What's New at Federal OSHA?
Certification, Evaluation and More

Scott Ketcham, Director,
OSHA Directorate of Construction

October 29, 2020
Construction Update

Scott C. Ketcham MPA, CSP
Director, Directorate of Construction
Occupational Safety and Health Administration
Agenda

• Directorate of Construction
• Engineering incident investigation
• Focus Four
• Regulatory Update
• Inspection Statistics
• Crane Operator Qualification
• Opioids/Suicide in Construction
• Fall Stand Down
• COVID-19
• **OCS (Construction Services)**: Field enforcement assistance, Compliance Assistance, Interpretations, ACCSH

• **OCSG (Construction Standards and Guidance)**: Develop and promulgate Construction standards; Directives; Interpretations and other guidance products

• **OES (Engineering Services)**: Forensic engineering analysis, Structural and Geotechnical Assistance
Catastrophe Incident Investigations

- Bridges
- Cranes
- Communication Towers
- Excavation and Trenching
- Formwork and Scaffolds
- Industrial Buildings (Steel, Concrete, Masonry)
- Mast Climbing Platforms
- Parking Garages
- Trusses (Steel and Timber)
- Demolitions
2018: Investigation of the Collapse of a Lattice Boom Crawler Crane

• Construction of a new wastewater treatment facility
  • Two employees on a scaffold
  • Installing wooden roof trusses
  • Lattice boom crawler crane hoisting wooden roof trusses

• Crane boom hoist wire rope failed when lifting four half wooden roof trusses, resulting in the boom falling and striking two employees on scaffolding

• One employee was killed, another was injured
Boom Hoist Line
OSHA’s Findings

• Incident was caused by the *failure of the boom hoist wire rope due to fatigue*, an extensive number of wires of the exterior stands of the wire rope had fractured

• Crane operator and the contractor’s technicians *did not properly inspect the crane’s boom hoist wire rope during the shift and monthly inspections* in accordance with the OSHA standard 1926.1413(a)(3)(ii)
OSHA’s Findings Cont.

• The contractor failed to document its monthly inspections of the crane and its wire ropes in accordance with OSHA standards 26 CFR 1926.1412(e)(3) and 1926.1413(b)(4)

• Metallurgical examination of the failed wire rope indicated that the extent of breaks were due to extensive and numerous fatigue failures, that could have been noticed during proper shift inspections
OSHA’s Findings Cont.

• Contractor did not correct deficiencies raised by the third-party inspector during the annual inspection a few months before the incident

• Contractor was using slings and hooks that were damaged that should have been pulled from service
Construction Focus Four

The actual breakdown of the causes of fatalities on construction sites in 2018 is as follows (numbers are a percentage of the 1,008 total construction-related fatalities that occurred in 2018):

- Falls: 338 (33.5%)
- Struck by object: 112 (11.1%)
- Electrocutions: 86 (8.5%)
- Caught in/between: 55 (5.5%)
## Construction Fatal Fall Incidents

### Fatal Fall Incidents in Construction (323)

<table>
<thead>
<tr>
<th>Type of Construction</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roofing</td>
<td>77</td>
<td>23%</td>
</tr>
<tr>
<td>Residential Building</td>
<td>67</td>
<td>20%</td>
</tr>
<tr>
<td>Plumbing and HVAC</td>
<td>24</td>
<td>7%</td>
</tr>
<tr>
<td>Nonresidential Building</td>
<td>20</td>
<td>6%</td>
</tr>
<tr>
<td>Painting and Wall Covering</td>
<td>17</td>
<td>5%</td>
</tr>
<tr>
<td>Heavy and Civil Engineering</td>
<td>16</td>
<td>5%</td>
</tr>
<tr>
<td>Electrical</td>
<td>15</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: BLS 2018 CFOI Data
## Construction Fatal Struck-by Incidents

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struck by falling object or equipment--other than powered vehicle (66)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Struck by object falling from vehicle or machinery--other than vehicle part</td>
<td>29</td>
<td>26%</td>
</tr>
<tr>
<td>Struck by powered vehicle--nontransport (26)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Struck by falling part of powered vehicle still attached</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td>• Struck by swinging part of powered vehicle</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>• Struck or run over by rolling powered vehicle</td>
<td>5</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: BLS 2018 CFOI Data
## Construction Fatal Electrocution Incidents

### Electrocution Incidents in Construction (86)

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Exposure to electricity (49)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Greater than 220 volts</td>
<td>28</td>
<td>33%</td>
</tr>
<tr>
<td>• 220 volts or less</td>
<td>12</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Indirect exposure to electricity (37)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Greater than 220 volts</td>
<td>33</td>
<td>38%</td>
</tr>
<tr>
<td>• 220 volts or less</td>
<td>4</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: BLS 2018 CFOI Data
## Construction Fatal Caught-in/Between Incidents

<table>
<thead>
<tr>
<th>Caught in/Between Incidents in Construction (55)</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struck, caught, or crushed in collapsing structure, equipment, or material (35)</td>
<td>19</td>
<td>35%</td>
</tr>
<tr>
<td>• Struck, caught, or crushed in other collapsing structure or equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Excavation or trenching cave-in</td>
<td>14</td>
<td>25%</td>
</tr>
<tr>
<td>Caught in or compressed by equipment or objects (20)</td>
<td>11</td>
<td>20%</td>
</tr>
<tr>
<td>• Caught in running equipment or machinery</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: BLS 2018 CFOI Data
Construction Regulatory Activities

• Tech Corrections - Issued in February
• Railroad Cranes - Final Rule in effect
• Crane Amendments - NPRM Clearance
  ▪ Communication Towers - NPRM
  ▪ Welding in Confined Spaces - NPRM
  ▪ PPE in Construction - NPRM
  ▪ Powered Industrial Trucks - NPRM (ACCSH)
  ▪ Hazard Communication - NPRM
Directives

• New Excavation Directive
• New Small Unmanned Aerial System (Drone) Directive
• Updating of Crane Directive for Operator Certification
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1926.501 - Fall Protection</td>
<td>6</td>
<td>1926.20 - General S&amp;H Provisions</td>
</tr>
<tr>
<td>2</td>
<td>1926.451 - Scaffolding</td>
<td>7</td>
<td>1926.100 - Head Protection</td>
</tr>
<tr>
<td>3</td>
<td>1926.1053 - Ladders</td>
<td>8</td>
<td>1926.651 - Excavation Requirements</td>
</tr>
<tr>
<td>4</td>
<td>1926.503 - Fall Protection Training</td>
<td>9</td>
<td>1910.1200 - Hazard Communication</td>
</tr>
<tr>
<td>5</td>
<td>1926.102 - Eye &amp; Face Protection</td>
<td>10</td>
<td>1926.502 - Fall Protection Systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Criteria &amp; Practices</td>
</tr>
</tbody>
</table>
### Top 10 Violations in Construction FY20 Data (OIS 10/16/20)

<table>
<thead>
<tr>
<th>Standard</th>
<th>Total Violations</th>
<th>Serious Violations</th>
<th>Willful Violations</th>
<th>Repeat Violations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1926.501 - Fall Protection</td>
<td>5454</td>
<td>4317</td>
<td>150</td>
<td>850</td>
</tr>
<tr>
<td>1926.451 - Scaffolding</td>
<td>2549</td>
<td>2355</td>
<td>11</td>
<td>118</td>
</tr>
<tr>
<td>1926.1053 - Ladders</td>
<td>2138</td>
<td>1912</td>
<td>11</td>
<td>109</td>
</tr>
<tr>
<td>1926.503 - Fall Protection Training</td>
<td>1626</td>
<td>1156</td>
<td>9</td>
<td>87</td>
</tr>
<tr>
<td>1926.102 - Eye &amp; Face Protection</td>
<td>1374</td>
<td>1209</td>
<td>8</td>
<td>115</td>
</tr>
<tr>
<td>1926.20 - General S &amp; H Provisions</td>
<td>897</td>
<td>730</td>
<td>5</td>
<td>65</td>
</tr>
<tr>
<td>1926.100 - Head Protection</td>
<td>785</td>
<td>699</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>1926.651 - Excavation Requirements</td>
<td>703</td>
<td>564</td>
<td>7</td>
<td>34</td>
</tr>
<tr>
<td>1910.1200 - Hazard Communication</td>
<td>662</td>
<td>463</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>1926.502 - Fall Protection Systems Criteria &amp; Practices</td>
<td>650</td>
<td>562</td>
<td>0</td>
<td>12</td>
</tr>
</tbody>
</table>
# Crane Inspection Data

## Top 10 Crane Violations FY20 Data (OIS 10/16/20)

<table>
<thead>
<tr>
<th>Standard</th>
<th>Total Violations</th>
<th>Serious Violations</th>
<th>Willful Violations</th>
<th>Repeat Violations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1926.1412 - Inspections</td>
<td>354</td>
<td>197</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>1926.1428 - Signal person qualifications</td>
<td>167</td>
<td>111</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1926.1408 - Power line safety</td>
<td>150</td>
<td>127</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1926.1425 - Keeping clear of the load</td>
<td>142</td>
<td>118</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1926.1417 - Operation</td>
<td>123</td>
<td>82</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1926.1404 - Assembly/Disassembly</td>
<td>85</td>
<td>69</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1926.1427 - Operator Qualification &amp; Certification</td>
<td>84</td>
<td>61</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1926.1431 - Hoisting personnel</td>
<td>73</td>
<td>63</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1926.1413 - Wire rope-inspection</td>
<td>71</td>
<td>45</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1926.1430 - Training</td>
<td>58</td>
<td>50</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Year</td>
<td>Totals</td>
<td>Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>--------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>19</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>24</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>32</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>16</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>23</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>114</td>
<td>59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: BLS CFOI Data
## Crane Fatalities 2014 - 2018

### Contact with objects and equipment (67) – All Industries

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struck by object or equipment</td>
<td>44</td>
<td>66%</td>
</tr>
<tr>
<td>• Struck by powered vehicle - nontransport</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Caught in or compressed by equipment or objects</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>• Caught in running equipment or machinery</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Source: BLS CFOI Data
Crane Fatalities 2014 - 2018

<table>
<thead>
<tr>
<th>Type of Crane</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck mounted</td>
<td>21</td>
<td>36%</td>
</tr>
<tr>
<td>Other mobile cranes</td>
<td>15</td>
<td>24%</td>
</tr>
</tbody>
</table>

Source: BLS CFOI Data
Crane Operator Qualification & Certification
Background

Subpart CC - Cranes and Derricks in Construction
• Required certification by type and capacity and retained employer duty

Post-Rulemaking Concerns
• Industry stakeholders said certification by capacity unnecessary and employer should play role in operator competency
• OSHA reached out to industry to gather information

Operator Qualification Rulemaking
• Proposed rule published May 18, 2018
• Final Rule published November 9, 2018
• Employers must ensure operators are trained, certified/licensed, & evaluated
• Any operator not certified/licensed & evaluated is an operator-in-training
• Operators of derricks, sideboom cranes, & equipment less than 2000 lbs. are excluded
• US military employees with qualifications from the military meet these requirements
Operator Training

• Employers must provide training to operators-in-training to ensure they have the skills, knowledge, and ability to recognize and avert risk
• Trainer must be an employee or agent of the operator-in-training’s employer
• Operators-in-training must be continuously monitored
• Operators must be retrained when the operators performance or knowledge indicates it is necessary
Operator Certification & Licensing

• Employer must ensure that each operator is certified or licensed
• Some jurisdictions require operators to be licensed by a state or local government entity
• Certification/licensing must be provided at no cost to employees
• Testing entities can provide both training and testing
Certification by Accredited Testing Organization

• For OSHA to consider an accredited testing organization certification to be valid, the organization must certain criteria

• If there is no certification available for a type of equipment, the operator must be certified on the most similar equipment

• A certification issued by an accredited testing organization is valid for 5-years
Audited Employer Program

• Employers certifying their own employees must certain requirements for:
  • Testing
  • Timing of audit
  • Requalification
  • Deficiencies

• Audited-program certificates are valid 5-years
Evaluation

• Employers must evaluate an operator to ensure their continued ability to recognize and avert risk necessary to operate the equipment safely

• Evaluations must meet OSHA criteria

• Employer may allow the operator to operate other equipment of the same type that the employer can demonstrate does not require substantially different skills, knowledge, or ability to recognize & avert risk

• Operators employed prior to December 10, 2018, the employer may rely on its previous assessments of the operator instead of conducting a new evaluation
Crane Directive Update and OSHA Outreach

• Amends the existing Cranes and Derricks Directive, CPL 02-01-057
• This directive does not create any new obligations on employers
• Provides OSHA enforcement personnel with guidance on conducting inspections and policy on citing violations of the standard
• Updated Small Entity Compliance Guide for the Final Rule for Cranes and Derricks in Construction
  • Will provide concise statement of crane operator training, certification, and evaluation requirements
  • Will answer frequently asked questions on certification testing and payment for certification
Telecommunication Tower Fatalities

• Total of 8 fatalities in 2019
• 2 fatalities in 2020 to date
• January 10, 2019 in Caputa, SD
  • 23-year-old employee climbed a 190’ self-supporting tower to perform night work
  • Limited visibility and inadequate lighting
  • No safety plan for hazards encountered during night work
  • Employee fell while descending at the 180’ level
  • Inadequate anchorage through use of an oversized carabiner hooked over a step bolt allowing it to slip off the end
  • Inadequate lighting & failure to provide and ensure fall protection use
Telecommunication Tower Standard Development

• Closely reviewing existing consensus standards

• Full list of potential topics which include fall protection, safe work practices, hoisting, rigging, and structural requirements for consideration can be found in SBAR panel documents (https://www.osha.gov/doc/comtowersbrefa.html)

• OSHA will continue to conduct research and reach out to stakeholders as the process continues
Construction Worker Suicides

- **Suicide Rates by Major Occupational Group — 17 States, 2012 and 2015**
  - From 2000 to 2016, the U.S. suicide rate among working aged (16–64 years) adults increased 34% from 12.9 per 100,000 population to 17.3
  - 2012 and 2015, **largest percentage of male suicides** (15%–16% of decedents) occurred among **Construction** and Extraction group
    - **Highest male suicide rate** (43.6 [2012] & 53.2 [2015] per 100,000)

- **102 workplace suicides in the private construction industry 2013-2017**
  - 13 Construction managers
  - 21 First-line supervisor
  - 46 Construction trades workers
  - 40 Self-employed
  - 62 Wage and salary workers
  - 36 Building construction
  - 5 Heavy and civil engineering construction
  - 55 Specialty trade contractors

Source: NIOSH
Construction Worker Suicides

Suicide Rates by Occupational Group — 17 States, 2012 and 2015

• 2000 to 2016, the U.S. suicide rate among working aged (16–64 years) adults increased 34% from 12.9 per 100,000 population to 17.3

• 2012 and 2015, largest percentage of male suicides (15%–16% of decedents) occurred among Construction and Extraction group

• Highest male suicide rate (43.6 [2012] & 53.2 [2015] per 100,000)

102 Workplace Suicides in the Private Construction Industry 2013-2017

• 13 Construction Managers, 21 First-line Supervisors, 5 Heavy & Civil Engineering Construction, 46 Construction Trades Workers, 55 Specialty Trade Contractors, 40 Self-employed, 62 Wage and Salary Workers, and 36 Building Construction Workers

Source: NIOSH
• Construction industry has one of the highest injury rates when compared to other industries
• Commonly prescribed to construction workers to treat the pain caused by these occupational injuries
• Overdose deaths occurred on the job increased by over 30% between 2015 and 2016
• OSHA supports NIOSH, and other stakeholders in sharing ideas
Get help now.
If you’re having trouble coping with work-related stress, talk with someone who can help.

- Call 1-800-273-8255
- Para español 1-888-628-9454
- Online chat suicidepreventionlifeline.org/chat
National Fall Stand-Down was a huge success with thousands of companies – large and small – participating across the U.S. and internationally

- Over 2,500 certificates issued reaching nearly 400,000 workers
- Certs still available

#StandDown4Safety
Virtual/Small Group Stand-Downs

• COVID-19 Pandemic caused us to change the way we held the stand-downs from years past

• OSHA encouraged employers to promote fall safety while holding stand-downs virtually or while employing social distancing practices among small groups
Protecting Workers from Risk of Exposure to COVID-19

- OSHA is coordinating closely with CDC, including NIOSH, and other federal agencies to monitor the ongoing pandemic
- OSHA’s message is clear: Employers should have a plan for protecting workers and preventing further spread of disease while maintaining the employer’s day-to-day functions

www.osha.gov/coronavirus
Occupational Exposure Risks

• Risk of exposure in many workplaces likely reflects the risk to the general public in the community where the workplace is located

• Risk increases when workers have frequent, close contact with the general public or other coworkers

www.osha.gov/coronavirus
OSHA Guidance

- OSHA developed a variety of guidance materials for workers and employers on how to stay healthy during the pandemic.
- OSHA.gov/coronavirus includes information on implementing the hierarchy of controls when workers have specific exposure risks.

www.osha.gov/coronavirus
OSHA Guidance Cont.

- Helps employers comply with OSHA standards
- Based on anticipated hazards & risks, incorporates standards, contact, and airborne precautions, and use of face/eye protection.
- Should be adapted based on an employer’s hazard assessment and workers’ tasks.

www.osha.gov/coronavirus
OSHA Guidance Cont.

For all workers, regardless of specific exposure risks:

• Practice good and frequent hand hygiene
• Follow good cough/sneeze etiquette
• Avoid touching the eyes, nose, or mouth with unwashed hands
• Avoid close contact with people who are sick

www.osha.gov/coronavirus
OSHA Alerts

OSHA has developed alerts for:

- Stockroom and Loading Dock Workers
- Nursing Home and Long Term Care Facility Workers
- Retail Pharmacies
- Rideshare, Taxi, and Car Service Workers
- Dental Practitioners
- Restaurants & Beverage Vendors offering Takeout
- Construction Workers
- Package Delivery Workers
- Retail Workers
- Other risk and infection prevention topics

www.osha.gov/coronavirus
OSHA Posters

- Nine Steps to Reducing Worker Exposure to COVID-19 in Meat, Poultry, and Pork Processing and Packaging Facilities Poster (available in 18 languages)
- Seven Steps to Correctly Wear a Respirator at Work (available in 15 languages)
- Ten Steps All Workplaces Can Take to Reduce Risk of Exposure to Coronavirus Poster (available in 13 languages)

www.osha.gov/coronavirus
OSHA Frequently Asked Questions (FAQs) include:

- General Information
- Cleaning and Disinfection
- Cloth Face Coverings
- Employer Requirements
- Healthcare
- Personal Protective Equipment
- Restrooms and Handwashing Facilities
- Retaliation
- Return to Work
- Testing for COVID-19
- Training
- Worker Protection Concerns
- Industry-Specific
  - Construction
  - Health Care

www.osha.gov/coronavirus
Staying Safe During COVID-19

Remember to:
• Stay home if sick
• Wash hands with soap and water or alcohol-based hand rubs containing at least 60% alcohol
• Wear a face covering
• Continue social distancing
• Avoid sharing equipment and tools

www.osha.gov/coronavirus
Continual Updates

• Visit OSHA’s website to sign up to receive OSHA information:
  • QuickTakes biweekly newsletter (287,000+ subscribers)
  • Tip of the Day (33,700+ subscribers)
  • www.osha.gov/contactus

• Follow OSHA on social media
  • Twitter: @OSHA_DOL (21,500+ followers)
  • Facebook: Follow the Department of Labor page

www.osha.gov/coronavirus
What's New at Federal OSHA?
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THANK YOU FOR YOUR ATTENTION

October 29, 2020