SAFETY
PLANTS, WORK ZONES, SILICA AND INITIATIVES
TRENTON M. CLARK, P.E.
EXECUTIVE VICE-PRESIDENT
CONSTRUCTION INDUSTRY FATAL FOUR
ACCORDING TO OSHA IN 2016

4693 WORKER FATALITIES
IN PRIVATE INDUSTRY

991 WORKERS IN CONSTRUCTION
21.1%

FOUR MOST COMMON CAUSES
FALLS (384)
STRUCK BY OBJECT (93)
ELECTROCUTIONS (82)
CAUGHT IN BETWEEN (72)

THIS DOES NOT INCLUDE WORK ZONES
WORKER FATALITIES IN WORK ZONES

ACCORDING TO NOISH FROM 2003-2015
68% OF WZ DEATHS WERE
Construction Laborers
Heavy and Tractor Trailer Drivers
Construction Equipment Operators
First-Line Supervisors
Highway Maintenance Workers

PRIVATE SECTOR EMPLOYEES: 59%

SERVICE PRODUCING INDUSTRIES: 20%

GOVERNMENT SECTOR WORKERS: 14%
Work Zone Fatalities - Nationally

SOURCE: NATIONAL WORK ZONE SAFETY INFORMATION CLEARINGHOUSE
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2017 VDOT DATA
Thru Mid December

WORK ZONE
Crashes: 2553
Injuries: 1276
Fatalities: 12
PURPOSE
To Discuss and Share Ways to Improve Plant & Work zone Safety

JIM MITCHELL
President of Superior Paving Corp, Discussed their Company’s Safety Culture

BETH STINSON
ARTBA, Discussed new Training and Safety Certification Program

SAFETY PROFESSIONALS
Led Small Group Discussions
PLANT SAFETY
Led by J.R. Glasscock and Michelle Weeks
Virginia Paving Company

Fatigue    Guarding Plant Equipment    Adequate Training    Visitors on Site    Night-time Visibility
PLANT SAFETY
IDEAS SHARED

- Use of Halo Lights on Hard Hats for Night Time Crews
- Safety Leadership Teams
- Internal Traffic Control Plans: Control Flow of Vehicles/Equipment
- Task Training of Personnel
- Teaming with Local EMS in Case of Emergency
WORK ZONE SAFETY
LED BY DICK BEARD
B & S CONTRACTING, INC.

- Work Zone Visitors Don’t Follow ICTP
- Parking in Safe Zones
- Speed of Traffic Through Work Zone
- Excessive Signage Leading to Confusion Or Ignoring Signs
WORK ZONE SAFETY
IDEAS SHARED

- REQUEST SPEED REDUCTION THROUGH WORK ZONES
- DEVELOP AND FOLLOWICTP
- USE SPOTTERS WITH SPECIFIC COLORS FOR EASY IDENTIFICATION
- USE OF HALO LIGHTS ON CREW MEMBERS
- USE OF PORTABLE RUMBLE STRIPS
- FLASHING LIGHTS ON EQUIPMENT, SIGNS, ETC. AT NIGHT
WORK ZONE SAFETY

HALO LIGHT

FLASHING LIGHTS

RUMBLE STRIPS
OSHA SILICA

REGULATION STATUS

TWO MAIN AREAS

▪ CONSTRUCTION Activities
  (June 23, 2017)

▪ GENERAL INDUSTRY Activities
  (June 23, 2018)

Recent Court Case by Industry Groups Against Rule was Rejected by US Court of Appeals for District of Columbia
CONSTRUCTION ACTIVITIES

OPERATIONS THAT GENERATE VISIBLE DUST

EMPLOYERS MUST HAVE PLAN TO IDENTIFY AND ADDRESS DUST

PAVING RELATED OPERATIONS
- Sweeping (Enclosed Cabs vs. Open Cabs)
- Milling (Table 1)
- Sawing/Coring (Not Covered)

MANY OPERATIONS COVERED BY TABLE 1 IN REGULATION, MANY OTHERS ARE NOT

THOSE NOT COVERED AND WORKERS EXPOSED TO DUST MUST BE EVALUTED
SAWING/CORING

NO VISIBLE DUST, NO ISSUE
But Sawing and Coring are Done
Dry For Asphalt Density Acceptance

Not All Aggregates Have High Levels of Silica
SAWING/CORING
2017 EFFORT TO ASSESS

HIRED THIRD PARTY TO MONITOR & EVALUATE WORKER EXPOSURE

THREE SITES EVALUATED BY MONITORING DENSITY TECHNICIAN OVER 8 HOUR PERIOD

AIR MONITORING ANALYSIS DONE BY ACCREDITED LAB
SAWING/CORING RESULTS

TWO OF THREE MONITORING SITES DID NOT HAVE MEASURABLE SILICA

ONE SITE HAD A VALUE OF 11 PEL FOR SILICA IS 25

NUMBER OF CORES/PLUGS RANGED FROM 4 TO 5

ADDITIONALLY, RESULTS FROM OTHER COMPANIES PERFORMING WORK ALIGN WITH VAA RESULTS
SAWING/CORING

WHAT NEXT IN 2018?

- Additional data will be collected
- At least one site with 8 to 10 plugs/cores will be evaluated
- Should cover situations with control strips & test sections conducted in single 8-hour shift
SAME EXPOSURE LIMITS
25 PEL for Action, 50 PEL Maximum

OSHA HAS GUIDANCE DOCUMENTS AT:

KEY DETERMINATION
Is Silica Dust an Issue at the Plant
VDOT SAFETY INITIATIVE

REDUCE THE RISK FOR SEVERE INJURY & FATAL CRASHES

CONCERN FOR COLLISIONS
Caused By Stopped Or Slowed Traffic, Prior To Typical Traffic Control In Work Zones (Temporary & Long-term)

HIGH SPEED, HIGH VOLUME ROUTES

ROUTES WITH GEOMETRIC CHALLENGES (I.E., Grades And Curves)

PILOTED STRATEGIES ON I-95 BRIDGE PROJECT & I-81 STAUNTON WARNING ON-COMING TRAFFIC OF STOPPED OR SLOWED TRAFFIC AHEAD
- I-95 Is Tech App For Long Term Wz Application
- I-81 Is Short-Term App Using A Truck With Message Sign & Driver
FOCUSED ON I-81 CORRIDOR - STAUNTON
- 12 Fatal Crashes In 5 Years Within Traffic Queue On I-81
- Staunton I-81 Traffic Columnes Increasing At 3-4% Per Year Since 2014

PLANT MIX AND LATEX CONTRACTS

USE OF MOBILE QUEUE WARNING VEHICLE
- Queue Management Team (QMT) Special Provision Copied Note (SPCN); 8.23.17

FOUR PRIMARY APPROACHES TO ACCESS EFFECTIVENESS IN 2018
- Contractor Provided QMT
- VDOT Provided QMT Using Safety Service Patrol (SSP) Or Interstate Maintenance Contractor
- Additional PCMS Devices With Warning Messages Prior To Anticipated Traffic Queues.
- Reduction Of Allowable Work Hours
QUEUE MANAGEMENT FOR I-81

Approaches will be assessed during 2018 based on:

▪ Cost for each approach
▪ Effectiveness in reducing crashes

Newer technologies to automatically provide queue warning messages may be investigated.
IF YOU WOULD LIKE TO TEXT YOUR QUESTIONS DIAL 804-929-2331