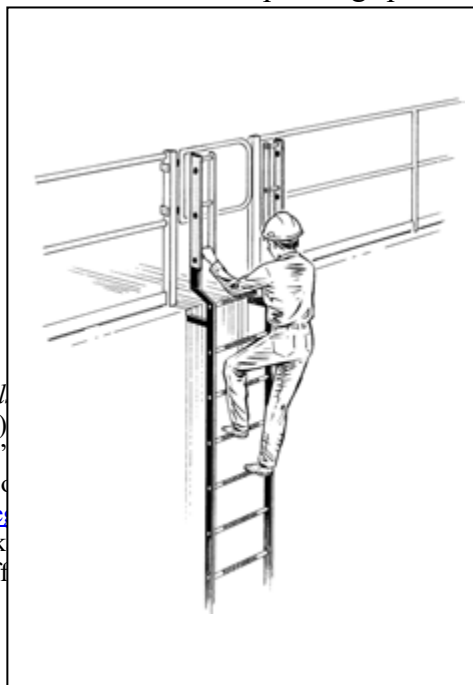
For walk-through fixed ladders, designers should specify that the ladders or ladder equivalent have horizontal round grab bars. If a fall occurs, a vertical rail extension is less effective in stopping the fall due to low sliding friction and lack of a horizontal power grip.³ However, if a worker is holding rungs on the ladder or equipment or structure horizontal grab bars, sliding is avoided when a fall starts at the top three-foot extension of a fixed ladder during transition due to the high-strength, non-sliding hook grip.

Workers should be trained to hold only horizontal rungs and horizontal grab bars when possible and to use the

¹ BLS, [2014 Census of Fatal Occupational Injuries](#).

² [Falling Off Ladders Can Kill](#), OSHA Publication 3625 (2015). *See also* Occupational Ladder Fall Injuries – United States 2011 (Apr. 25, 2014) injuries treated in U.S. emergency departments (EDs) involve a ladder.³

³ A horizontal power grip refers to holding a rung or horizontal bar, as compared to a vertical rail. *See* Barnett and Poczynok (2000). [Ladder rung vs. siderail hand grip strategy](#). Depending on rung size, the horizontal power grip can result in a 75-94% larger breakaway strength. *See* Young, Woodley, Armstrong, et al. (2012). The effect of hand/handhold breakaway strength. *Human Factors*, 54(3), 316-333.



report,
and 81% of fall

ced holds. *See*
depending on the
of the same
loves on the

three-point control climbing technique. See below for a discussion of three-point control versus three-point contact.

Designers of ladder climbing systems should consider human factors when planning the use of effective three-point control. These factors include handgrip strength capacities, the maximum breakaway force if a hand is forcibly pulled away from a support, and the size, shape, orientation, and spacing of handholds/grab bars.

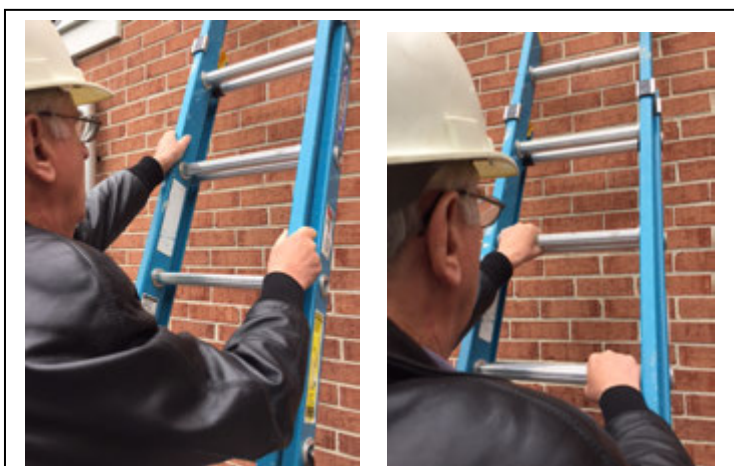
Worker using horizontal grab bars on fixed ladder.

While not a design solution, portable ladders can also be fitted with extension grab bars when used to access roofs or an elevated deck surface to provide a three foot extension. These bars provide the horizontal handholds necessary for three-point control to access or exit a structure. In addition, roof hatches should be equipped with walk-through horizontal grab bars for safer access to or from the roof or higher level.

Three-Point Control v. Three-Point Contact

When using ladders or other climbing structures, workers should consider using the **three-point control** technique.

Three-point control requires a worker to use three limbs for reliable, stable support, including gripping a horizontal support using a horizontal power grip. It is safer for a worker to hold a horizontal support member than a vertical one. Research has shown that holding a horizontal round object or grab bar with a horizontal power grip provides a greater safety margin for preventing a fall than holding onto a vertical side object or rail when a fall starts.⁴ The approximate shape should be 1 to 1.5" rounded. Vertical side rails of any shape promote uncontrolled sliding of the hand in a fall.



Climbing a ladder using three-point contact (left) and three-point control (right).

Unlike three-point control, three-point contact requires three points of support without specified body parts with an unspecified ladder or structure. No shapes or sizes exist for adequate support using three points of contact. Three-point control requires using the hands to grab and hold a support so that one hand can reasonably support the climber's body weight or more in an emergency.

BACKGROUND INFORMATION

⁴ See Young, Woodley, Armstrong et al. (2009). Hand/handhold coupling: Effect of handle shape, orientation and friction on breakaway strength. *Human Factors*, 51(5), 705-717. See also Young, Woodley, Armstrong, et al. (2012). The effect of handle orientation, size and wearing gloves on the hand/handhold breakaway strength. *Human Factors*, 54(3), 316-333.

OSHA regulations

- [29 CFR 1926 Subpart M](#) (1926.500-503 and appendices)
- [29 CFR 1926 Subpart X](#) (1926.1050-1053 and appendices)
- [29 CFR 1926 Subpart L](#) (1926.450-454 and appendices)

Other information

- U.S. Army Corps of Engineers, [EM 385-1-1 Safety and Health Requirements Manual](#)
- ANSI Z359.2, Minimum Requirements for a Comprehensive Managed Fall Protection Program
- ANSI Z359, fall equipment component standards
- ANSI A10.32, Personal Fall Protection Used in Construction and Demolition Operations
- A10.24 Roofing Safety Requirements for Low-Sloped Roofing, and other A10 equipment component standards
- ANSI A14.3 Fixed Ladders
- ANSI A14.2 Metal Ladders
- ANSI A14.5 Fiberglass Ladders

OTHER CONSIDERATIONS

In addition to incorporating horizontal grab features at elevated work locations, designers can also reduce falls from ladders by specifying fixed ladders or stairways when possible. This would reduce the need for portable ladders when accessing a roof, work platform, or upper level, thereby reducing the chance that a worker may use a defective or improper ladder. See [Construction Safety Design Solution #6, Specify Fixed Ladders or Stairs](#).

References:

- J. Nigel Ellis, Three Point Control, Analysis & Recommendations for Climbing Ladders, Stairs & Step Bolts, Professional Safety Journal, Nov. 2012.
- Justin G. Young, Charles Woodley, Thomas Armstrong, and James A. Ashton-Miller, University of Michigan, Ann Arbor, Hand-Handhold Coupling: Effect of Handle Shape, Orientation, and Friction on Breakaway Strength, Human Factors Vol. 51, No. 5, Nov. 2009.
- Justin G. Young Ph.D thesis, [Biomechanics of Hand/Handhold Coupling and Factors Affecting the Capacity to Hang On](#) (2011).
- Kurt Beschorner et al: Biomechanical Response to ladder slipping events: Effects of hand placement, Journal of Biomechanics 48 (2015) 3810-3815.

Through the OSHA Alliance Program's Construction Roundtable, the Roundtable participants developed this product for informational purposes only. It does not necessarily reflect the official views of OSHA or the U.S. Department of Labor.