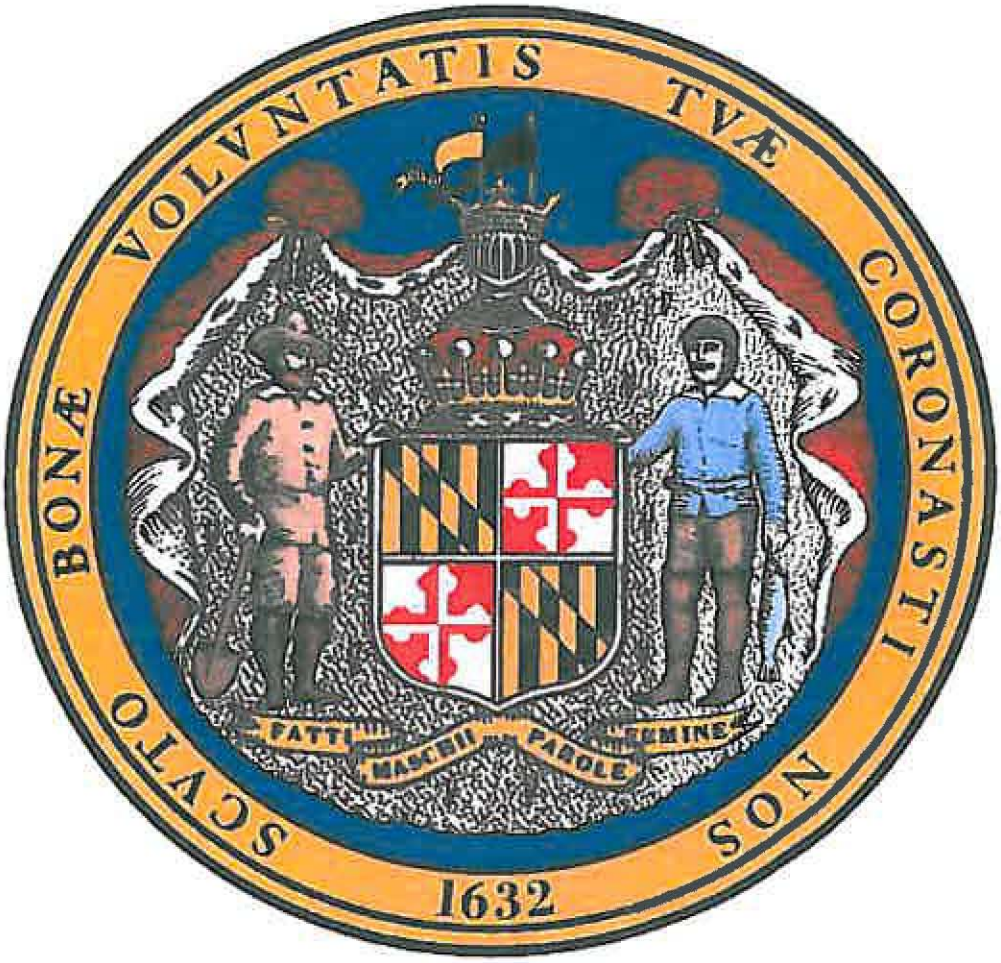
# State of Maryland
# Occupational Safety and Health
# Compliance Annual Report for Fiscal Year 2009

**December 2009**




**Martin O'Malley, Governor**
**Alex Sanchez, Secretary**
**J. Ronald DeJuliis, Commissioner**

# Table of Contents


**Section 1**
**Year in Review**

---

Fiscal Year 2009 was a successful year for Maryland Occupational Safety and Health (MOSH). We continue to enjoy the success of restructuring the annual plan and strategic goals. By integrating the agency's annual goals into each employee's individual goals we have everyone in the agency working towards them. This enabled the agency to work more efficiently at protecting the employees in the State of Maryland. In this fiscal year the number of fatalities decreased by 11 and the number of accidents under our jurisdiction to investigate decreased by 16. During FY09 MOSH continued to focus on the annual and strategic plans as the primary driving tool of our day to day operations. MOSH covers 158,915 establishments and 2,413,355 employees across the state.

MOSH Enforcement and Outreach continued to focus their efforts in the high hazard industries in Maryland. In order to identify those employers that needed the most help, several local emphasis programs including fall hazards in construction, struck/crushed by hazards in construction, electrocution hazards in construction and general industry establishments that had high Days, Away, Restricted, or Transferred/Total Recordable Cases (DART/TRC) numbers were continued. The program was able to complete and surpass most of its annual goals.

MOSH compliance completed approximately 1228 inspections in FY09 and issued approximately 5375 citations for violations of Federal and State Regulations (included in this number were 14 willful and 39 repeats). A total of over $3.6 million in initial penalties was issued.

## New Regulations:

| MOSH Instructions/Directives Adopted in FY09 | | | |
|---|---|---|---|
| Directive Number | Title | MOSH Instruction | Notes |
| CPL 03-00-007 | NEP Crystalline Silica w/ Addendum | 08-07 | |
| 08-03 (CPL 102) | Site Specific Targeting 2009 (SST-08) | 08-08 | |
| CPL 02-01-045 | Citation Guidance related to Tree Trimming & Tree Removal Operations | 08-15 | |
| TED 01-00-018 | Initial Training Program for MOSH Compliance Personnel | 09-02 | |
| | LEP Maryland High Hazards in Construction | 08-09 | Applies only in Maryland, no Federal Directive Associated |
| | LEP Fall Hazards in Construction | 08-10 | Applies only in Maryland, no Federal Directive Associated |
| | LEP Electrocution Hazards in | 08-11 | Applies only in Maryland, no Federal Directive |

| | | | |
|---|---|---|---|
| | Construction | | Associated |
| | LEP Struck/Crushed by Hazards in Construction | 08-12 | Applies only in Maryland, no Federal Directive Associated |
| CPL 02-00-148 | Filed Operations Manual | | A committee of MOSH management is making the appropriate modifications with anticipated completion of February 2010 |
| CPL 02(09-06) | NEP - PSM Covered Chemical Facilities | 09-10 | MOSH Instruction is in final review (as of 12/10/2009) and will be issued late December 2009 - early January 2010 |
| CPL 02-09-08 | Injury and Illness Recordkeeping NEP | | MOSH Instruction is in final review (as of 12/10/2009) and will be finalized and issued mid-December 2009 |

In response to increased crane failures and fatalities around the nation MOSH took aggressive steps to implement more stringent crane operation regulations. The industry, including crane manufacturers, general contractors, trade contractors, rental companies, labor organizations, and certifying agencies were brought together to develop this standard by our Commissioner, Ron DeJuliis, a former crane operator. On April 6, 2009 COMAR 09.12.26 became final rule. It sets forth regulations for crane operators, riggers and signal persons. The regulations address training/certification, inspections, physical exams, and drug testing for most all cranes in construction. Also covered are additional requirements for tower crane usage. Note these standards do require extensive training for all riggers and signalpersons as well as the operator. MOSH compliance staff began issuing "crane letters" to employers who were not compliant with the new standard as the standard was phased in the summer of 2009. Citations with penalties for non-compliant employers will begin to be issued January 1, 2010. A copy of the regulation is contained in Appendix C. The new standard is also available on the MOSH website http://www.dllr.state.md.us/labor/mosh.html.

In order to help the employers and employees in Maryland become familiar with the new crane regulations MOSH offered six educational seminars throughout the state. The seminars were given by our Deputy Commissioner, Assistant Commissioner, and Outreach Manager, who participated in developing the new regulations. Over 200 people have attended these seminars, along with hundreds of others who have attended numerous additional speaking engagements in the industry on the new regulations. MOSH is confident that with these new regulations, accidents and fatalities involving cranes will decrease in Maryland.

In FY09 MOSH began the process to revoke its interim fall protection standard, the agency is hopeful that this will be completed by the beginning of 2010. MOSH also began putting in requirements for Class II work vests on roadways, this instruction is still going through the regulatory process and will be completed sometime in 2010.

In response to the Occupational Safety and Health Administration's (OSHA) instruction CPL 02-01-045 'Citation Guidance Related to Tree Trimming and Tree Removal Operations', MOSH began the process of developing its own standard. A committee was formed using the expertise of four compliance officers. They were charged with developing specific regulations for Maryland that combined this instruction with OSHA's logging standard. The committee is hopeful that the regulations will be ready for legal review in early 2010.

In October of 2008, MOSH adopted a National Emphasis Program (NEP) for Crystalline Silica. The NEP focuses on procedures for conducting inspections of sites where employees are exposed to air borne silica (this was adopted with minor changes from the OSHA directive CPL 03-00-007). MOSH conducted 15 inspections under this NEP where more than 2000 employees were affected.

## Staff Training

This year MOSH adopted the new Training Directive with MOSH specific modifications and integrated it into our existing training program to ensure our compliance officers were essentially receiving the same training as Federal compliance officers with additional training in areas we identified as an opportunity to improve our staff's abilities. In April 2009 MOSH issued instruction 09-02, which spells out what initial training a Compliance Safety and Health Officer (CSHO) shall receive (this was adopted with minor changes from OSHA's TED-01-00-018). A committee was put in charge of figuring out which CSHOs needed what classes and plans were developed to make sure that all compliance officers were given the proper training.

MOSH was able to send 29 compliance officers to the OSHA Training Institute (OTI) training courses throughout the nation. Topics of study included: Accident Investigation, Safety Hazard Awareness for IH, Evaluation of S&H Management Systems Cranes & Material Handling for General Industry, Introduction to Health Standards for IH, Inspection Techniques and Legal Aspects, Power Press Guarding, Machinery & Machine Guarding Standards, and S&H for Oil and Gas Well Operations. MOSH will continue the growth of its highly skilled compliance officers and send them to additional classes in FY10.

In addition to sending CSHOs out of state to train, MOSH brought in the Cranes and Rigging Safety course from OTI for its Compliance Officers. The agency was excited to invite CSHOs from Virginia, as well as have several federal attorneys attend the class. In addition, MOSH holds quarterly staff meetings for all field personnel to go over any technical issues and to give a general update on the agency. Some of the topics covered in FY09 staff meetings include: prima fascia cases, proper photography techniques for case documentation, overview of the new crane regulations, electrical systems overview, flammable liquids and eye wash stations, and basic operations of a utility company.

There were several educational classes that were taught by outside companies for our CSHOs. These included: Mistake Free Grammar and Proofreading, Advanced Microsoft Excel, Train the Trainer, Managing Multiple Priorities, Projects and Deadlines, and Dealing with Difficult People given by Fred Pryor Seminars.

MOSH's Chief of Compliance held a class on case review at the training and education offices in Laurel for all CSHO's that are responsible for reviewing case files. In June 2009 MOSH began training 12 compliance officers in tower crane climbing. The compliance officers were fitted with harnesses and allowed to climb a 200' tower crane under the direction of four senior compliance officers. The climbers were able to get the feel of carrying the weight of a harness and inspection equipment needed to inspect a tower crane from the ground up. The next step in this training program will be to allow those climbers that wish to the opportunity to walk the boom. Those climbers that don't wish to go out on the boom will still be issued a harness and called upon to inspect towers, aerial lifts, and any other situation where a harness is needed.

Additionally MOSH held it's Annual Update for all staff where training on customer service, hazard communication, blood borne pathogens, respiratory protection, focused inspections, and the instruction of Fiscal Year 2010's new annual goals, strategic targeting, and emphasis programs were covered and provided in our Red Book (a system used to ensure each employee has the latest copy of the annual plan and has received training on it). Tamara Bradford from the National Office, Directorate of Information and Technology joined our meeting and presented the new on-line resources for our staff. Her training was well received and a real eye-opener for all the new resources we have access to through the intranet.

## Organizational Changes:

During this fiscal year we worked towards bringing our agency closer together in terms of information flow and daily communication. Consultation has been brought under our Outreach Department to provide employers and employees one place to receive assistance. In addition, approval and subsequent proceedings were conducted to consolidate several of our offices including the Baltimore office headquarters, Consultation offices, and our Laurel offices into one location. Once a site has been chosen we will notify Federal OSHA and look forward to hosting meetings in our new location. A new organizational chart is included in Appendix D.

MOSH hired four new compliance officers with two of them being bi-lingual to better serve our Hispanic population.

## Funding & Furloughs:

MOSH did not accept additional American Recovery and Reinvestment Act (ARRA) funding for the year.

One time reversion money from other state plans was accepted and utilized during this fiscal year.

Our additional over-match, that MOSH must petition for since lack of additional federal funding, was exercised again this year. Over $600,000 of additional 100% state funds were added to our grant to make up for the lack of federal funding.

Furloughs and Temporary Salary Reductions occurred during this fiscal year. Since our state fiscal year runs June to July we have experienced two separate rounds in one federal fiscal year. In state fiscal year 2009 employees in our unit experienced 90 days of salary reduction as well an additional 3-5 days of floating furloughs for each employee. Then in state fiscal year 2010 which began in July 2009 five service reduction days were used for a new temporary salary reduction as well as 2-4 additional floating furlough days based on the salary of each employee will be in effect across federal fiscal year 2009 and 2010.

### Internal Audit

In FY09 MOSH did an internal audit on our organizational structure from compliance staff to consultation. We had our Senior Management meet and bring forth potential areas of growth and need as well as anticipated retirements and attrition. It was decided that future attrition needed our most immediate attention. In order to stave off future issues with lack of institutional knowledge and experience two core solutions were identified and implemented. The first was a reorganization to begin moving those who are coming close to retirement into positions where those who would be potentially replacing them could begin to assume those duties now with full support and a "mentor" to call on. This led to a growing need for a more centralized headquarters to consolidate our management and battle the "silo" effect. By doing the self audit and involving those who would be affected we succeeded in this becoming a positive transition with support from all those involved. Secondly, we realized that all job duties within the agency need to have a back up and procedures written. The idea that no job is too little or not important was integral to this step. As the agency proceeds through having each duty broken down and at least one, many times two or three, persons learn the job and have a copy of the procedures we are reaping additional rewards. Employees are proud to list their duties and instead of "hoarding" the knowledge they are realizing the benefits of others knowing their job. It is helping us to identify areas where there are some great practices and ideas that can be shared throughout the agency. And finally, whenever there is a leave of absence the work does not stop, but continues to flow and those who assist are more confident that they are proceeding correctly and can be recognized for filling in when someone cannot perform their duties. As a side note, we really were expecting resistance from employees but as we are working through this process we are very satisfied with the results.

MOSH employee inspects rigging on a crane

# Enforcement:

MOSH compliance officers were able to conduct over 1200 enforcement inspections in FY09. Efforts were made for compliance officers to focus on the industries in MD that had high DART/TRC values. Over 800 of these inspections were conducted under one or more of the state's local emphasis programs and over 200 of the inspections were conducted under one or more of the adopted national emphasis programs. MOSH compliance officers investigated 112 accidents and 20 fatalities.

MOSH Compliance Officers were able to initiate complaint inspections within an average of 3.22 days of receipt which is well within the 5 days required by Federal OSHA. MOSH investigated 20 fatalities in FY09, this is a 37.5% decrease from last year fatality total of 31.

MOSH placed an emphasis on lag time for citation mailings this year. The average number of days from opening conference to citation issuance for a safety case was 30.39 days; this is well below the national average of 43.8 days. The average number of days from opening conference to citation issuance for Industrial Hygiene was 62.15 days; this is slightly above the national average. MOSH was able to negotiate a contract with a new laboratory for FY10. The turnaround time for samples is guaranteed in 5 days, and we are confident that with this MOSH Industrial Hygienists will be able to close cases and issue citations quicker.

Out of 903 programmed inspections, both safety and health, 661 (73%) had serious, willful, and/or repeat violations. This is 15% higher than the 3 year national average of 57.7%. Compliance Officers were also able to initiate complaint investigations within an average of 1.59 days of receipt; again, this is well within the 5 days required by Federal OSHA. MOSH averaged 2.44 serious, willful, repeat and 2.62 other-that-serious violations per inspection. These numbers are well above the national average of 2.1 and 1.2, respectively.

MOSH's average penalty per serious violation was $1262.14, which is approximately $128 less than the 3 year national average.

There was an increase in public sector inspections this year. There were 76 public inspections performed this year, this represents over 6% of the total inspections done. This is double the percentage of public sector inspections from last year and 1% higher that the 3 year average for the State.

Case Highlight:
MOSH has three open investigations with a large poultry processing company within the state. Two of these investigations resulted in the issuance of 4 willful violations, mainly for a lack of machine guarding and lack of lockout/tagout devices and procedures. The penalties from these two cases total more than $150,000. The other case is from a general inspection in one of the company's processing plants, which resulted in 27 citations being issued (13 serious and 14 other-than-serious) with a total penalty of $30,000.

Sampling Employees for Methylene Chloride Exposure

# Consultation:

MOSH has one public sector consultant (23(g)) and in FY09 this individual attended training in areas that included: citation guidance in the tree care and removal operations (given by OSHA as a webinar), Train the Trainer (given by Fred Pryor Seminars), Recordkeeping National Emphasis Program (given by OSHA as a webinar), and Managing Multiple Priorities, Projects and Deadlines, & Dealing with Difficult People (given by Fred Pryor Seminars). Our public sector consultant inspected 19 sites (18 initial visits and one follow up visit). 11 of these visits were made to public correctional facilities throughout the state. These public sector institutes are not considered high-hazard, 8 of these are considered to be maximum security facilities and are therefore considered to be high-hazard in the State of Maryland. There were 5 additional cases done in a recognized public sector high-hazard industry, making the total 13 of 19 (68%). For all other consultation measures please refer to the FY09 Consultation Annual Project Report (CAPR).

# Outreach:

## Cooperative Compliance Partnerships (CCP)

In FY09 the CCP Unit signed 3 new partnerships bringing the total to 50 partnerships since the program's inception in 1997. The unit has achieved its five year Strategic Goal of 49 partnerships and MOSH is in its 3rd year of the five year plan.

Companies Signing a Partnership in FY 2009:

| Company Name | Project Name | CCP Signing Date | Estimated Cost |
|---|---|---|---|
| The Whiting-Turner Contracting Company | Towson University-College of Liberal Arts & | 12/4/2008 | $110M |
| Coakley & Williams Construction Inc. | Rockville District Courthouse | 6/5/2009 | $60M |
| P.J. Dick, Inc. | School of Public Health Renovation Project U of M | 9/30/2009 | $13M |

MOSH employee Nancy Barboza translates for employees at CCP signing ceremony

Group Photo for 50th Partnership Celebration

MOSH's CCP unit performed 27 maintenance visits inspecting 356 subcontractors in FY09. The unit removed 4,813 employees from 358 hazards. At the end of FY09 the CCP unit had 14 active sites.

*Special Note:* As part of our intensive approval process for CCP each company's nationwide Log 300's are reviewed in-depth for accuracy and injury trends then throughout the project it is required to keep a "site-wide" log for any and all trade employees working on the site and the accuracy of these logs are compared to actual injuries and illnesses. These efforts and reporting integrity have been implemented since 2000 on all sites and complement the new nationwide effort to increase reporting accuracy recently undertaken in light of the recent Government Accountability Office (GAO) study of injury and illness data.

Active CCP sites as of end FY09

| Company Name | City | Project Name | Estimated Cost |
|---|---|---|---|
| G.A. & F.C. Wagman, Inc. | Oxon Hill | Wilson Bridge MB-4 | $59M |
| The Whiting-Turner Contracting Company | Glen Burnie | Baltimore Washington Medical Center | $90M |
| G.A. & F.C. Wagman, Inc. | Rosedale | Section 100 I95/I695 Interchange Contract #1 | $208M |
| Clark Construction Group, LLC | Baltimore | Johns Hopkins Hospital Clinical Buildings | $600M |
| G.A. & F.C. Wagman, Inc. | Oxon Hill | Woodrow Wilson Bridge Project MA-4 | $93M |
| The Whiting-Turner Contracting Company | Frederick | BP-Solar East End Expansion | $50M |
| The Whiting-Turner Contracting Company | Baltimore | UMB Campus Center | $32M |
| The Whiting-Turner Contracting Company | Baltimore | St. Agnes Hospital-Campus Revitalization Phase I | $150M |
| Armada Hoffler Construction Co. | Baltimore | Legg Mason Tower/Four Seasons Hotel | $200M |
| The Whiting-Turner Contracting Company | Baltimore | Mercy Medical Center New Tower | $260M |

| | | | |
|---|---|---|---|
| Bovis Lend Lease | Baltimore | Franklin Square Hospital | $150M |
| The Whiting-Turner Contracting Company | Towson | Towson University-College of Liberal Arts & | $110M |
| Coakley & Williams Construction Inc. | Rockville | Rockville District Courthouse | $60M |
| P.J. Dick, Inc. | College Park | School of Public Health Renovation Project U of M | $13M |

Picture of Rockville District Court House (Coakley &Williams Construction, Inc.)

The CCP unit has partnered with Maryland contractors for total project values of over $3.9 billion as of the end of fiscal year 2009. The unit continues to accept applications from contractors for up and coming projects being developed throughout the state. The response to this vigorous program and the resulting verified reductions in injuries and illnesses is changing the culture of construction in Maryland. Increased employer and employee relations with MOSH, instant information conduit from the industry to MOSH and vice versa, and the spreading of best practices from CCP sites to traditional work places are some of the benefits MOSH reaps from this program in addition to the reduced injuries and illnesses. In addition, three meetings a year are held bringing in all participating companies to share technical updates, work on initiatives together, and strengthen the informational relationship between the industry and MOSH.

In February the Outreach unit was honored to host an inspector from Minnesota OSHA (MNOSHA). The inspector visited the Outreach unit in hopes of learning more about the CCP program. MNOSHA is in the process of developing their own program and wanted to learn of our strategies that have made this a successful program. The senior inspector in the outreach unit spent the entire week with the MNOSHA inspector teaching him about the program, which included several site visits to current partners.

MOSH employees attending tower crane climbing training

## Voluntary Protection Program (VVP) - Star only

In fiscal year 2009 the VPP unit was able to perform 8 pre-application site visits and awarded 4 new VPP's. The unit performed 2 re-certification evaluations and recommended that both companies be approved. This makes for a total of 14 active VPP sites for FY09. The VPP project manager attended the Region III and National Voluntary Protection Programs Participants' Association (VPPPA) conferences in FY09.

VPP Sites Awarded in FY 2009

| VPP Sites Approved in FY08 | |
|---|---|
| Company | Location |
| BlueLinx Corporation | Frederick |
| Clean Harbors Environmental Services | Baltimore |
| Grace Davis Technical Center | Curtis Bay |
| Life Technologies Corporation | Frederick |

Active VPP sites FY09

| Active VPP Sites FY09 | |
|---|---|
| Company | Location |
| BlueLinx Corporation | Frederick |
| Clean Harbors Environmental Services | Baltimore |
| Constellation Nuclear Power Plant | Lusby |
| Covanta Energy | Dickerson |
| FritoLay | Aberdeen |
| Grace Davis Technical Center | Curtis Bay |
| Life Technologies Corporation | Frederick |
| Millennium Organic Chemical | Curtis Bay |
| Mosanto Galena Research Station | Galena |
| Northrop Grumman Advanced Technologies Laboratories | Linthicum |

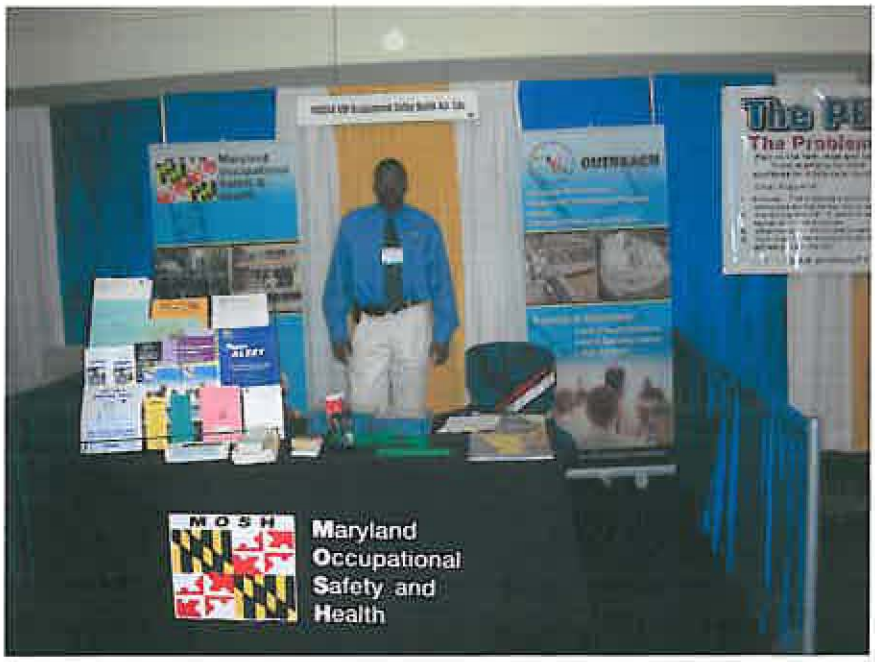
| | |
|---|---|
| Northrop Grumman Electronic Systems | Linthicum |
| Performance Pipe | Hagerstown |
| Sherwin Williams | Crisfield |
| Wheelabrator | Baltimore |

## Safety and Health Achievement Recognition Program (SHARP)

Please refer to the FY09 CAPR for these results.

## Education Unit

In fiscal year 2009 the Training and education Unit was able to offer 88 educational seminars covering 38 topics at no cost to the employees and employers in Maryland. The majority of these seminars were taught by MOSH compliance officers and were offered at locations throughout the state. Topics included everything from Accident Investigation to Injury Prevention in Nursing Homes to Workplace Hazard Assessment. Three of the 88 classes held were done in Spanish (Excavation and Trenching, Construction Site Safety and Fall Protection). Over 2500 employees and employers participated in the seminars that were given. Another approximately 4200 employees attended speaking engagements given by MOSH staff.




Regional Supervisor Bill Johnson distributing and relaying information from the MOSH show booth at a local safety and health conference

## Educational Seminars Offered in FY 2009

| Educational Seminars | |
|---|---|
| Course Name | Course Name |
| Accident Investigation | Introduction to IH for Construction |
| Basic Rigging Seminar | Introduction to OSHA Recordkeeping |
| Bloodborne Pathogens | Introduction to Safety and Health for Supervisors |
| Characteristics of an Effective Safety & Health Program | Machine Guarding |
| Construction Equipment Awareness | MSDS/Right-to-Know & Personal Protective Equipment |
| Construction Site Safety | Nursing Home - Injury Prevention |
| Construction Site Safety - Fall Protection | Occupational Exposure to Noise |
| Construction Site Safety II | OSHA 10 Hour |
| Crane Safety Awareness | Permit Required Confined Spaces |
| Cranes - New Maryland Regulations | Powered Industrial Truck Safety |
| Electrical Hazard Awareness | Proteccion contra caidas para trabajos sobre techo |
| Electrical Safety & Lockout Tagout | Residential Fall Protection |
| Emergencey Response and Disaster Preparedness | Respiratory Protection |
| Excavacion de trincheras | Scaffolding Safety in Construction |
| Excavation & Trenching | Seguridad en la Construccion |
| Excavation Safety | This is MOSH |
| Fair Practice/Personnel Training | Topics in OSHA Recordkeeping |
| Hand and Power Tool Safety | Workplace Hazard Assessment |
| Heat Stress | Workplace Violence |

# APPENDIX A

## Summary of Annual Performance Plan Goals for MOSH FY 09

- Performance Goal 1.1 – Total Reduction in the Fatality Rate by 1% in FY09 (5% by end of FFY 2012).
- Performance Goal 1.2 – Total Reduction in Injury and Illness DART rate from 2.4 to 2.34 in FY09 (2.1 DART by end of FFY 2012).
- Performance Goal 2.1 – Increase VPP and SHARP Recognition Programs from 14to 19 in FY09 (18 New Recognition programs by the end of FFY 2012).
- Performance Goal 2.2 – Increase Partnership and Alliance Programs from 50 to 53 in FY09 (49 Partnerships and Alliances by end of FFY 2012).
- Performance Goal 2.3 – Increase the total number of people participating in MOSH outreach and training programs by 6% in FY09 (total annual participation of 7498 by end of FFY 2012).
- Performance Goal 3.1 – Percent of fatality and catastrophe inspections initiated within one working day of notification maintained at least 95% in FY08 (FFY 2006 is 97%).
- Performance Goal 3.2 – Percent of serious complaint inspection initiated within five working days of notification increased from 90% to 95%.
- Performance Goal 3.3 – Percent of discrimination complaint investigations completed within 90 days maintained at least 90% (FFY 2006 is 100%).
- Performance Goal 3.4 – Percent of polled responses from MOSH website users indication a positive overall experience established at 90% by 2012.
- Performance Goal 3.5 – 90% of responding employers are satisfied in the consultation visit received.
- Performance Goal 3.6 – Provide prompt consultation service.

# APPENDIX B

## Program Activity Projections:

| Total Inspections- Enforcement | | | | |
|---|---|---|---|---|
| | Safety | | Health | |
| | Projected | Actual | Projected | Actual |
| Private Sector Inspections (FFY08: Safety 1221; Health 205) | 900 | 933 | 150 | 191 |
| Public Sector Inspections (FFY08: safety 22; Health 28) | 20 | 61 | 16 | 15 |

| Projected Inspection - Consultation | | |
|---|---|---|
| | Safety | Health |
| 21(d) | 178* | 102* |
| 23(g) | 8** | 15** |

| Total Inspections - Consultation |
|---|
| * For results of the 21(d) consultation unit please see the FY09 CAPR<br><br>** In all, nineteen 23g consultation visits were conducted. Eighteen were initial visits and one was a follow-up visit. Of the eighteen initial visits, nine were health, two was safety, and seven covered both safety and health |

# Performance Standards:

Strategic Goal 1- **Improve workplace safety and health through compliance assistance and enforcement of occupational safety and health regulations.**

Performance Goal 1.1- **Total reduction in the fatality rate by 1%**
Performance Goal 1.2- **Total reduction injury and illness DART rate from 2.4 to 2.34**

| Unit Responsible (date source) | Performance Indicator | Result | Comments |
|---|---|---|---|
| Enforcement/ Compliance Assistance<br><br>Consultation<br><br>(IMIS (numerator) and the Maryland Quarterly Census of Employment and Wages (QCEW) Program (denominator)<br><br>(BLS survey of occupational injuries and illnesses) | Increase inspection and intervention activity by 5% in the following areas from FFY 2006:<br>Industry 2006<br>a. Construction (SIC 1500-1799).....744<br>b. Manufacturing (SIC 2000-3999).....86<br>c. Trade, Transportation, Utilities (SIC 4000-4999).....35<br>d. Public Sector.....33<br><br>Conduct the following number of visits (8 of the planned visits will be comprehensive safety and health program evaluations):<br>Industry<br>a. Construction (SIC 1500-1799)..... 26<br>b. Manufacturing (SIC 2000-3999)..... 135<br>c. Trade, Transportation, Utilities (SIC 4000-4999)..... 10<br>d. Public Sector..... 23 | Industry 2009<br>a. Construction (SIC 1500-1799) .....1084<br>b. Manufacturing (SIC 2000-3999).....187<br>c. Trade, Transportation, Utilities (SIC 4000-4999).....104<br>d. Public Sector.....79<br><br>Industry 2009<br>a. Construction (SIC 1500-1799) ..... see CAPR<br>b. Manufacturing (SIC 2000-3999).....see CAPR<br>c. Trade,Transportation,Utilities (SIC 4000-4999)see CAPR<br>d. Public Sector.....18<br><br>See CAPR for consultation results on Goal 1.2 | MOSH enforcement and compliance assistance was able to exceed all inspection numbers by more than the projected 5%, in the SIC codes identified.<br>**NOTE: The DART rate for CY 2008 has dropped from 1.9 to 1.7 injuries and illnesses per 100 equivalent fulltime workers**<br><br>MOSH had one 23(g) public sector consultant. The projected number for public sector inspections was missed by 5. All other parameters for consultation can be found in the FY09 CAPR. |

Strategic Goal 2: **Promote a safety and health culture through Cooperative Programs, Compliance Assistance, On-site Consultation Programs, Outreach, Training and Education, and Informative Services.**

Performance Goal 2.1- **Increase VPP and SHARP Recognition Programs from 14 to 19**

| Unit Responsible (data source) | Performance Indicator | Result | Comments |
|---|---|---|---|
| Compliance Assistance (IMIS, report from consultation unit and VPP unit) | Increase VPP by three new site in FFY 2009<br>Increase SHARP by two new site in FFY 2009<br>Renew two existing SHARP facility<br>Have two additional employer enter pre-SHARP | 4 sites were added to the VPP program in FFY 2008<br>See FY09 CAPR<br>See FY09 CAPR<br>See FY09 CAPR | The VVP unit far exceeded its goal for FY09. |

Performance Goal 2.2- **Increase partnerships and alliance programs from 50 to 57**

| Unit Responsible (data source) | Performance Indicator | Result | Comments |
|---|---|---|---|
| Compliance Assistance (IMIS, report from partnership and alliance unit) | Increase partnerships by 2<br>Increase alliances by 1 | 3 new partnerships signed in FFY 2009<br>No new alliances signed in FFY 2009 | MOSH CCP partnerships were increased by 3 (one more that the goal, although no new alliances were signed MOSH has already exceeded its goal of 37 total partnerships and alliances with a grand total of 54 (4 alliances and 50 partnerships) |

Performance Goal 2.3- **Increase the total number of people participating in MOSH outreach and training programs by 6%**

| Unit Responsible (data source) | Performance Indicator | Result | Comments |
|---|---|---|---|
| Compliance Assistance (report from training and education unit) | Increase total number of trainees/participants anticipated to be effected by outreach activities in the areas covered by MOSH LEP's, SST-08, and Federal NEP's including formal training, workshops, seminars, speeches, conferences, and informal worksite training to 6911. | The total number of employees/employers participating in MOSH outreach and training programs in FFY 2009 was 6,800. The total number of participants in the 2 day, full day and ½ day educational seminars was 2,531. There were 4,269 participants in speaking engagements done by MOSH personnel. | MOSH missed its goal by 111 participants. 12 classes were canceled in FY09 due to low enrollment, this represents up 336 people. If these classes could have been held we would have exceeded our goal by 225. |

| Strategic Goal 3: **Secure public confidence through excellence in the development and delivery of MOSH programs and services** | | | |
|---|---|---|---|
| Performance Goal 3.1- **Percent of fatality and catastrophe inspections initiated within one working day of notification maintained at least 95%** | | | |
| **Unit Responsible (data source)** | **Performance Indicator** | **Result** | **Comments** |
| Enforcement/ Compliance Assistance (IMIS) | 95% of fatal case investigations initiated within one working day of notification | In FFY 2009 91% of fatal cases were investigated within one working day of notification- out of 20 fatalities 19 of them were investigated within 1 day of notification. | The response time is calculated from Fat/Cat notification date to entry |
| Performance Goal 3.2- **Percent of serious complaint inspections initiated within five working days of notification increased from 90% to 95%** | | | |
| **Unit Responsible (data source)** | **Performance Indicator** | **Result** | **Comments** |
| Enforcement/ Compliance Assistance (IMIS) | 95% of serious complaint inspections initiated within five working days of notification | In FFY 2009 92% of all serious complaint inspections were initiated within five working days of notification- there were a total of 110 complaints of a serious nature filed and 102 were investigated within 5 days of notification for a total percentage of 92%. According to the SAMM report MOSH initiated complaint inspections within an average of 3.22 days and initiated complaint investigations within an average of 1.59 days. | There are many circumstances that affect the response time for complaints. Response time is generated from inspector availability, case load, open accidents or fatalities and location of the employer. In FY08 MOSH investigated 89% of all serious complaints within five working days, FY09 was up 3%. |
| Performance Goal 3.3- **Percent of discrimination complaint investigations completed within 90 days maintained at least at 90%** | | | |
| **Unit Responsible (data source)** | **Performance Indicator** | **Result** | **Comments** |
| Enforcement/ Compliance Assistance (whistleblower web based application) | Percent of discrimination complaint investigations completed within 90 days | According to the Final Sate Activity Mandated Measures (SAMM) there was one discrimination case done in FY09. This case was completed within the 90 day time frame, which allows for 100% | According to the CSHO that handles all discrimination complaints, there were 22 cases filed in FY09; two were not opened as of 09/30/09, 5 were still under investigation, 11 were completed within 90 days, and 4 were not completed within 90 days. |

Performance Goal 3.4- **Percent of polled responses from MOSH website users indicating a positive overall experience established at 90% by 2012**

| Unit Responsible (date source) | Performance Indicator | Result | Comments |
|---|---|---|---|
| Enforcement/ Compliance Assistance<br><br>Consultation (on-line review of website) | This is a new Performance Goal within the 5 year Strategic Plan, whereas, 90% of website users indicate a positive overall experience when polled. In the first year of our plan we completed the correcting and updating of the website to include all Federal OSHA requirements, current information, and forms. In this year, our 2nd year, we will work with our Information Technology department to improve user friendliness and ease of navigation, ordering of materials, and registering for free training. We will continue to plan for the implementation of a user poll.<br><br>Consultation will share in the technical development of the website and continue to maintain their Federal OSHA requirements, current information, and forms. | MOSH was able to complete the goal of getting a publication order form on the website, as well as allowing employers and employees sign up for free educational seminars through the website. http://www/dllr.state.md.us/labor/mosh.html | The agency hopes to continue such great progress with little to no resources for the web development. The agency is next in line to get help from the DLLR Information Technology Department to increase the user friendliness of our website. |

Performance Goal 3.5- **90% of responding employers are satisfied in the consultation visit received**

| Unit Responsible (data source) | Performance Indicator | Result | Comments |
|---|---|---|---|
| Consultation (returned and completed DLLR external customer survey from) | Percent of responding employers that are satisfied in the consultation visit received | See FY09 CAPR | This measure is addressed and the results are explained in the CAPR for FY09 |

Performance Goal 3.6- **Provide prompt consultation service**

| Unit Responsible (data source) | Performance Indicator | Result | Comments |
|---|---|---|---|
| Consultation (OSHA CAM reports) | On average, small high-hazard employers are visited within 30 days of their request for an initial visit; on average, initial visit reports are mailed within 20 days of the closing conference. | See FY09 CAPR | This measure is addressed and the results are reported in the CAPR for FY09 |

# APPENDIX C

**Title 09**

**DEPARTMENT OF LABOR, LICENSING, AND REGULATION**

**Subtitle 12 DIVISION OF LABOR AND INDUSTRY**

**09.12.26 Crane Safety**

**Authority: Labor and Employment Article, §§2-106(b) (4) and 5-312,**

**Annotated Code of Maryland**

**.01 Purpose.**

The purpose of this chapter is to prevent incidents that result in property damage, injury, and death, related to the operation of cranes when used in construction and demolition.

**.02 Scope.**

A. Except as provided in §B of this regulation, this chapter applies to all cranes and crane operators, signal persons, riggers, and crane operator trainees, and to the erection, operation, and dismantling of cranes used in construction and demolition.

B. This chapter does not apply to:

(1) Power shovels, excavators, wheel loaders, backhoes, loader backhoes, and track loaders, when used with or without chains, slings, or other rigging to lift suspended loads;

(2) Automotive wreckers and tow trucks when used to clear wrecks and haul vehicles;

(3) Service trucks with mobile lifting devices designed specifically for use in the power line and electric service industries, such as digger derricks, when used in the power line and electric service industries for auguring holes to set power and utility poles, or handling associated materials to be installed or removed from utility poles;

(4) Equipment originally designed as vehicle-mounted aerial devices for lifting personnel and self-propelled elevating work platforms;

(5) Powered industrial trucks, such as forklifts;

(6) Mechanic's truck with a hoisting device when used in activities related to equipment maintenance and repair;

(7) Equipment that hoists by using a come-along or chainfall; and

(8) A crane while it has been converted or adapted for a nonhoisting or nonlifting use, including, but not limited to, use as a power shovel, an excavator, or a concrete pump.

**.03 Definitions.**

A. In this chapter, the following terms have the meanings indicated.

B. Terms Defined.

(1) "ANSI" means the American National Standards Institute.

(2) "ASME" means the American Society of Mechanical Engineers.

(3) "ASSE" means the American Society of Safety Engineers.

(4) "Commissioner" means the Commissioner of Labor and Industry.

(5) "Competent person" means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous, or dangerous to employees, and who has the authority to take prompt corrective measures to eliminate them.

(6) "Crane" means a machine for lifting and lowering a load and moving it horizontally, which has a hoisting mechanism that is an integral part of the machine.

(7) "Crane operator" means an individual who operates a crane.

(8) "Crane operator trainee" means an individual who is engaged in a structured training program under the direct supervision of a crane operator who meets the requirements of this chapter.

(9) "Direct supervision" means that the supervisor:

(a) Is in the immediate area of the operation;

(b) Is within visual sighting distance of the operation;

(c) Is able to effectively communicate with the persons engaged in the operation; and

(d) Has no duties other than to observe and supervise the operation.

(10) "Level I rigger" means an individual who works under the supervision of a competent person and on a routine basis performs rigging work engaged in lifting loads, other than rigging for special lifts, and the erection, dismantling, jumping, or reconfiguring of cranes.

(11) "Level II rigger" means an individual who has accumulated 2 or more years of experience working as a level I rigger and performs rigging work engaged in lifting loads for special lifts, or the erection, dismantling, jumping, or reconfiguring of cranes, or all of these.

(12) "Master/lead rigger" means an individual who has accumulated 5 or more years of experience rigging loads and is authorized by the employer to take prompt corrective action to eliminate hazards.

(13) "NCCA" means the National Commission for Certifying Agencies.

(14) "Qualified person" means a person who, by possession of a recognized degree in an applicable field or certificate of professional standing, or who, by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve problems relating to the subject crane operations.

(15) "Rigger" means an individual who is engaged in the process of lifting, moving, and rigging loads with hardware and equipment used to attach a load to a crane.

(16) "Rigging" means the hardware, equipment, and means used to safely attach a load to a crane by means of adequately rated and properly applied slings or other devices.

(17) "Safety sensitive position" means a position subject to drug and alcohol testing because the nature of the employee's duties and responsibilities indicate a potential that impaired performance due to drugs or alcohol, or both, could result in injury or death to the employee or others.

(18) "Signal person" means an individual who communicates guidance and direction to a crane operator in lifting, hoisting, moving, or releasing a load.

(19) "Special lift" means a lift using multiple cranes or the erection, dismantling, or jumping of a tower crane.

(20) "Tower crane" means a power-operated hoisting machine in which a boom, swing jib, or structural member is mounted upon a vertical mast or tower structure with the function of hoisting, lowering, and swinging loads at various radii.

**.04 Incorporation by Reference.**

A. In this chapter, the following documents are incorporated by reference.

B. Documents Incorporated.

(1) ASME B30.3-2004 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Construction Tower Cranes.

(2) ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes.

(3) ASME B30.6-2003 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Derricks.

(4) ANSI/ASSE A10.42-2000 Safety Requirements for Rigging Qualifications and Responsibilities—American National Standard for Construction and Demolition Operations.

**.05 Drug and Alcohol Free Workplace and Substance Abuse Policy.**

A. An employer who employs individuals within a safety sensitive position shall have a drug and alcohol free workplace and substance abuse policy as required by this regulation.

B. The Commissioner designates crane operators, signal persons, riggers, and crane operator trainees as safety sensitive positions.

C. In addition to the positions designated by the Commissioner, an employer may designate other employees who work with or around cranes as being safety sensitive positions.

D. An employer's drug and alcohol free workplace and substance abuse policy shall, at a minimum, require:

(1) Mandatory drug or controlled substance and alcohol testing for all safety sensitive positions under the following circumstances:

(a) At the commencement of employment in a safety sensitive position;

(b) Under reasonable suspicion by the employer;

(c) Randomly; and

(d) Unless the medical condition of the employee does not permit it, immediately or not later than 24 hours following any incident for which crane operations were a direct or indirect cause and which involve:

(i) Property damage greater than $5,000;

(ii) Bodily injury; or

(iii) A fatality;

(2) Testing requirements that are consistent with 49 CFR Part 40, U.S. Department of Transportation, and Health-General Article, §17-214, Annotated Code of Maryland;

(3) A prohibition on employees working in a safety sensitive position while under the influence of alcohol, drugs, or a controlled substance, unless:

(a) An employee is using a controlled substance under the direction of a licensed physician who has advised the employee that the substance will not adversely affect the employee's ability to safely perform the duties assigned;

(b) The employee notifies their supervisor and provides written medical documentation from their physician; and

(c) The employer consents; and

(4) A prohibition on the use, possession, or manufacture of any unlawful drug or use of alcohol while at work.

**.06 Crane Operator Requirements.**

A. An employer shall ensure that an individual is trained and successfully meets the applicable requirements in §B of this regulation for a mobile crane, a tower crane, or a derrick, or all of these, depending on which of these types of cranes the individual will be operating.

B. Except for a crane operator trainee, an employer may not require or permit an individual to operate a crane unless the individual is trained and successfully meets the following requirements:

(1) The individual has participated in training and passed a written examination that is developed and administered in accordance with the Standards for Educational and Psychological Testing, published jointly by the Joint Committee of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education, and that tests knowledge and skills necessary for safe crane operation, including the following:

(a) Operational characteristics and controls, limitations and use, rated load capacities, and special hazards, including characteristic and performance questions appropriate to the crane type for which qualification is sought;

(b) Emergency control skills, such as a response to fire, power line contact, loss of stability, or control malfunction;

(c) Basic arithmetic skills necessary for crane operation;

(d) The ability to read and comprehend the crane manufacturer's operation and maintenance instruction materials, including load capacity information, such as load charts, for the crane for which certification is sought; and

(e) Depending upon the type of crane the operator intends to operate:

(i) Knowledge of Chapter 3-3 of the ASME B30.3-2004 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Construction Tower Cranes;

(ii) Knowledge of Chapters 5-0 through 5-3 of the ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; or

(iii) Knowledge of Chapters 6-0 through 6-3 of the ASME B30.6-2003 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Derricks;

(2) The individual:

(a) Demonstrates proficiency in operating the specific type of crane;

(b) Performs a practical skills examination that includes pre-start and post-start inspection, maneuvering skills, shutdown, and securing procedures; and

(c) Demonstrates specific knowledge of crane operations, including:

(i) Voice and radio communications;

(ii) Personal fall protection methods;

(iii) Emergency procedures; and

(iv) Hazards and restrictions associated with working adjacent to overhead electric lines and equipment;

(3) The individual provides every 2 years the following current medical documentation:

(a) Proof of successful completion of a physical examination conducted by a licensed physician that includes, at a minimum, the examination criteria specified in Paragraph 3.1.2 of the ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; or

(b) A certificate of medical examination as required for a commercial driver's license that would be acceptable to the U.S. Department of Transportation, unless the employee provides documentation from a licensed physician that the failure to meet these qualifications will not affect the individual's operation of a crane; and

(4) The individual has successfully passed a substance abuse test pursuant to the employer's drug and alcohol free workplace and substance abuse policy.

C. In lieu of compliance with §B(1)—(3) of this regulation, an employer may accept a crane operator certification from a nationally recognized certification program accredited by the NCCA or ANSI that demonstrates that, depending upon the type of crane for which certification is sought, the individual has acquired and maintains the knowledge, skill, and ability as referenced by:

(1) ASME B30.3-2004 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Construction Tower Cranes;

(2) ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; and

(3) ASME B30.6-2003 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Derricks.

D. An employer shall ensure, through testing every 5 years, that the crane operator maintains the knowledge, skills, and abilities as required by §B(1)—(3) of this regulation.

**.07 Crane Operator Trainee Requirements.**

A. The employer may allow a crane operator trainee, who is engaged in a structured learning program, developed and documented by the employer and designed to give the crane operator trainee the training requirements specified for crane operators in Regulation .06A of this chapter, to operate cranes under the following circumstances:

(1) The crane operator trainee is under the direct supervision of a crane operator for the type of crane operated by the trainee; and

(2) The crane operator trainee has demonstrated a basic understanding of crane operations, including:

(a) Crane limitations;

(b) Standard hand signals as defined in ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes;

(c) Voice and radio communications;

(d) Crane dynamics involved in swinging, controlling, and stopping loads;

(e) Boom deflection from hoisting loads;

(f) Personal fall protection methods; and

(g) Hazards and restrictions associated with working adjacent to overhead electric lines and equipment.

B. In lieu of compliance with §A (2) of this regulation, an employer may accept proof of completion of training through an operating engineer apprenticeship program that has been approved by the Maryland Apprenticeship and Training Council.

C. A crane operator trainee shall provide every 2 years the following current medical documentation:

(1) Proof of successful completion of a physical examination conducted by a licensed physician that includes, at a minimum, the examination criteria specified in Paragraph 3.1.2 of the ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; or

(2) A certificate of medical examination as required for a commercial driver's license that would be acceptable to the U.S. Department of Transportation, unless the employee provides documentation from a licensed physician that the failure to meet these qualifications will not affect the individual's operation of a crane.

D. A crane operator trainee shall successfully pass a substance abuse test pursuant to the employer's drug and alcohol free workplace and substance abuse policy before beginning work as a crane operator trainee.

**.08 Signal-Person Requirements.**

A. An employer shall ensure that no individual is permitted to provide hand or verbal signals to control crane operations unless the individual has received the following training:

(1) Proficiency in hand and verbal signals, including the standard method for hand signals, as required by:

(a) Chapter 3-3.3 of the ASME B30.3-2004 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Construction Tower Cranes;

(b) Chapter 5-3.3 of the ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; or

(c) Chapter 6-3.4 of the ASME B30.6-2003 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Derricks;

(2) In depth knowledge of crane operations and limitations, including the crane dynamics involved in swinging, controlling, and stopping loads, and boom deflection from hoisting loads; and

(3) Specific knowledge of crane operations, including:

(a) Voice and radio communications;

(b) Personal fall protection methods;

(c) Emergency procedures; and

(d) Hazards and restrictions associated with working adjacent to overhead electric lines and equipment.

B. In lieu of compliance with §A of this regulation, an employer may accept a certification from a nationally recognized certification program accredited by the NCCA or ANSI that demonstrates that the signal person has acquired and maintains the knowledge, skill, and ability required by §A of this regulation.

**.09 Rigger and Rigging Requirements.**

A. An employer shall ensure that all rigging used is in accordance with the rigging manufacturer's limitations and requirements.

B. An employer shall ensure that no individual is permitted to rig loads to be lifted by a crane unless the individual has received training appropriate to the level of work to be performed, consistent with the requirements of this regulation.

C. An employer shall ensure that a level I rigger has completed training in the safe application, use, and limitations of rigging equipment, as applicable to the work performed, and has a basic knowledge of the following:

(1) Voice and radio communications;

(2) Standard hand signals as defined in:

(a) ASME B30.3-2004 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Construction Tower Cranes;

(b) ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; or

(c) ASME B30.6-2003 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Derricks;

(3) Rigging hardware, including:

(a) Hooks and similar attaching devices;

(b) Shackles, clips, and clamps; and

(c) Taglines;

(4) Synthetic/wire rope slings; and

(5) Common load configurations and positioning.

D. The level I rigger shall demonstrate specific knowledge of crane operations, including:

(1) Voice and radio communications;

(2) Personal fall protection methods;

(3) Emergency procedures; and

(4) Hazards and restrictions associated with working adjacent to overhead electric lines and equipment.

E. An employer shall ensure that in addition to the requirements of a level I rigger, a level II rigger has completed training in the safe application, use, and limitations of rigging equipment, as applicable to the work performed, including:

(1) Come-along/chain hoist operations;

(2) Rigging hitches and knots;

(3) Anchor points;

(4) Synthetic ropes for rigging;

(5) Wire rope;

(6) Chains;

(7) Reeving;

(8) Spreader bars and equalizing beams;

(9) Synthetic slings;

(10) Lifting points;

(11) Dollies;

(12) Trollies;

(13) Manual and power tuggers and winches;

(14) Bars and levers;

(15) Fiber rope for rigging jacks, jacking systems, and rams;

(16) Links and rings;

(17) Plate clamps;

(18) Softeners; and

(19) Cable dogs/grips.

F. In lieu of compliance with §D of this regulation, an employer may accept proof of completion of training through an apprenticeship program for riggers that has been approved by the Maryland Apprenticeship and Training Council.

G. An employer shall ensure that in addition to the requirements of a level II rigger, a master/lead rigger has completed training in the safe application, use, and limitations of rigging as applicable to the work performed, including:

(1) Blind hoists;

(2) Traveling with the load;

(3) Work in close quarters;

(4) Personnel lifting procedures;

(5) Load dynamics;

(6) Load weight estimation or determination;

(7) Specific criteria from the manufacturer or equipment representative in the safe and appropriate methods of erection, dismantling, jumping, and reconfiguring of cranes;

(8) Specific criteria for lifting a single load with multiple cranes;

(9) Load indicator devices;

(10) Capacity or load charts;

(11) Mechanical advantages;

(12) Center of gravity;

(13) Effects of angles or indirect pulling;

(14) Equipment capacity computations;

(15) Drum/diameter (D/d) ratios;

(16) Vectors and angles; and

(17) Boom angles and road radius.

H. In lieu of compliance with §C, E, or G of this regulation required for a level I rigger, level II rigger, and master/lead rigger respectively, an employer may accept a certification from a nationally recognized certification program accredited by the NCCA or ANSI that demonstrates that the rigger has acquired and maintains the knowledge, skills, and abilities as required by §C, E, or G of this regulation.

I. An employer shall ensure that riggers receive refresher training under the following circumstances:

(1) If there are changes in the workplace or assigned duties and responsibilities that render the previous training obsolete;

(2) If there are changes in the types of rigging systems or equipment to be used, rendering the previous training obsolete; or

(3) If a competent person observes or is aware of inadequacies in a rigger's knowledge, performance, use of rigging systems, or equipment that indicate that the rigger has not retained the requisite understanding or skill.

J. All riggers shall successfully pass a substance abuse test pursuant to the employer's drug and alcohol free workplace and substance abuse policy.

**.10 Crane Inspections.**

A. An employer shall ensure that an initial inspection to verify operational safety of the equipment is conducted prior to the use of all new and altered cranes by a qualified person consistent with the periodic inspection requirements contained in:

(1) Chapter 5-2.1.3 of the ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; or

(2) Chapter 6-2.1.3 of the ASME B30.6-2003 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Derricks.

B. Inspections shall be conducted by the employer on a regular basis as follows:

(1) Daily inspections shall be conducted by a competent person when a crane is in use in accordance with the manufacturer's specifications and:

(a) Chapter 3-2.1.3 of the ASME B30.3-2004 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Construction Tower Cranes;

(b) Chapter 5-2.1.2 of the ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; or

(c) Chapter 6-2.1.2 of the ASME B30.6-2003 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Derricks; and

(2) Annual inspections shall be conducted by a qualified person on a 12-month interval in accordance with:

(a) Chapter 3-2.1.4 of the ASME B30.3-2004 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Construction Tower Cranes;

(b) Chapter 5-2.1.3 of the ASME B30.5-2007 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Mobile and Locomotive Cranes; or

(c) Chapter 6-2.1.3 of the ASME B30.6-2003 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings—Derricks.

C. An employer shall maintain inspection records for all inspections conducted on cranes, including inspections of brakes, crane hooks, ropes, hydraulic and pneumatic cylinders, and hydraulic and pneumatic pressure valves.

D. An employer shall maintain copies of inspection and maintenance records as follows:

(1) Daily inspection records for 1 year; and

(2) Annual inspection records and maintenance records for 3 years.

E. An employer shall make all records available to the Commissioner of Labor and Industry or the Commissioner's representative for review upon request.

**.11 Tower Cranes.**

A. An employer shall ensure that prior to the erection or modification of any tower crane or supporting structure, a qualified person shall determine the appropriate and safe method to integrate, assemble, and erect the tower crane for that site.

B. The employer shall ensure that when a tower crane is erected, dismantled, jumped, or reconfigured the following are maintained at the site where the work is performed:

(1) Written instructions by the manufacturer or a qualified person; and

(2) A list of the weights of each subassembly to be erected, dismantled, jumped, or reconfigured.

C. Except when approved and documented by a qualified person, prior to the commencement of work on the tower crane, the employer shall establish procedures for the particular site for the erection, dismantling, jumping, or reconfiguration work.

D. An employer shall ensure that the erection, dismantling, jumping, or reconfiguring of a tower crane is performed under the direct supervision of a master/lead rigger.

E. An employer shall ensure that a daily job safety briefing is conducted before the commencement of work with all persons working on or around the crane in the following circumstances:

(1) Prior to each jumping operation;

(2) Prior to when the boom, jib, or counter-jib is to be reconfigured; or

(3) Prior to when a tower crane is to be dismantled.

F. An employer shall ensure that the master/lead rigger discuss the following at the daily job safety briefing:

(1) The site-specific procedures;

(2) The manufacturer's recommendations and precautions;

(3) Any concerns related to the process that is to be undertaken;

(4) The communication methods and procedures to be used; and

(5) The process workload for the work shift, including the individual tasks to be performed by each person.

G. An employer shall ensure that erection, dismantling, and inspections shall be conducted in accordance with Chapters 3-1 and 3-2 of the ASME B30.3-2004 Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings — Construction Tower Cranes.

**.12 Record Keeping.**

A. An employer shall maintain a written record of the training for each crane operator, signal person, rigger, and crane operator trainee.

B. Training Records.

(1) All training records shall be maintained for 5 years in the employer's principal office of the business in Maryland.

(2) An employer shall make the training records available to the Commissioner of Labor and Industry or the Commissioner's representative for examination and copying upon request.

**.13 Special Lifts.**

A. An employer shall ensure that each time a special lift occurs, it is under the direct supervision of a master/lead rigger.

B. An employer shall ensure that prior to the commencement of work, all rigging used in special lifts is inspected for compliance with all requirements by the master/lead rigger.

C. Forty-eight hours prior to the commencement of any special lift, an employer shall notify the Commissioner of Labor and Industry by e-mail to speciallift@dllr.state.md.us, or fax at 410-767-2986, with the following information:

(1) Name of employer;

(2) General or managing contractor;

(3) Type of special lift;

(4) Site location;

(5) Specific site of special lift within the location;

(6) Site contact person and phone number;

(7) Equipment involved; and

(8) Scheduled time of special lift.

D. If an employer is unable to provide 48 hours notice to the Commissioner of Labor and Industry prior to the commencement of any special lift, the employer shall provide the Commissioner with notice as soon as practical and a written explanation why 48 hours notice was not provided along with the required information in §C (1)—(8) of this regulation, not later than 24 hours after the special lift.