

The background features several decorative elements: a thin blue horizontal line at the top, a light blue arc in the top left corner, and two thick, wavy lines in light blue and purple that trend upwards from the bottom left towards the top right, passing behind the main title text.

Safety Trends, Changes & Lessons Learned

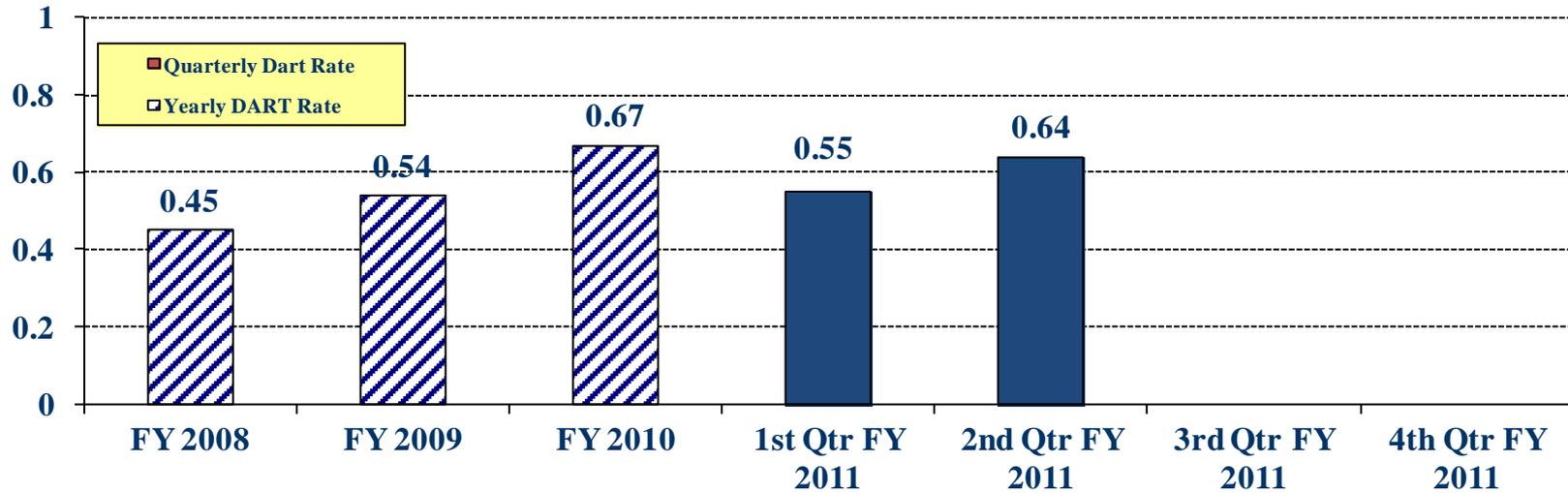
JULY 2011

Safety Execution

Total Contractor DART Rate – NAVFAC Atlantic



DART Rate



Activity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Cases FY 2011	DART Rate FY 2011	DART Rate FY 2010	DART Rate FY 2009	DART Rate Goal FY 2011
EURAFSWA	0	1	0	0	0	1	2						4	0.10	0.34	0.54	0.51
Mid-Atlantic	2	1	2	3	3	1	3						15	0.39	0.51	0.41	0.39
Midwest	1	1	1	1	0	0	0						4	1.74	0.60	0.61	0.57
Northwest	0	0	0	1	2	2	0						5	0.76	1.45	0.67	0.63
Southeast	2	2	2	6	4	3	2						21	0.74	0.61	0.45	0.42
Southwest	0	3	3	1	1	1	0						9	0.30	0.67	0.22	0.21
Washington	0	5	6	3	3	5	6						28	1.62	1.17	1.24	1.17
Atlantic (Ech III only)	0	0	0	0	0	0	0						0	0.00	0.89	4.74	4.46
All NAVFAC Atlantic	5	13	14	15	13	13	13	0	0	0	0	0	86	0.59	0.67	0.54	0.51

Goal Met

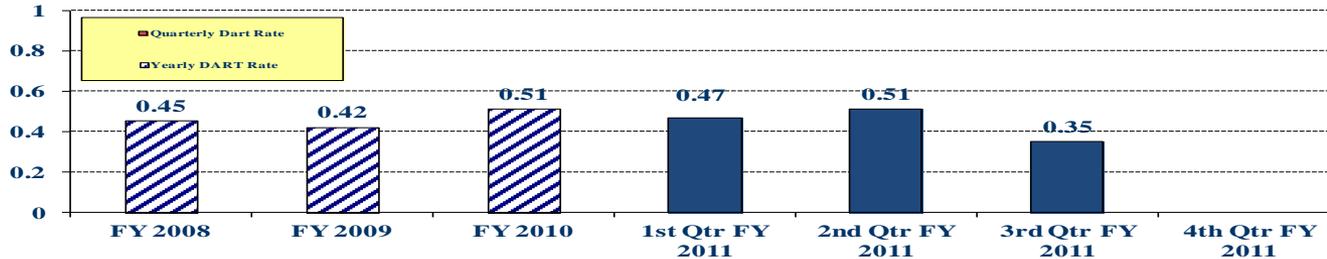
Goal Not Met

Safety Execution

Contractor - Days Away, Restricted Duty, or Transfer (DART) Rate Combined Construction, Service and Environmental Totals



DART Rate



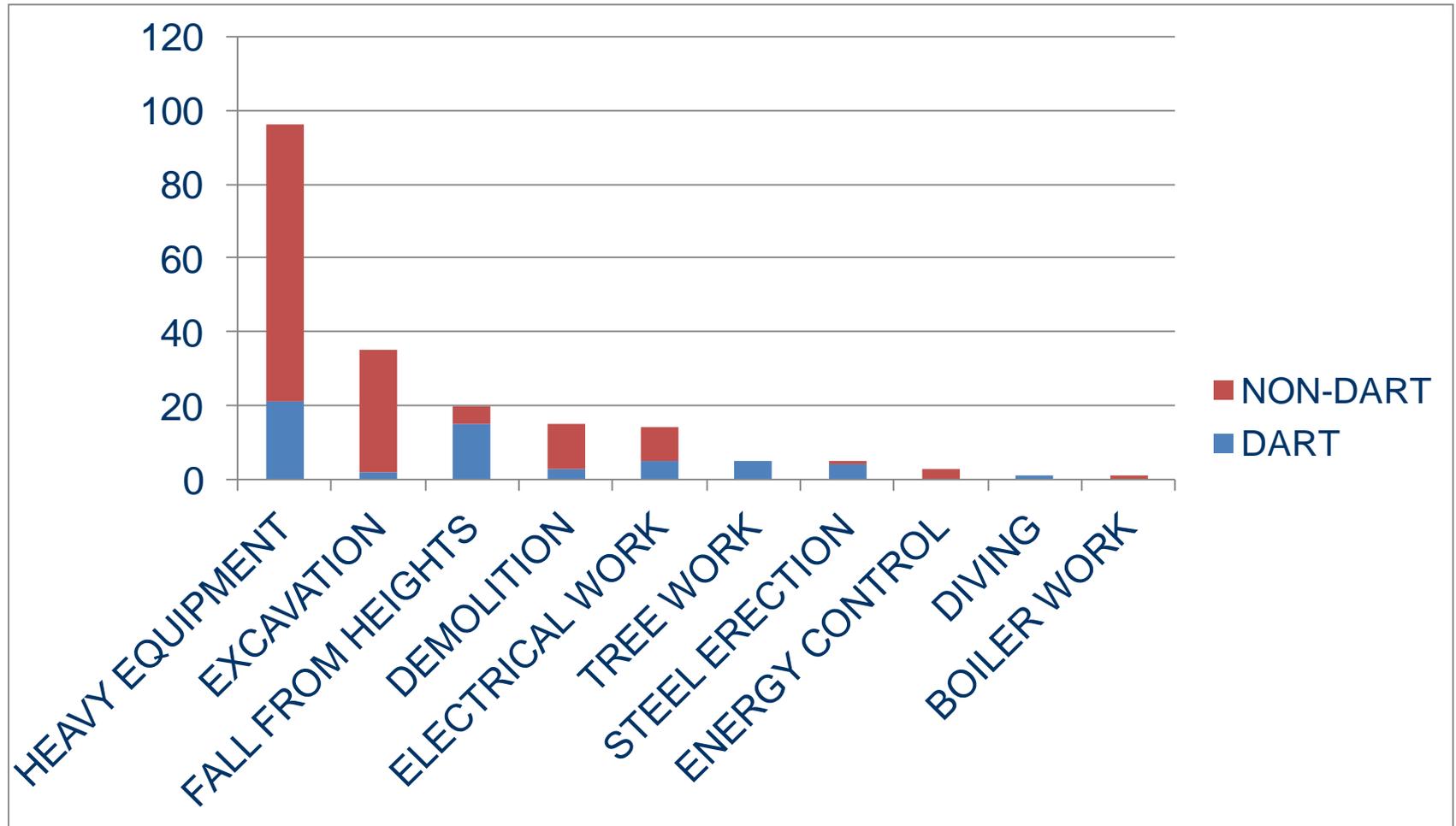
Activity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	FY 2011 YTD	Year to date Man-hours	Year to date DART Rate	DART Rate FY 2010	DART Rate FY 2009
OICC MCI EAST	0	1	1	1	1	0	2	0	1	0	0	0	7	4,408,265	0.31	0.18	0.26
PWD Earl	0	0	0	0	0	0	0	0	0	0	0	0	0	230,812	0.00	0.00	0.00
PWD Little Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	298,522	0.00	0.34	0.00
PWD Maine	0	0	0	0	0	0	0	0	0	0	0	0	0	44,579	0.00	0.00	0.86
PWD New London	0	0	0	0	0	1	0	0	0	0	0	0	1	284,323	0.70	2.14	0.00
PWD Newport	0	0	0	1	1	0	0	0	0	0	0	0	2	281,076	1.42	2.49	2.28
PWD Norfolk	0	0	1	2	0	1	0	0	0	0	0	0	4	2,150,868	0.37	0.70	0.63
PWD NSA NORFOLK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.69	0.57
PWD Oceana	0	0	0	0	0	0	0	0	0	0	0	0	0	382,942	0.00	0.00	0.00
PWD PA	1	0	0	0	0	0	0	0	0	0	0	0	1	507,557	0.39	0.00	0.00
PWD Portsmouth	0	0	0	0	0	0	0	0	0	0	0	0	0	342,958	0.00	0.79	1.52
PWD Yorktown	1	0	0	0	0	0	0	0	0	0	0	0	1	75,391	2.65	0.00	0.00
ROICC Cherry Pt	0	0	0	0	1	0	0	0	0	0	0	0	1	512,104	0.39	0.00	0.00
MIDLANT Totals	2	1	2	4	3	2	2	0	1	0	0	0	17	9,531,718	0.35	0.51	0.42

Goal met Goal not met

$$\text{DART RATE} = \frac{\text{Number of DART Cases} \times 200,000 \text{ hrs}}{\text{TOTAL NUMBER OF MANHOURS}}$$

TARGET DART RATE FOR FY11 is 0.39
DART RATE ABOVE 1.0 REQUIRES SAV

CONTRACTOR HIGH HAZARD INCIDENTS – FY08 – FY11 YTD



N = 139 CASES

Understand!



Lives **CHANGE** when mishaps occur!

We succeed or fail **TOGETHER!**



 **Our 10 Guiding Principles**

 **A Pro-active Safety Manager...**



Our 10 Guiding Principles for Safety



1. Safety is an **Ethical & Moral** Responsibility
2. All Injuries **ARE Preventable**
3. Safety is a **Culture NOT** a Program
4. Management is **Responsible**
5. Everyone Must Be **Trained** to Work Safely
6. Safety is a **Condition of Employment**
7. Provide **Encouragement & Recognition** for Safe Performance
8. Safety Programs Must be **Site Specific**
 - ✓ Recurring Internal & External Audits of the Workplace
 - ✓ Prompt Corrective Action
9. Safety is a **Good Stewardship** of Federal Funds (your tax dollars!)
10. Facilitate Employee **Ownership** of Safety



A Pro-active Safety Manager....



1. Understands the EM 385-1-1 USACOE Safety & Health Manual
2. Has a well-developed contract/site specific safety plan
3. Takes ownership of all sub-contractors on the job site
4. Ensures that everyone is properly trained (at all levels)
5. Ensures everyone has all required PPE at all times
6. Has thought through the various phases of work
7. Looks ahead anticipates safety problems
8. Watches out for the “Problem Children” & “Hard Chargers”
9. Will NEVER compromise safety for production
10. Has the moral courage to have the “Tough Conversation”
 - ✓ with a long-time friend or co-worker
 - ✓ might include a warning
 - ✓ might include a suspension or firing!



**General Colin Powell
Chairman (Ret), Joint Chiefs of Staff
A Leadership Primer**



"Management is lonely."

Harry Truman was right. Whether you're a CEO or the temporary head of a project team, the buck stops here. You can encourage participative management and bottom-up employee involvement, but ultimately the essence of leadership is the willingness to make the tough, unambiguous choices that will have an impact on the fate of the organization. I've seen too many non-leaders flinch from this responsibility. Even as you create an informal, open, collaborative corporate culture, prepare to be lonely.

General Colin Powell
Chairman (Ret), Joint Chiefs of Staff
A Leadership Primer



**"Being responsible sometimes
means pissing people off."**

Good leadership involves responsibility to the welfare of the group, which means that some people will get angry at your actions and decisions. It's inevitable, if you're honorable. Trying to get everyone to like you is a sign of mediocrity: you'll avoid the tough decisions, you'll avoid confronting the people who need to be confronted, and you'll avoid offering differential rewards based on differential performance because some people might get upset. Ironically, by procrastinating on the difficult choices, by trying not to get anyone mad, and by treating everyone equally "nicely" regardless of their contributions, you'll simply ensure that the only people you'll wind up angering are the most creative and productive people in the organization.

Culture vs. Climate



- **For most organizations you have to create a climate where safety has equal or near equal status with Production, Quality and Cost**
- **Historically this has not been the case for most organizations. There is often confusion from the messages sent**
- **“Do whatever it takes” does not actually mean “Do whatever it takes”**

Visibility of Safety



- **Visible when Accident occurs**
- **Invisible unless trained to look for at risk conditions, situations and behaviors**
- **Many incentives to work at risk**
 - **Speeding**
 - **Positive Reinforcement of a Negative Act**
- **No one ever expects to get hurt**
- **No one wants anyone to be hurt**

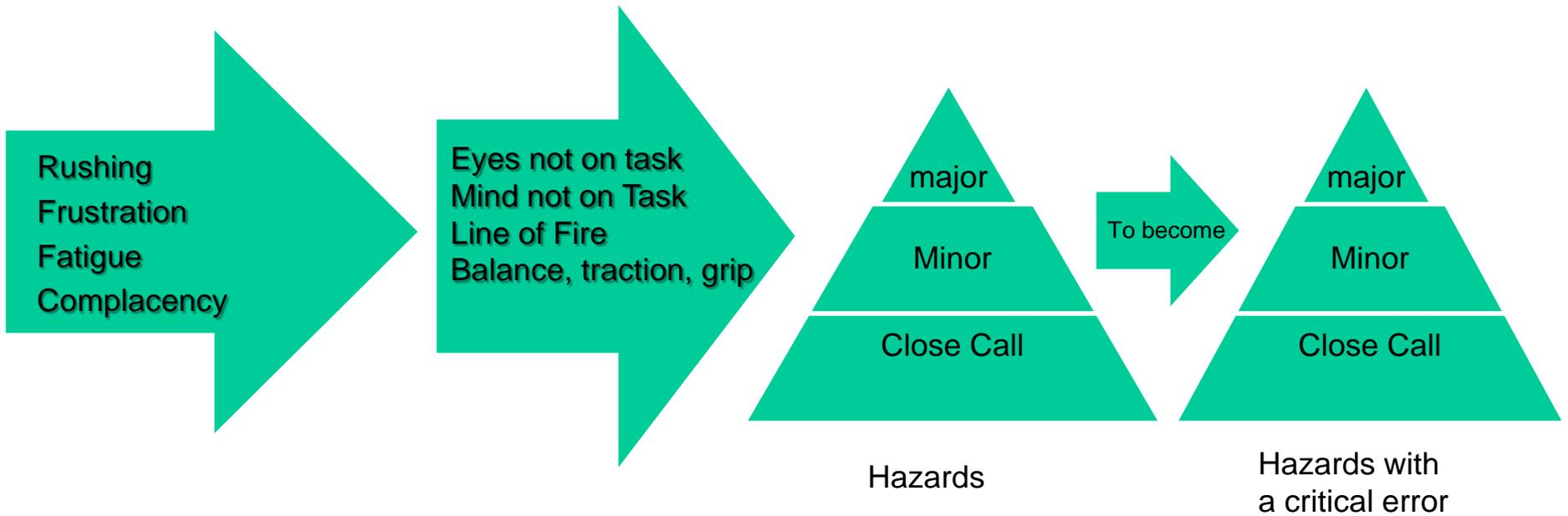
Safety Skills & Awareness

Employee Responsibility



States (cause)

Errors (which cause) Less Risk (to become) More Risk



EM 385 (2008) CHANGES



EM 385-1-1
15 September 2008
SAFETY AND HEALTH
REQUIREMENTS MANUAL

EM 385 (2008) CHANGES 4. General a (1)



(1) Construction contract work under the provisions of FAR Clause 52.236-13. Contractors shall comply with the latest version of EM 385-1-1 (including interim changes) that is in effect on the date of solicitation. Prior to making an offer, bidders should check the HQUSACE Safety and Occupational Health web site (see paragraph c) for the latest changes.

No separate payment will be made for compliance with this paragraph or for compliance with other safety and health requirements of this contract. Note: Existing contracts will continue to apply the provisions of the previous edition of this manual until contract completion.

EM 385 (2008) CHANGES



Safety and Health Requirements 4. General (3) c

c. Changes. All interim changes (changes made between publication of new editions) to this manual, and the effective date of change, will be posted on the Safety and Occupational Health Office website:

<http://www.usace.army.mil/CESO/Pages/Home.aspx>

and in USACE Electronic bid Sets.

CHANGE 1 (9 CHANGES) EFFECTIVE 5 APRIL 2010



01.B.04 Visitors and Authorized Entrants.

a. A visitor is anyone coming to the site for short-term action (e.g., inspection, meetings, deliveries, etc.). An authorized entrant is anyone entering the site that is assigned to the site but is not a site worker (e.g., security forces, other military forces, etc.). Signs shall be posted at all site entrances requiring anyone entering the site to report to the project office for a safety briefing

b. All visitors and authorized entrants to USACE Government- or Contractor-controlled sites presenting hazardous conditions shall be briefed by a Qualified Person on the hazards to be expected on the site and the safety and health controls required (e.g., hard hat, foot protection, etc.

c. The site manager shall ensure that all visitors entering the site are properly protected and are wearing or provided the appropriate PPE.

d Site personnel should maintain a stock of common PPE, such as hard hats, eye protection, ear plugs, and reflective vests, for use by visitors

e. The site manager shall provide an escort for all visitors while on site.

f. A visitor sign-in/out log shall be maintained on site. The site manager shall maintain a roster of all authorized entrants that enter the site.

CHANGE # 2 (52 CHANGES)



EFFECTIVE 10 NOVEMBER 2010

i. Paragraph 21.C.01, add wording to read:

“21.C.01 If Contractor has personnel working at heights, exposed to fall hazards and using fall protection equipment, he shall develop a Site- Specific Fall Protection and Prevention Plan and submit it to the GDA for acceptance as part of their APP. This plan may be developed by either the Competent Person for Fall Protection (CP for FP) or Qualified Person for Fall Protection (QP for FP). If the plan includes FP components or systems requiring direction, supervision, design calculations or drawings by a QP for FP, the name, qualifications and responsibilities of the QP for FP shall be addressed in this plan. The plan shall describe, in detail, the specific practices, equipment and methods used to protect workers from falling to lower levels. This plan shall be updated as conditions change, at least every six months and shall include:“;

CHANGE # 3 (4 CHANGES)

EFFECTIVE 1 JUNE 2010



05.J.02 Automatic-Inflatable PFDs Type V or better, USCG-approved for Commercial Use, may be worn by workers in lieu of inherently buoyant PFDs (See conditions 05.J.01.a-e above), provided the following criteria is met:

a. PFDs are worn only by workers over 16 years of age and those who weigh 90 lb (40.8 kg) or more;

b. An AHA shall be developed for the intended activity and shall be used to select the most appropriate PFD for the activity;

c. PFDs must be inspected, maintained, stowed and used in accordance with the manufacturer's instructions. PFDs used in heavy construction or maintenance activities or where hot work (welding, brazing, cutting, soldering, etc.) is to be performed must be designed, tested and certified by the manufacturers for this type of work;

NOTE: The standard commercial auto-inflatable PFD does not meet these requirements.

d. PFDs shall provide a 30-pound minimum buoyancy post-deployment and shall have a status indicator window;

e. Personnel shall be trained in the use, maintenance, restrictions, care, storage, inspection and post-deployment procedures per manufacturer's instructions;

f. The USCG-approval for auto-inflatable PFD's is contingent upon the PFD being worn, not stowed. All auto-inflatable PFDs must be worn at all times a drowning hazard exists.

g. In-water testing is required for all first time users to validate performance and to become familiar with the use and feel of the PFD.

CHANGE # 4 (1 CHANGE) EFFECTIVE 9 JUNE 2011



3. Delete existing paragraph 20.A.04 and replace with the following:

“20.A.04 Testing using Pressurized Gases/Air.

a. Tests for structural integrity or leaks using pressurized gases, such as air, are prohibited, **except for:**

(1) testing of bulk petroleum, oil, and lubricant (POL) storage tanks under API standards, or

(2) testing when permitted by all applicable manufacturer’s specifications or when specified by an applicable code.

b. Testing with pressurized air or gases must be conducted within the limits of the specific codes or standards specified by the manufacturer’s recommendations using detailed test procedures that have been prepared by a Competent Person, submitted and accepted by the GDA. A Competent Person shall be responsible for supervision of the testing procedures and all workers performing the testing shall be knowledgeable of the procedures, hazards and controls. Quality assurance/control measures shall assure strict enforcement of all requirements.

preparatory meeting shall be held immediately prior to the testing to review the test procedures and AHA.”

c. If interim or final acceptance testing is anticipated to occur 2 or more months after the initial pipe or system installation preparatory meeting, a supplemental preparatory meeting shall be held immediately prior to the testing to review the test procedures and AHA.

CHANGE # 5 (REPLACE RIGGING CHAPTER) EFFECTIVE 1 APRIL 2011



- 1. These changes shall be in effect as of 1 April 2011. For contractual work, all contracts whose date of solicitation is 1 April or later shall consider this change in effect. All underlined wording is specific to this change.**
- 2. These changes are required to: update USACE requirements to parallel recently published OSHA requirements, streamline, improve and clarify requirements for rigging**
- 3. This change affects the following;**
Remove Section 15, in entirety, Replace with the new Section 15 Rigging

Change # 6 (Table 11-1) and lifting requirements



This Change effects the following:

- | | |
|------------------------------------|------------------------------|
| a. Table 11-1: | Change values |
| b. New table 11-2: | Add: |
| c. Existing Table 11-2: | Re-title as Table 11-3 |
| d. Existing Table 11-3: | Re-title as Table 11-4 |
| e. Section 11, various paragraphs: | Change Table references |
| f. Remove Section 16: | Replace with new Section 16: |
| g. Paragraph 18 G.29: | Change wording |
| h. Paragraph 18 G.29: | Add new note afterwards |
| i. Appendix I: | Delete |
| j. Appendix Q: | Add new definitions |
| k. Appendix S: | Add new Definitions |

UPCOMING CHANGES TO SECTION 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS



1.17 TRAFFIC CONTROL

1.17.1 Signal Systems, Personnel And Procedures

Signal systems, personnel and procedures shall comply with EM 385-1-1 Section 08.B SIGNAL SYSTEMS, PERSONNEL AND PROCEDURES.

1.17.1 Road Closings

Traffic control is extremely important on highways, in residential areas, and at construction sites. When traffic may pose a hazard to operations, public roads will be closed. Road closings shall be coordinated in writing with appropriate local agencies. Traffic controls and signage should comply with the DOT Federal Highway Administration's "Manual on Uniform Traffic Control Devices (MUTCD)".

1.17.2 Operating Road Precautions

When a road cannot be closed, the following precautions shall be taken:

- a. "FLAGGER" (MUTCD W-20-7) or "WORKERS AHEAD: (W21-1) or similar appropriate signs shall be placed along the roadway, 1,000 ft (304.8m) and 500 ft (30.5 m) before the work zone, on both sides of the work zone".
- b. Sufficient number of flag persons shall be used to control traffic within the work area.
- c. Flag persons shall be used and shall receive instruction in flagging operations before being placed in traffic (training and certification by the National Safety Council (NSC) is recommended).
- d. All flag persons shall wear high-visibility apparel in accordance with EM 385-1-1, paragraph 05.F, safety-toed footwear and hard hats.
- e. "STOP/SLOW" paddles, preferably mounted on a 6 ft staff, will be used for traffic control.
- f. Flag persons shall be able to communicate with each other and with the foreman, and effectively signal/direct the affected public.
- g. Two-way radios shall be used whenever visual contact between flaggers is not maintained.

1.17.3 Construction Vehicles

All construction vehicles and all vehicles exceeding 1-1/2 tons (1360.8 kg) shall have a signal person to assist in backing in residential and construction areas.

1.17.4 Internal Traffic Control Plans

Internal traffic control plans (written plans which address how separation and safety of personnel and moving equipment will be attached to all AHA's when interaction between personnel and moving equipment will occur or physical changes occur onsite which could effect personnel or moving equipment.

LESSONS LEARNED ALERT



Construction Safety References

EM 385 14.C HOUSEKEEPING

14.C.01 Work areas and means of access shall be maintained safe and orderly.

a. Sufficient personnel and equipment shall be provided to ensure compliance with all housekeeping requirements.

b. Work areas shall be inspected daily for adequate housekeeping and findings shall be recorded on daily inspection reports.

c. Work will not be allowed in those areas that do not comply with the requirements of this Section.

14.C.02 All stairways, passageways, gangways, and access ways shall be kept free of materials, supplies, and obstructions at all times.

PART 1926 Safety and Health Regulations for Construction

29 CFR 1926.25 HOUSEKEEPING

1926.25(A) During the course of construction, alteration, or repairs, form and scrap lumber with protruding nails, and all other debris, shall be kept cleared from work areas, passageways, and stairs, in and around buildings or other structures.

29 CFR 1926.250(a)(3) Aisles and passageway shall be kept clear to provide for the free and safe movement of material handling equipment or employees.

29 CFR 1910 Occupational Safety and Health Standards for General Industry

29 CFR.1910.22(a) Housekeeping (a)(1) All places of employment, passageway, storerooms, and service rooms shall be kept clean and orderly and in a sanitary condition

DOES YOUR JOBSITE LOOK LIKE THIS?

HOUSEKEEPING AND MATERIAL STORAGE INSIDE JOBSITES



a. Injured Employee

b. Stacked Material
(metal studs)

c. Direct Cause of
Laceration
(edge of metal studs)

d. Wet Floor
(standing water not a
factor)

THIS IS HOW IT SHOULD LOOK !!!
SAME MATERIAL STORAGE AREA AFTER MISHAP



LESSONS LEARNED/NEAR MISS



Property Damage Falling Brick Tower



Activity: Building Demolition

A contractor was removing a 62ft. high brick tower of an old fire house. With the fire house portion of the demo complete, the contractor intended to demo the brick tower by removing several top sections by hand, then using a grappler to complete the demo. This changed when the contractor found the top section (Roof) was made of concrete. The contractor attempted to pull the top concrete section down with wire rope attached to an excavator when the base of the tower collapsed. The brick tower fell east striking and damaging a beam of another facility.

Direct Cause:

Failure to use proper equipment and approach for demolition.

Indirect Causes:

- AHA did not detail the hazards.
- No FEAD notification before starting critical activity
- No EM-385-1-1 required Engineering and Demolition Plan signed by a Registered Professional Engineer
- No ORM adjustment made when conditions changed



Lessons Learned:

- Ensure an Engineering and Demolition Plan is provided by a Registered Professional Engineer.
- AHA must be site specific for each definable feature of work, and all control measures must be followed.
- Ensure diligence in all three phases of QA / QC

SUMMARY



- **Overall DART rates are going down**
- **Number of reported mishaps is going UP**
- **Mishap Review Boards (MRBs) are showing positive results**
- **NAVFAC requires for an Accident Prevention Plan not a “Safety Plan”**
- **Activity Hazard Analysis (AHA) is the last sanity check before you begin work to ensure everyone, all crafts, have reduced the risk level to the lowest level possible before beginning work.**

Back up Slides

Activity Hazard Analysis (AHA)

ACTIVITY/WORK TASK:		Overall Risk Assessment Code (RAC) (Use highest code)						
		Revision number				AHA number		
PWO/OICC/ROICC OFFICE		Risk Assessment Code (RAC) Matrix						
NAME & DATE ACCEPTED BY GDA:		Severity	Probability					
CONTRACT NUMBER:			Frequent	Likely	Occasional	Seldom	Unlikely	
TASK ORDER/DELIVERY #:			Catastrophic	E	E	H	H	M
PRIME CONTRACTOR:			Critical	E	H	H	M	L
SUBCONTRACTOR:			Marginal	H	M	M	L	L
DATE OF PREPARATORY MEETING:		Negligible	M	L	L	L	L	
DATE OF INITIAL INSPECTION:								
CONTRACTOR COMPETENT PERSON:								
SITE SAFETY and HEALTH OFFICER								
RAC CHART and ACCEPTANCE BY GOVERNMENT DESIGNATED AUTHORITY		Review each "Hazard" with identified safety "Controls" and determine (RAC)						
E = EXTREMELY HIGH (PWO/OICC/ROICC)		Identify the RAC (Probability/Severity) as E, H, M, or L for each "Hazard" .Place the highest RAC at the top of AHA. This is the overall risk assessment code for this activity						
H = HIGH RISK (FEAD DIRECTOR)		"Severity" is the outcome/degree if an incident, near miss, or accident did occur and identified as: Catastrophic, Critical, Marginal, or Negligible after controls are in place						
M = MODERATE RISK (CM or ET or PAR)								
L = LOW RISK (ET or PAR)		"Probability" is the likelihood to cause an incident, near miss, or accident did occur and identified as: Frequent, Likely, Occasional, Seldom, or Unlikely after controls are put in place.						
Job Steps	Hazards	Controls			RAC			

**IAW EM 385 01.A.13 Contractor-Required AHA "Work will not begin until the AHA for the work activity has been accepted by the GDA"
The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified person's**

Equipment to be Used	Training Requirements and Competent or Qualified Personnel name(s)	Inspection Requirements	RAC

IAW EM 385 01.A.13 Contractor-Required AHA "Work will not begin until the AHA for the work activity has been accepted by the GDA"
The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified person's

Instructions for completing Activity Hazard Analysis

1. **Activity/Work Task** – Insert work/task this AHA is written for i.e. excavation, scaffold building, foundation preparation.
2. **PWO/OICC/ROICC** – Insert name of Public Works Office
Officer In Charge of Construction Office or
Resident Officer in Charge of Construction
3. Enter name & date AHA accepted by Government Designated Authority (GDA)
4. Enter contract number
5. Enter Task order or Delivery order number
6. Enter Prime Contractors name
7. Enter Subcontractors name
8. Enter date preparatory meeting was held
9. Enter date initial inspection was performed
10. Enter name of contractor competent person on site for this activity
11. Enter name of Prime Contractor Site Safety and Health Officer
12. RAC Chart explanation and level of government person responsible for accepting the AHA as level of risk increases.
13. Overall Risk Assessment code is highest code assigned to any Job step after Hazards are assessed and controls have been assigned
14. Revision number is blank for beginning AHA and sequentially numbered thereafter
15. AHA number is the sequential number of all AHA's for this contract. Starting with number 001 and continuing until contract is completed AHA numbers will be cross referenced with activity schedule tasks, when possible
16. Job steps is the complete sequence of work, not general statements to complete the entire activity
17. Hazards is the known safety risks associated with completing the task
18. Controls is the safety measures in place to reduce the hazard to the lowest level possible
19. Risk Assessment code is where Severity and Probability connect, place that letter E, H, M, or L in the RAC column
20. List all equipment to be used to complete this activity i.e. crane, backhoe, vehicle, all heavy equipment
21. List the training requirements required by EM 385, Safety Spec 01356 or OSHA that apply to this task.
List competent person(s) required for specific tasks in EM 385
List qualified person(s) required for specific tasks in EM 385
22. List all inspection requirements of EM 385, Governmental Safety Requirements 013526 or OSHA 29 CFR 1926

**IAW EM 385 01A.13 Contractor-Required AHA “Work will not begin until the AHA for the work activity has been accepted by the GDA”
The AHA shall be reviewed and modified as necessary to address changing site condition, operations or change of competent/qualified person’s**