



Resident Officer In Charge of Construction MCB Camp Pendleton Field Leadership Quality Control Conference

June 16, 2011

AGENDA

- **ROICC Welcome**
- **FMD Warranty Overview, Statistics, and Lessons Learned**
- **Final Design and Required Supporting References**
- **QC Manger's Role in Submittal Process**
- **QC Manager's Role in Site Safety**
- **Discussion: Concrete Mix Time**
- **Q&A**

FAR 52.246-21

FMD ORDER 11300.34

WARRANTY OF CONSTRUCTION

Purpose



- To identify, report, and correct defects on contracted construction projects on which construction has been completed and which carry a warranty clause for a specified period of time.
- Avoid potential illegal procurement actions by defining the authority of each agency involved in warranty administration and provide a notice to contractors, **in writing**, of their responsibilities and authority to make repairs to correct defects **at no additional cost to the Government**.

Background



- **The Facilities Maintenance Department Quality Assurance (FMDQA) Office, in coordination with the Contracting Officer, is responsible for administration and enforcement of construction warranties.**
- **Notification of the Contractor regarding warranty defects is the responsibility of the Facilities Maintenance Department (FMD).**

Background (Cont.)



- The authority to commit funds for contractual work rests solely with the Contracting Officer. **No other person is authorized to direct a contractor to perform work which would result in the expenditure of appropriated funds.**
- Reports of post-completion inspections may be generated at intervals of six months and eleven months after start of the warranty period.
- The on-site inspection will include tenants or users in order to obtain their comments and input. Warranty defects, if identified in these reports, are documented and enforced.

Procedure



- ▶ **To report a problem experienced at the facility, the facility user or tenant is instructed to contact the FMD Customer Service via normal service call procedures. The FMD Customer Service will issue a work order for the appropriate Facilities Maintenance Department (FMD) Shop to respond to the problem and make necessary repairs or determine if the problem is a warranty issue.**
- ▶ **FMD will determine if the defect is a warranty problem, lack of user maintenance, tenant's negligence or abuse.**

Procedure (Cont.)



- If the FMD Shop clearly determines that the problem is a warranty defect, the work order and all supporting documentation is forwarded to FMDQA so that a new work order is generated in MAXIMO.
- If the reported defect(s) are considered warranty items, FMDQA will contact the contractor describing the defect(s).

Procedure (Cont.)



- **FMDQA will log into MAXIMO daily and search work orders generated since 0700 of the previous workday. If a warranty work order is discovered, FMDQA will contact the contractor.**
- **The contractor is required to respond and investigate the problem. If the contractor has not responded, a second call is made to the contractor and a second follow-up letter or e-mail is dispatched.**

Procedure (Cont.)



- ▶ **If the contractor neglects to respond after the second notification, FMDQA may contact the appropriate Contracting Officer's Representative (COR) to have the repairs performed and all costs involved captured and provided to the FMD.**
- ▶ **If the contractor does NOT agree that the defect is warranty, the contractor is not required to make repairs. FMDQA may then contact ROICC and/or the COR for final disposition.**
- ▶ **If the contractor agrees that the defect is a warranty item, he performs the required repairs and a new one-year warranty starts for that item.**

Procedure (Cont.)



- ▶ **Contractors must respond to warranty service calls within twenty four hours for heating, air-conditioning, refrigeration, air supply and distribution, and critical electrical service systems and food service equipment, and all other systems.**
- ▶ **If the standard one year warranty period (or extended warranty if applicable) has expired AND the FMD Shop and FMD believe that the problem is a latent defect (defined as a defect that existed at the time of acceptance but would not have been discovered by a reasonable inspection) then FMDQA will contact NAVFAC office that administered the contract and ask for assistance.**

This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

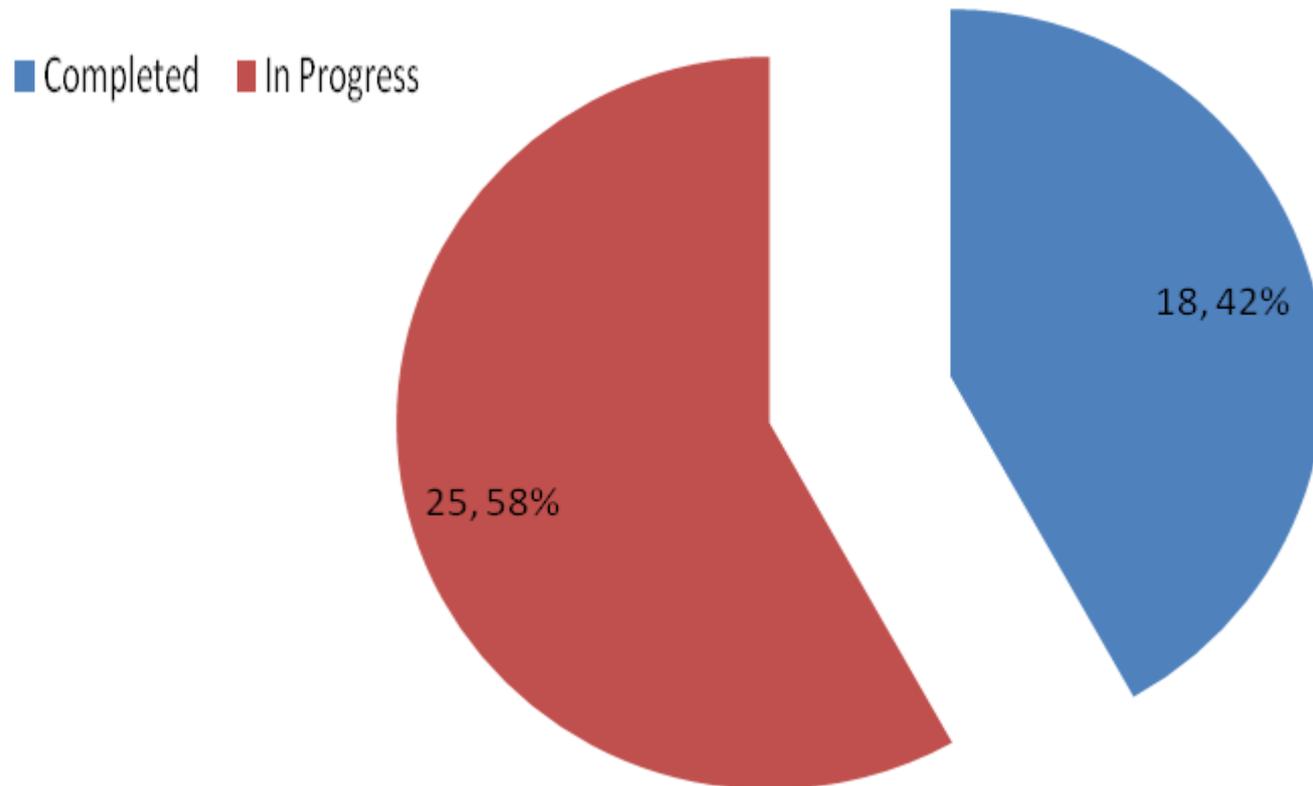
FAR 52.246-21

QA Monthly Report



- **The QA monthly report will reflect the number of warranty calls generated. The annual report will illustrate any positive and or negative trends. In addition an annual report will be made available to the ROICC and FSC showing the number of warranty related items by contractor.**

Warranty Work Orders April 2011 7.2 Days Completion Rate



Reports (Cont.)



WO #	Status	Location	ACT START	ACT FINISH	Description
10216759	COMP	220230	04/01/2011 2:32:00 PM	04/11/2011 2:54:00 PM	(WRT) ██████████ 22208 BLR GOING DOWN ON F/F LOCKOUT #17 BLR #2
10216803	COMP	120101	04/04/2011 7:15:00 AM	04/04/2011 9:38:00 AM	(WRT) ██████████ GATE TO PARKING LOT MALFUNCTION HALF WAY OPENS
10216904	COMP	13-AREA	04/04/2011 10:51:00 AM	04/07/2011 2:39:00 PM	(WRT) ██████████ FOUND TWO GAS LEAKS OUTSIDE OF TRAILER, UNDER WARRANTY
10217092	COMP	31330	04/04/2011 12:22:00 PM	04/04/2011 2:23:00 PM	(WRT) ██████████ ENG. HVAC IS DOWN IN THE SUPPORT CENTER
10217291	COMP	13-AREA	04/05/2011 3:09:00 PM	04/07/2011 2:42:00 PM	(WRT) ██████████ CONS. GAS ODOR OUTSIDE OF TRAILER
10217590	COMP	13-AREA	04/07/2011 1:05:00 PM	04/18/2011 1:20:00 PM	(WRT) ██████████ RM 123 - ROOM DOOR LOCK WILL NOT SECURE
10217689	COMP	53505	04/07/2011 1:55:00 PM	04/08/2011 7:39:00 AM	(WRT) ██████████ NO HOT WATER TO THE ENTIRE BUILDING
10217767	COMP	53322	04/08/2011 11:39:00 AM	04/22/2011 8:29:00 AM	(WRT) ██████████ EXHAUST ROOF VENT ON THE CEILING IS LEAKING WATER
10217834	COMP	13-AREA	04/08/2011 11:42:00 AM	04/18/2011 11:23:00 AM	(WRT) ██████████ COND. A/C IN 13 AREA TRAILER NOT WORKING (130157T)
10218337	COMP	33532	04/11/2011 3:59:00 PM	04/18/2011 11:17:00 AM	(WRT) ██████████ WATER LEAK ON VARIOUS PIPING
10218360	COMP	31-AREA-FACILITIES	04/12/2011 10:24:00 AM	04/25/2011 10:12:00 AM	(WRT) URGENT - RAMP GATE - BY CONTROL TOWER - DOWN - PINS SHEARED OFF - UNABLE TO SECURE LCAC RAMP
10218367	COMP	520520T	04/12/2011 10:44:00 AM	04/25/2011 10:14:00 AM	(WRT) ██████████ ITEM - CLASSROOM TRAILER DOES NOT COOL
10218667	COMP	2459	04/15/2011 8:37:00 AM	04/20/2011 9:31:00 AM	(WRT) ██████████ RM 118 AC IS OUT MADE LOUD NOISE AND IS NOW LEAKING OIL
10218682	COMP	530402	04/13/2011 2:12:00 PM	04/22/2011 8:12:00 AM	(WRT) ██████████ OFFICE 64 - NO POWER IN INTIRE OFFICE.
10218810	COMP	520523	04/14/2011 8:06:00 AM	04/19/2011 9:06:00 AM	(WRT) ██████████ 1ST FLOOR WILL NOT OPEN EVEN WITH MASTER KEY OR EMERGENCY KEY.
10219073	COMP	13070	04/15/2011 9:14:00 AM	04/18/2011 11:21:00 AM	(WRT) ██████████ ELEVATOR HYDRAULIC CONTROL VALVE NOT SEALED.
10219161	COMP	13037	04/12/2011 1:29:00 PM	04/25/2011 10:58:00 AM	(WRT) ██████████ PROJECTOR IN THE CONFERENCE ROOM IS NOT WORKING
10219507	COMP	530402	04/20/2011 7:19:00 AM	04/25/2011 11:09:00 AM	(WRT) ██████████ B CHECK/REPAIR - WARRANTY WORK - OFFICE 64 HAS NO POWER IN INTIRE OFFICE.
10218139	INPRG	26049	04/13/2011 1:28:00 PM	<Null>	(WRT) PRECON REPAIR HOT WATER FUNCTION IN TRAILER-MODULAR, MEN'S & WOMEN'S RESTROOM, BLDG 26049...
10219229	INPRG	320870T	04/12/2011 7:20:00	<Null>	(WRT) ██████████ 6-MONTH WARRANTY WALK

MAXIMO START CENTER



PE Leader

User Start Center

User Start Center

Update Start Center

Quick Insert

- New PM
- New Service Request
- New Warranty Contract

Favorite Applications

- Company Master
- Warranty Contracts
- Work Order Tracking

Bulletin Board (1)

>> Helpful Hints

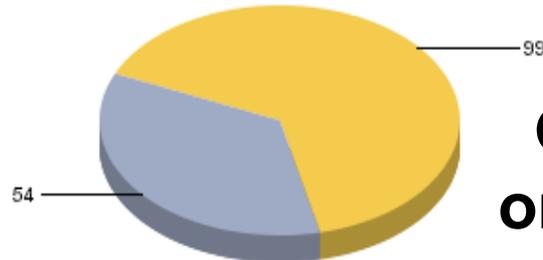
6/21/10 9:19 AM

Result Set

Chart Type: PIE

View By: Status

...ast and previous months warranty work orders. (By Status)



Status	Value	Percent (%)
COMP	99	64.71
INPRG	54	35.29

Graph illustrates work orders received since 01 Feb 11 to 08 Jun 11. 99 completed, 54 in progress.

[List View](#)

Result Set

Chart Type: PIE

View By: Status

Outstanding QA Work Orders (By Status)



Status	Value	Percent (%)
APPR	3	13.04

MAXIMO START CENTER



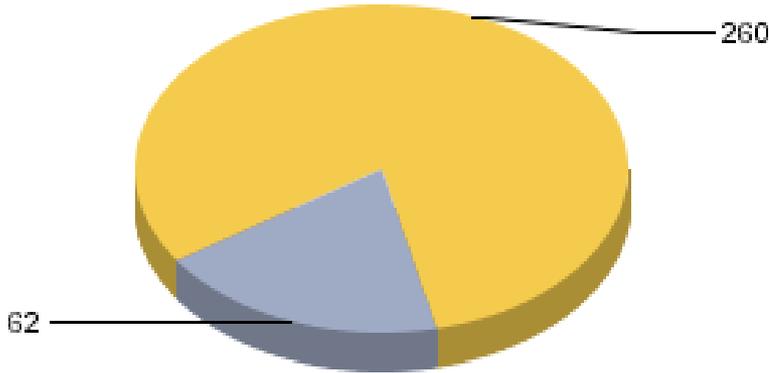
Result Set



Chart Type: [PIE](#)

View By: [Status](#)

All Work assigned to Warranty Group (By Status)



Status	Value	Percent (%)
COMP	260	80.75
INPRG	62	19.25

This graph shows 322 warranty work orders received since 30 Nov 11 to 8 Jun 11. 260 completed, 62 in progress.

[List View](#)

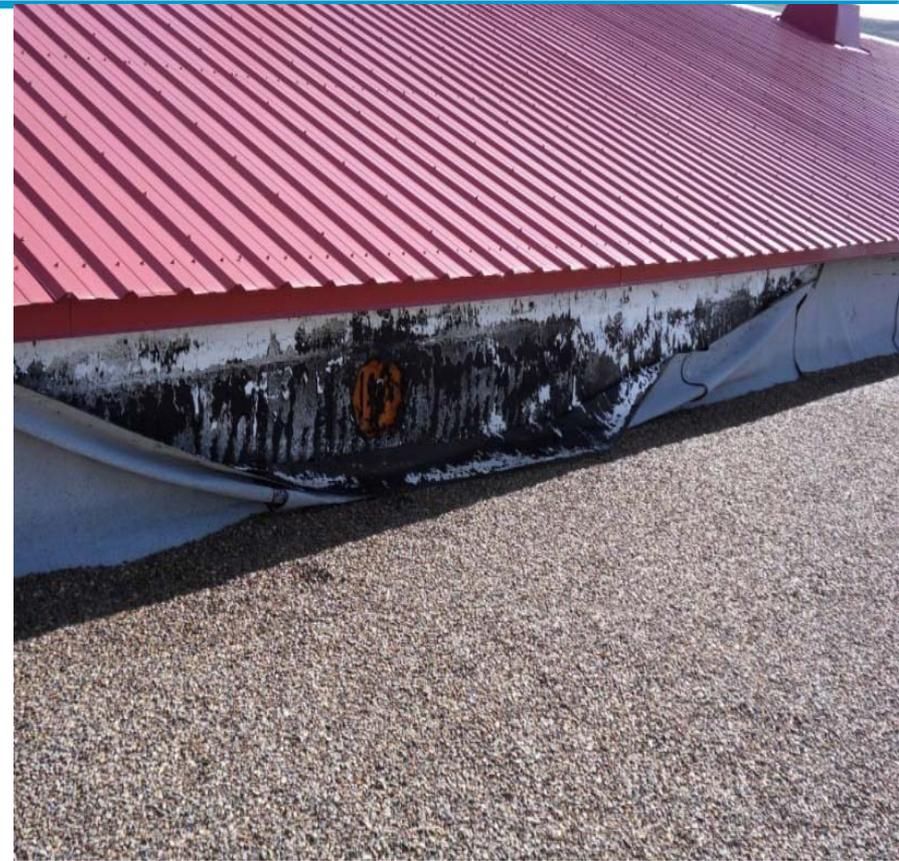
Result Set



Examples of Warranty Calls

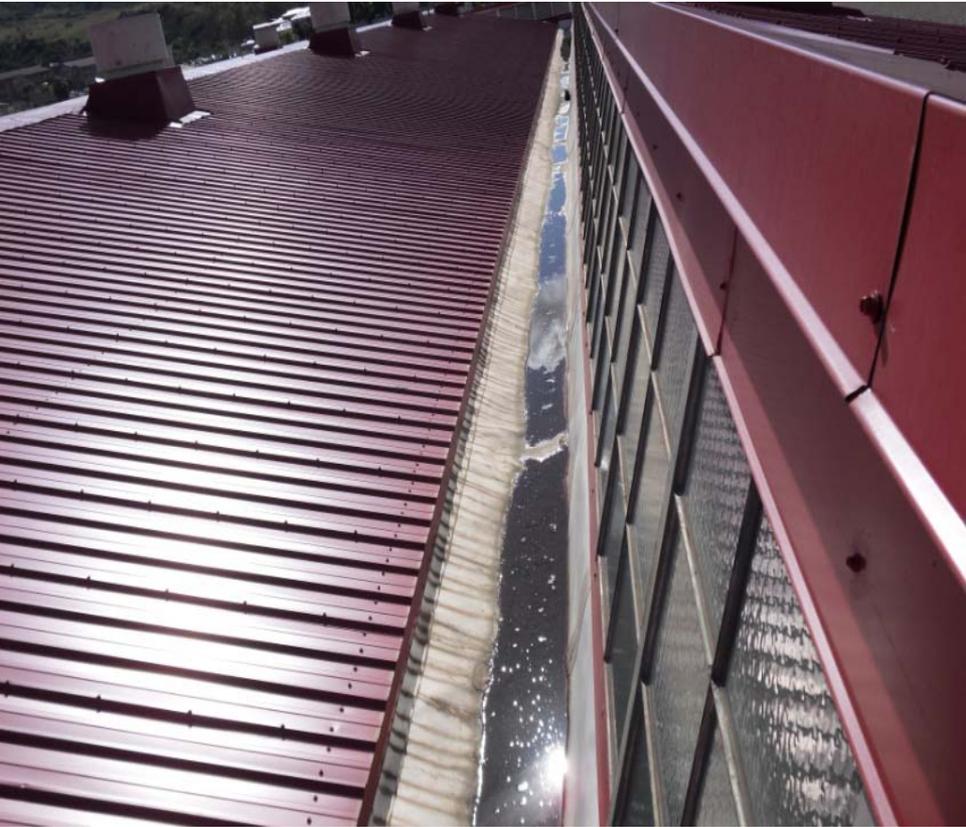


•Roof Combination



•BUR & SSM

ROOF WARRANTY



Roof Transition



SSM to TPO to SSM

MECHANICAL

Inaccessible to maintain

**Can not
remove/replace
without
opening**



**Can not
remove/replace with
out opening exterior
wall**

SITE CONDITION



Site Drainage



Erosion



Junction Box



Strain Relief Cap



Soffit Failure



Soffit held by split face

PLUMBING



BROKEN VALVE: KTR hit valve during construction, but did not take responsibility.



Accessibility and Mounting



Clearance



Clearance to the front

Maintenance mechanic will have to go up and over the ducting to get into this side of the unit.

There is only an 8" clearance from the corner of the unit to the newly installed gate. Hard hat when worn is 9" wide.

Any part that must be replaced on this side of the unit has to be hoisted up and over the unit or the wall.

Accessibility and Mounting.

**Chilled water treatment
chemical controller
installed by SERVICE
CONTRACTOR. Hung on
existing PVC piping.
Note the mounting holes
on the body of the
controller.**



GAS



CAST IRON BUSHING IN LIEU OF REQ'D BELL REDUCER

BELL REDUCER SHALL BE USED WHEN REDUCING OR INCREASING SIZE PIPE

Fire Protection System



**Conduit to Fire Alarm Panel
came up short**



**Fire Dept. Door-continues to
disrupt their response time
to emergency**



HVAC



Periscope – intake reduced to 1/10 of original size to meet ATFP.



Dummy thermostats installed instead of programmable thermostats.



Field Modification



Renovation-ATFP does not apply

MECHANICAL

Bathroom Exhaust

06.03.2011 13:31

Flashpoint for Equipment



05.26.2011

Questions?

FINAL DESIGN & REQUIRED SUPPORTING REFERENCES

OVERVIEW



- **Designer of Record designs facility according to specified references**
- **Responsibility of individual trades, superintendent, and QUALITY CONTROL MANAGER to ensure construction occurs in accordance with specified references.**
- **References incorporated by final design are contractual. Failure to comply with references will result in rework.**

EXAMPLES



- **Boiler Operating Pressure IAW ASME design guidance**
- **Avian Protection in High Voltage Electrical Construction**
- **Corrosion Prevention**

AVIAN PROTECTION

Per Camp Pendleton

APP Environmental Requirements &

SDGE Sec. 1600 of the Overhead Standards

CROSS ARMS

3 Phase 12,000
Without Avian Protection.



With Avian Protection



Improper Installation



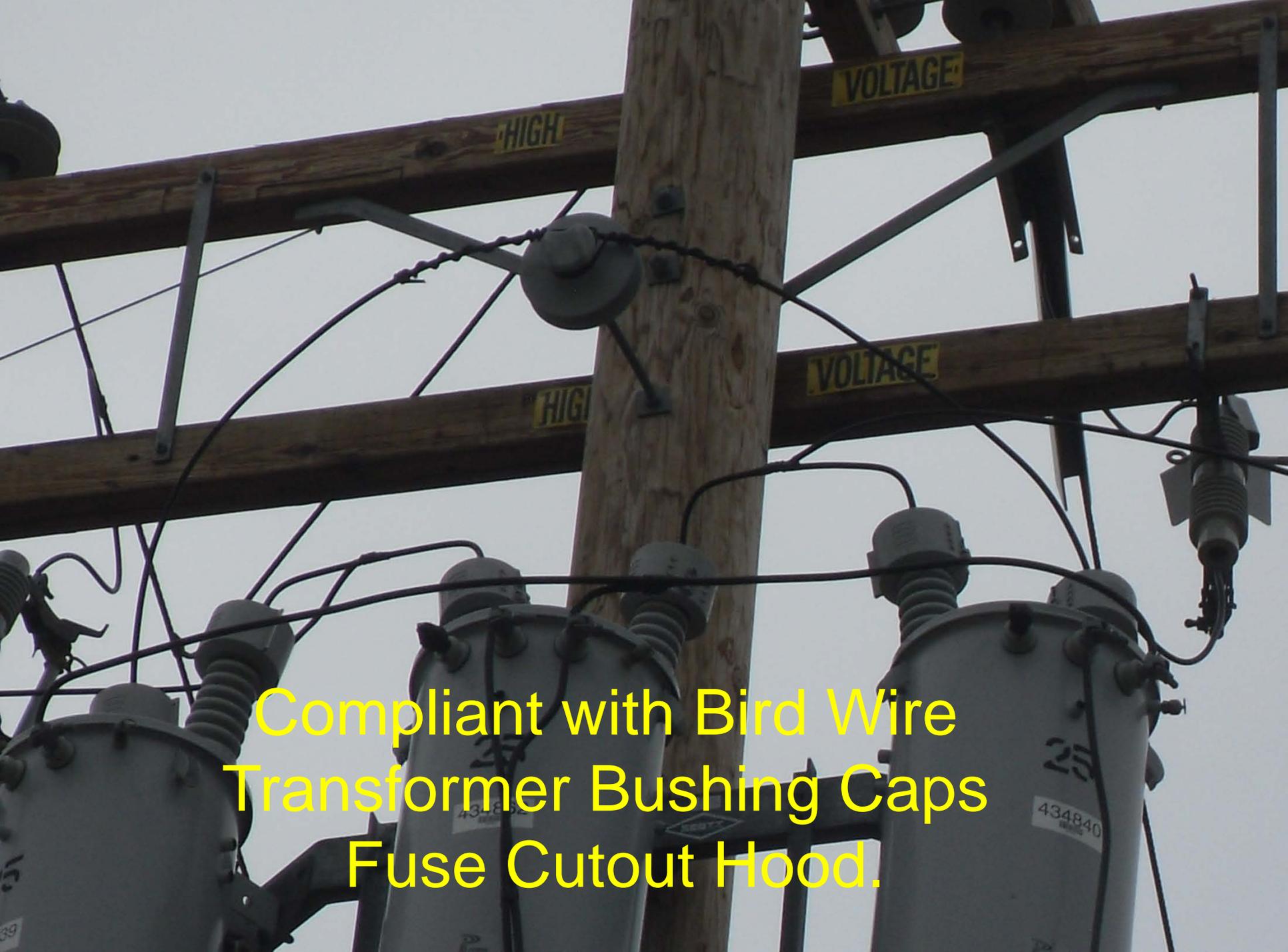
Transformers

A photograph of a utility pole with a transformer and cross-arms. The pole has 'HIGH' and 'VOLTAGE' markings. The transformer is mounted on the pole with insulated jumpers and primary bushing caps.

Compliant With Insulated Jumpers
and
Primary Bushing Caps

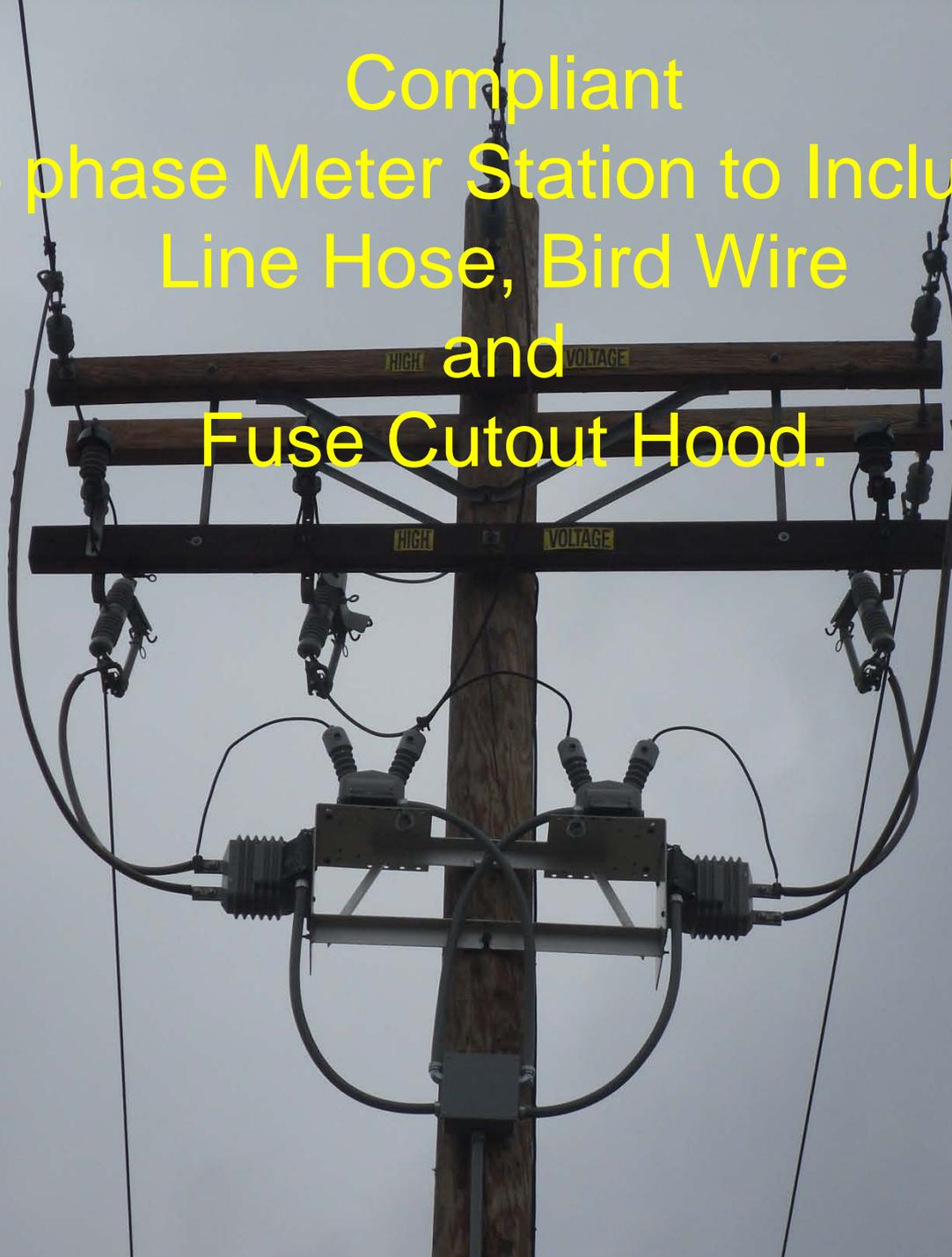


Non- Compliant 12K Volt 3 Phase Bank



Compliant with Bird Wire
Transformer Bushing Caps
Fuse Cutout Hood.

Compliant
3 phase Meter Station to Include
Line Hose, Bird Wire
and
Fuse Cutout Hood.



Compliant
Alley Arm with Center Phase Pin
Insulator Hood
and Accessory Extenders.



Compliant for Raptor Guards but....



Brush Buffer/ Clearances
Maintained to Prevent Wildfire
Damage.



Questions?

**How old is the
equipment in this
building?**



This is condensation at
the boiled flue



Condensation (different location)



This flue goes up more than 3 stories

A photograph showing a metal duct resting on a wall. The duct is made of galvanized steel and is positioned vertically. At the base of the duct, where it meets the wall, there is significant rust and corrosion, appearing as a thick, brownish-orange layer. The wall is made of light-colored concrete or masonry. The floor is made of light-colored tiles. The text "The duct is sitting on the wall" is overlaid in yellow at the bottom of the image.

The duct is sitting on the wall

Ongoing
Leak



A photograph of a vertical pipe in a utility room. The pipe is heavily rusted and has a metal band around its middle. A blue stain is visible on the wall to the left of the pipe, and a red laser pointer dot is also visible on the wall. A green pipe is connected to the bottom of the vertical pipe. A white label with the text "Water Controller" is visible in the upper right corner. The text "There was more than one leak in this area" is overlaid in yellow on the image.

There was more than one leak
in this area



A Repair!!

How old is this?
What's your guess?



Note the Connection



The left side.



How old is the
installation





another ongoing leak

The Leak Source
(the pink cloth directs the water)





DOMESTIC HOT WATER

Properly
insulated?









A photograph of a mechanical installation, possibly a water filter or pump, with a large white cylindrical component. The image is overlaid with yellow text. The text reads: "This Installation is EIGHT (yes 8) years old." The word "EIGHT" is underlined. The background shows various pipes, valves, and a window with blinds.

This Installation is EIGHT
(yes 8)
years old.

Questions?

HOW TO ACCESS UFC'S

And other references used for the various projects.



Type in WBDG

Advanced Search
Language Tools

Google Search

I'm Feeling Lucky

Advertising Programs Business Solutions About Google

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Change background image



WBDG

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- wbdg **ufc**
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- wbdg **cobie**
- wbdg **90.9**
- wbdg **dod**
- wbdg **guiding principles**
- wbdg **navfac**
- wbdg **.org/ndbm**
- wbdg **curtain wall**

press enter

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WBDG Search

About 53,000 results (0.08 seconds) Advanced search

- Everything
- More
- National City, CA
- Change location
- Show search tools

WBDG - The Whole Building Design Guide

Web portal for building-related information with a "whole building" focus provided by the National Institute of Building Sciences.
www.wbda.org/ - Cached - Similar

- Uni **This one will do** ent of Defense (DOD)
- Uni nts & References
- Building Envelope Design Guide The Integrated Design Approach
- Design Guidance Project Management

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Construction Criteria Base - Unified Facilities Criteria (UFC ...

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www.wbdg.org > ... > CCB > Documents Library > DOD Criteria - Cached - Similar

Unified Facilities Guide Specifications (UFGS) - WBDG - The Whole ...

The **Whole Building Design Guide** - A program of the National Institute of ...
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Design Guidance | Whole Building Design Guide

Multiple links between various sections of the **WBDG** and the Internet allow ...
www.wbdg.org/design/index.php - Cached

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Ben Davis WBDG--90.9 Radio Station Home

Welcome to the award-winning student radio, Giant 90.9, **WBDG-FM**, one of America's finest high school radio stations. **WBDG** is a student-run, school operated ...
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WBDG - Wikipedia, the free encyclopedia



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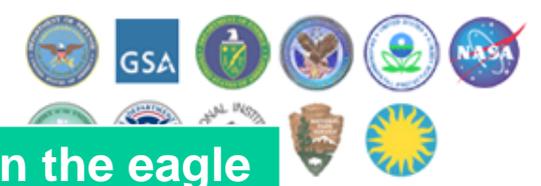
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click on the eagle (the DoD one)

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Aesthetics Design Objective (including Understanding the Language and Elements of Design, Engage the Integrated Design Process and Design Awards) Design Objectives - 11/1/2010

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(including Provide Equal Access and Plan for Flexibility: Be Proactive)

Design Objectives - 11/3/2010

[Aesthetics Design Objective](#)
(including Understanding the Language and Elements of Design, Engage the Integrated Design Process and Design Awards)

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[Continuous Child Care Facilities](#)

Building Type Page - 09/20/2010

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[VA CAD Standard Details Index](#)

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[Division 23 - HVAC and Steam](#)

Posted: 11-08-2010

[VA Master Specifications](#)

Posted: 11-07-2010



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Unified Facilities Criteria (UFC)

Unified Facilities Criteria (UFC) documents provide planning, design, construction, sustainment, restoration, and modernization criteria, and apply to the Military Departments, the Defense Agencies, and the DoD Field Activities in accordance with [USD\(AT&L\) Memorandum](#) dated 29 May 2002. UFC are distributed only in electronic media and are effective upon issuance.

The [United States Army Corps of Engineers](#) (HQUSACE), [Naval Facilities Engineering Command](#) (NAVFAC) and the Office of the Air Force Civil Engineer are responsible for administration of the UFC system. Points of contact and procedures for the development and maintenance UFC documents are prescribed in the latest edition of [MIL-STD-3007](#).

See the [Matrix of UFCs and their superseded Agency-Specific Documents](#) for the list of UFCs that were formerly Agency-specific documents.

For additional information regarding NAVFAC documents that have been superseded, see the [NAVFAC Engineering Criteria Status Report](#).

[UFC Template in MS Word](#)

[Unified Facilities Spreadsheets](#)

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Title	Date	Downloads	CCR
Matrix of UFCs and their superseded Agency-Specific Documents	01-13-2009	21 KB	

UFC list starting with General Building Requirements

UFC 1-200-01 General Building Requirements NEW	08-16-2010	135 KB	
SERIES 1-300: PROCEDURES AND GUIDANCE			
UFC 1-300-01 Criteria Format Standard, with Change 2	02-28-2006	290 KB	
UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard, with Changes 1-4	09-01-2004	116 KB	
UFC 1-300-07A Design Build Technical Requirements	03-01-2005	210 KB	
UFC 1-300-08 Criteria for Transfer and Acceptance of DoD Real Property, with Change 1	04-16-2009	536 KB	
UFC 1-300-09N Design Procedures, with Change 8	05-25-2005	471 KB	
SERIES 1-900: MISCELLANEOUS			
UFC 1-900-01 Selection of Methods for the Reduction, Reuse and Recycling of Demolition Waste	12-01-2002	319 KB	
SERIES 2: MASTER PLANNING			
UFC 2-000-02AN Installation Master Planning	03-01-2005	1.4 MB	
UFC 2-000-05N (P-80) Facility Planning Criteria for Navy/Marine Corps	01-31-2005		



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UNIFIED FACILITIES CRITERIA PROGRAM

- [Unified Facilities Guide Specifications \(UFGS\)](#)
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U.S. Army Corps

Comments, suggestions and recommended changes are welcome and should be submitted to the Criteria Change Request (CCR) link next to the document title on the applicable page listed above.

The Department of Defense (DoD) and the military services have initiated a program to unify all technical criteria and standards pertaining to planning, design, construction, and operation and maintenance of real property facilities. The objective of the Unified Facilities Criteria (UFC) program is to streamline the military criteria system by eliminating duplication of



NAVFAC
Naval Facilities Engineering Command

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1980 to 2011

PUBLISHER

- ASHRAE (350)
BHMA (36)
ICC (27)
NFPA (659)

- 2008 ASHRAE ANSI/ASHRAE/ASHE Addendum a to ANSI/ASHRAE/ASHE Standard 170-2008
2010 ASHRAE ANSI/ASHRAE Standard 26 Mechanical Refrigeration and Air-Conditioning Installations Aboard Ship
2010 ASHRAE ANSI/ASHRAE Standard 32.1 Methods of Testing for Rating Vending Machines for Sealed Beverages
2010 ASHRAE ANSI/ASHRAE Standard 35 Method of Testing Desiccants for Refrigerant Drying
1996 ASHRAE ANSI/ASHRAE Standard 63.2 Method of Testing Liquid-Line Filter Drier Filtration Capability
2010 ASHRAE ANSI/ASHRAE Standard 94.1 Method of Testing Active Latent-Heat Storage Devices Based on Thermal Performance
2010 ASHRAE ANSI/ASHRAE Standard 94.3 Method of Testing Active Sensible Thermal Energy Devices Based on Thermal Performance
2010 ASHRAE ANSI/ASHRAE Standard 193 Method of Test for Determining the Airtightness of HVAC Equipment
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 - ★ 2009 ICC International Energy Conservation Code
 - ★ 2006 ICC International Energy Conservation Code
 - ★ 2009 ICC International Existing Building Code
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- Index
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- Effective Use of the International Building Code
- Preface
- Ordinance
- Chapter 1: Scope and Administration
- Chapter 2: Definitions
- Chapter 3: Use and Occupancy Classification
- Chapter 4: Special Detailed Requirements Based on Use and Occupancy
- Chapter 5: General Building Heights and Areas
- Chapter 6: Types of Construction
- Chapter 7: Fire and Smoke Protection Features
- Chapter 8: Interior Finishes
- Chapter 9: Fire Protection Systems
- Chapter 10: Means of Egress
- Chapter 11: Accessibility



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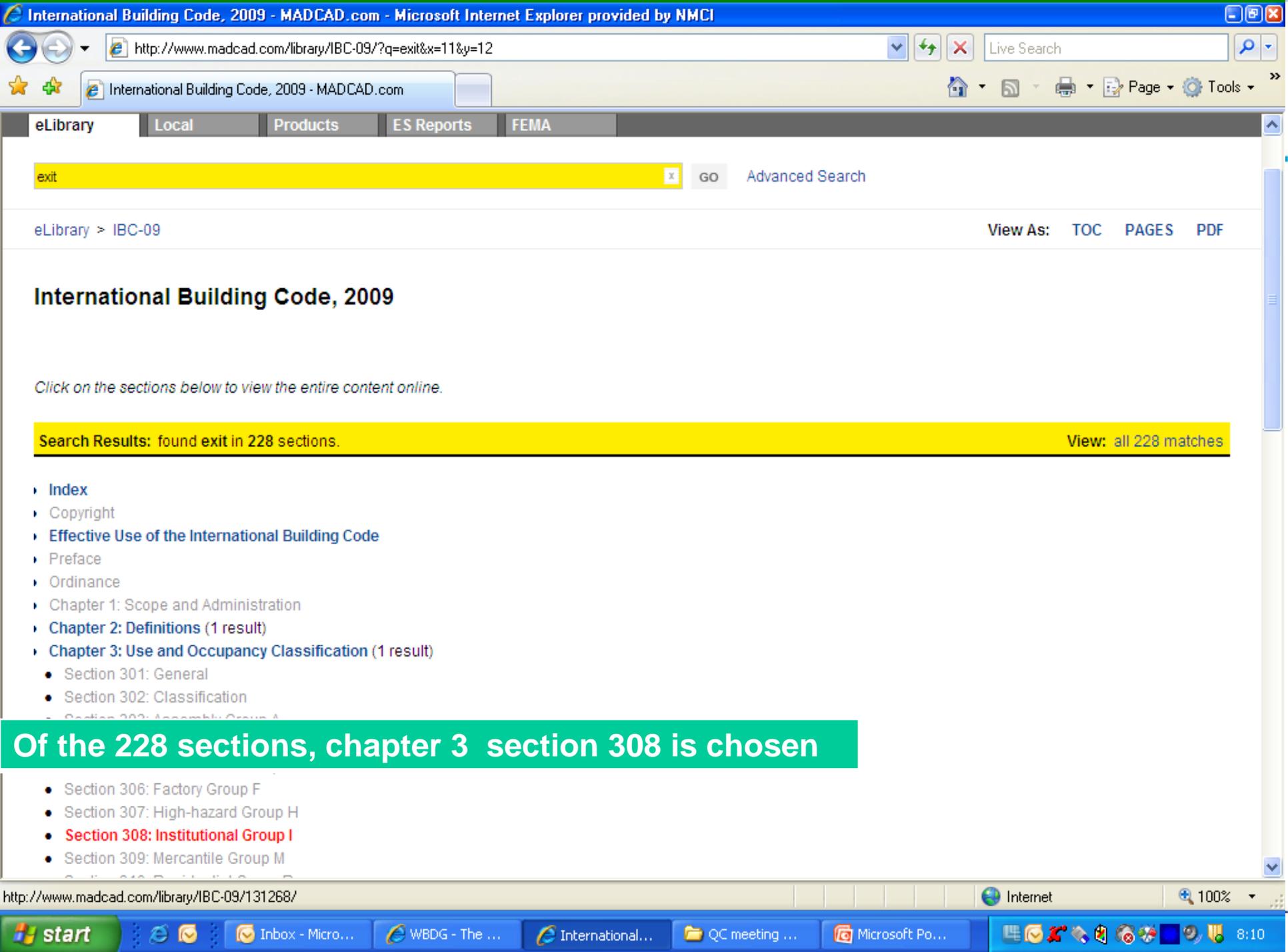
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 - [Section 303: Assembly Group A](#)
 - [Section 304: Daycare Group A-2](#)
 - [Section 305: Daycare Group A-3](#)
 - [Section 306: Factory Group F](#)
 - [Section 307: High-hazard Group H](#)
 - [Section 308: Institutional Group I](#)
 - [Section 309: Mercantile Group M](#)

Of the 228 sections, chapter 3 section 308 is chosen

Prisons
Reformatories

Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated in Sections [308.4.1](#) through [308.4.5](#) (see Section [408.1](#)).

308.4.1 Condition 1. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas, and other spaces where access or occupancy is permitted, to the exterior via *means of egress* without restraint. A Condition 1 facility is permitted to be constructed as Group R.

308.4.2 Condition 2. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. Egress to the exterior is impeded by locked exits.

308.4.3 Condition 3. This occupancy condition shall include buildings in which free movement is allowed within individual smoke compartments, such as within a residential space. Remote-controlled release is provided to e compartments.

This section can either be copied & added to a word doc. or the paged(s) can be printed.

308.4.5 Condition 5. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Staff-controlled manual release is provided to permit movement from *sleeping units*, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

308.5 Group I-4, day care facilities. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas, and other spaces where access or occupancy is permitted, to the exterior via *means of egress* without restraint. A Condition 1 facility is permitted to be constructed as Group R.

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308.5.1 Adult care facility. A facility that provides accommodations for less than 24 hours for more than five unrelated adults and provides supervision and *personal care services* shall be classified as Group I-4.

Exception: A facility where occupants are capable of responding to an emergency situation without physical assistance from the staff shall be classified as Group R-3.

308.5.2 Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than five children 2 1/2 years of age or less shall be classified as Group I-4.

Exception: A child day care facility that provides care for more than five but no more than 100 children 2 1/2 years or less of age, where the rooms in which the children are cared for are located on a level of *exit discharge* serving such rooms and each of these child care rooms has an *exit* door directly to the exterior, shall be classified as Group E.



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ACI 318-08

Building Code Requirements for Structural Concrete (ACI 318-08) and Commentary

QUESTIONS?

QC MANAGER'S ROLE IN THE SUBMITTAL PROCESS

UFGS SPECIFICATIONS

SUBMITTAL REGISTER (LOG)

TRANSMITTAL FORM

UFGS 01 33 10.05 20
Design Submittal Procedures

UFGS 01 33 00.05 20
Construction Submittal Procedures

UFGS 01 33 00.05 20, Submittal Register



- The submittal register will be prepared during the initial design stages of the project and indicate each design and construction submittal. Maintain an electronic version of the submittal register as work progresses. The DOR must assist the DQC in preparing the submittal register by determining all project submittals that require DOR approval. The Contractor proposed submittal register format must include all types of information pertinent to the submittal process and be approved by the Contracting Officer prior to the first submission

Submittal Package

It is the responsibility of the Project Manager, Superintendent, SSHO, Sub-Contractors and the Design Team to prepare submittals . The QCM, reviews, assures proper signatures, stamps, certifies and prepares the Transmittal Form for transmittal of submittals.

Certification Statement

Stamp each sheet of the submittal with QC certifying statement or approving statement, except that data submitted in bound volume or on one sheet printed on two sides maybe stamped on the front of the first sheet only.

Government Approved



“ I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated with contract number (insert contract number), is in compliance with the contract documents, can be installed in the allocated spaces, and is submitted for Government approval.

(RFP Part Two Submittals)

Certified by QC Manager _____, Date _____

(RFP Part Four Submittals)

Certified by DOR _____, Date _____

Certified by QC Manager _____, Date _____”



Designer of Record Approved

“ I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated with contract number (insert contract number) , is in compliance with the contract documents, can be installed in the allocated spaces, and is submitted for Government approval.

(RFP Part Four Submittals)

Approved by DOR _____, Date _____

Certified by QC Manager _____, Date _____”

TRANSMITTAL FORM

- **UFGS 01 33 00.05 20, 1.5.1 Transmittal Form**
- Transmit submittals with transmittal form prescribed by Contracting Officer and standard for the project.
- **NO MORE E-MAIL TRANSMITTAL/SUBMITTAL APPROVALS, CONTRACTOR COVER SHEETS ETC.**
- **Keep a copy of the Transmittal Form with the Submittal Package.**



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<i>It is hereby certified that the material submitted herein conforms to contract requirements and can be installed in the allocated spaces.</i>						
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FROM:		TO		DATE:		
RECOMMEND:						
<input type="checkbox"/> APPROVAL/ACCEPTANCE, subject to contract requirements			<input type="checkbox"/> DISAPPROVAL			
<input type="checkbox"/> APPROVAL/ACCEPTANCE, as noted, subject to contract requirements			<input type="checkbox"/> REVIEWED AND FOR FILE			
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Submittal Information QCM

Review

Approval



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FROM (CONTRACTOR) <u>Bob the Builders Constructors</u>			TO <u>ROICC, Camp Pendleton</u> Attr: <u>Know It All, CM</u>		SUBMITTAL NO. <u>7</u>	FOR SPEC. SECTION <u>N/A</u>
ENCL. NO.	NO. OF COPIES	DESCRIPTION	SPEC. SEC.PARA/DWGNO.	SCHEDULE ACTIVITY NO.	COC CODE	Add Del
<u>1</u>	<u>4</u>	<u>Storm Water Pollution Prevention Plan</u>	<u>01 57 19.00 20</u>	<u>S-060</u>	<u>GA</u>	
DATE NEEDED BY: <u>30 Nov 1775</u>						
TRANSMITTED FOR: <input checked="" type="checkbox"/> APPROVAL <input type="checkbox"/> CLARIFICATION <input type="checkbox"/> SELECTION <input type="checkbox"/> RECORD <input type="checkbox"/> VARIANCE						
<i>It is hereby certified that the material submitted herein conforms to contract requirements and can be installed in the allocated spaces.</i>						
FROM <u>Know It All</u> <u>ROICC, CM</u>			SIGNATURE: _____		DATE: <u>11/12/1775</u>	
TO: <u>Keep it Dry, ROICC Environmental</u>			<i>For review/comment (<u>1</u>) copies of enclosures forwarded. RETURN WITHIN (<u>5</u>) WORKING DAYS, unless submittal is for record/info purposes only and there are no adverse comments.</i>			
FROM: <u>Keep it Dry.</u>			TO <u>Know it All</u> <u>ROICC CM</u>		DATE: <u>11/16/1775</u>	
RECOMMEND:						
<input type="checkbox"/> APPROVAL/ACCEPTANCE, subject to contract requirements			<input type="checkbox"/> DISAPPROVAL			
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<input checked="" type="checkbox"/> RETURN for correction and resubmission			<input type="checkbox"/> _____			
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<input type="checkbox"/> copies of encls retained			SIGNATURE: _____			
FROM: <u>Know it All, CM, ROICC Camp Pendleton</u>			TO (CONTRACTOR) <u>Bob the Builders Constructors</u>		QCM	DATE: <u>11/17/1775</u>
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<input type="checkbox"/> APPROVED/ACCEPTED, subject to contract requirements			<input type="checkbox"/> DISAPPROVED			
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Submittal Register



Update submittal register database as submittal actions occur and maintain the submittal register at the project site until final acceptance of all work by the Contracting Officer.

GA: Retain a copy of approved submittals at the project site, including Contractor's copy of approved samples.

DA: Send copies of final DOR or QC Specialist approved and signed submittals that are identified in the specifications for Government surveillance to the Contracting Officer. Stamp copies "For Surveillance Only".

QUESTIONS ?

QUALITY CONTROL MANAGER'S ROLE IN SITE SAFETY

OVERVIEW



- **CULTURE OF SAFETY**
- **SAFETY IS EVERYONE'S RESPONSIBILITY!**
- **ACCEPTANCE OF THE QC PLAN**

- **CONTRACTUAL REQUIREMENT**

- **RFP PART 2 SECTION 01 45 00.05 20
DESIGN AND CONSTRUCTION QUALITY
CONTROL**

- **QC and Alternate QC Manager
qualifications:**

- Familiar with requirements of USACE EM 385-1-1, and experience in the areas of hazard identification and safety compliance.

- **How do you establish / demonstrate familiarity with EM 385?**
 - **Formal Instruction, EM 385, 40 Hr Construction Hazard Awareness Training**
 - **Level 1, EM 385, Construction Safety Certification, 150 Questions, Open Book Test**
 - **Need to provide documentation with resume in QC Plan**

Federal Acquisition Regulation (FAR)



- **Part 1.602, Contracting Officers**
- **Part 1.602-1, Authority, par (b)**
- **Part 1.602-2, Responsibilities**

- **“The Contracting Officer reserves the right to interview any member of the QC organization at anytime to verify submitted qualifications. All QC personnel are subject to acceptance by the Contracting Officer”**

USACOE EM 385-1-1 REQUIREMENT



–SECTION 1: PROGRAM MANAGEMENT

- 01.A.12 Inspections.
 - a. The APP or the USACE Project Safety and Health Plan shall provide for frequent safety inspections, conducted by competent persons, of the work sites, material, and equipment to ensure compliance with the plan and this manual.
 - b. In addition to the requirements of subparagraph a., Contractor quality control (QC) personnel - as part of their QC responsibilities - **SHALL CONDUCT AND DOCUMENT DAILY SAFETY AND OCCUPATIONAL HEALTH INSPECTIONS IN THEIR DAILY QC LOGS.**

EM 385 RECENT CHANGES



CHANGE	EFFECTIVE FOR SOLICITATION ON OR AFTER	SUMMARY
1	5-Apr-10	Changes to sections 1 (Program Management) and 6 (Hazardous Substances, Agents, and Environments)
2	1-Nov-10	Section 5, 16, 19, 21
3	1-Jun-10	Section 5 (Personal Protective and Safety Equipment)
4	9-Mar-11	Section 20: Testing Using Pressurized Gases or Air
5	1-Apr-11	Section 15 (Rigging) replaced to mirror recent OSHA guidance

MCB CAMP PENDLETON RECENT INCIDENTS

Date: 4APR11

Injury: Ankle Injury



- Situational awareness and focus on the task at hand.**
- Always maintain three points of contact when using a ladder climbing device.**
- Always make eye contact with your intended direction to ensure it is clear of debris and obstacles.**
- Safety should never be compromised for the sake of production; take your time and proceed safely.**

Date: 4APR11

Injury: Palm Laceration

-Thoroughly examine the work surface prior to proceeding with your task.

-Ensure trades clean their work space once they have completed their phase of work.

- Quality Control needs to verify the areas have been properly cleaned prior to opening the space for the next phase of work.



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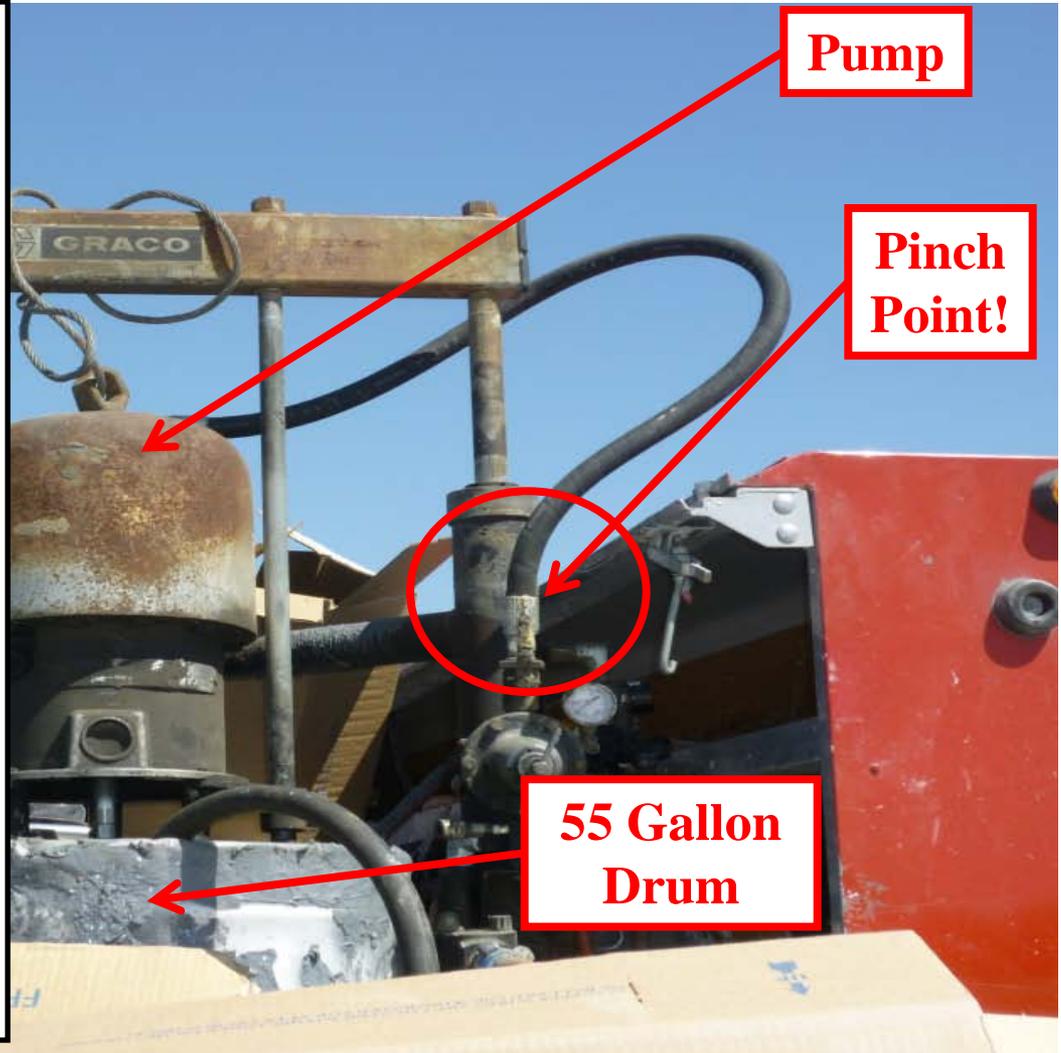
Date: 28APR11

Injury: Pinch Finger

- Never put any part of your body in a potential pinch point.

-Always have the owner's manual for any equipment readily available. **VERIFY AT PREPARATORY MTG!**

- In this incident the owner's manual of the GRACO High-Viscosity Pump was not available to determine the proper and safest way to move the pump along with the empty 55 gallon drum.



Date: 29APR11

Injury: Puncture Wound



- Perform work activities in the proper order to prevent a possibly dangerous chain reaction.
- In this particular instance, proper order of work would have been to remove the interior T-Bar before the surrounding drywall and perimeter T-Bar.
- Situational awareness is paramount when working in the demolition phase. Ensure personnel are aware of the results and anticipate what may happen when one portion of the material/structure is removed or weakened.

Federal OSHA Most Cited October 2009 through September 2010.



Standard	#Cited	\$Penalty	Description
19260451	1712	\$1,505,171.00	Scaffolding General requirements.
19260501	1566	\$1,944,955.00	Duty to have fall protection.
19261053	652	\$395,155.00	Ladders.
19260405	489	\$203,207.00	Wiring methods, components, and equipment for general use. (temp wiring, temp power)
19260020	459	\$433,540.00	General safety and health provisions. (House keeping, sanitation)
19101200	447	\$127,195.00	Hazard Communication.

BUILD SAFETY INTO 3 PHASES OF CONTROL



- **PREPARATORY PHASE MEETINGS CRITICAL TO SAFETY!**
- **Are all employees familiar and qualified to perform the task?**
- **Properly trained to operate equipment?**
- **Is all necessary equipment on hand and functioning?**
- **Review hazard analysis (AHA)**
- **Discuss mishaps / near-misses from similar work**
- **Ensure work area is safe to complete the task**
- **Situational awareness of adjacent activities / trades**

QUESTIONS ?



Hazardous and Toxic Substances on Construction Sites

Jennifer Sullivan, ROICC Environmental
Sherry William, ROICC Environmental
Usha Little, ROICC Environmental



Common Violation Found in Past at CP Sites



According to our ROICC Safety Officer

- **Compressed air stored in a non-ventilated container**
- **Oxygen and acetylene stored in the box and/or together**
 - **Should to placed in ventilated area, separate, secure**
- **“Indoor Use Only” power strips**
- **Chemicals stored improperly without labels and/or MSDS**
- **Oil based chemicals being stored around regulators**
- **Flammable Liquids (fuels) stored in a non-ventilated area**



Advance

MADE IN THE USA

Ingersoll Rand
The Products
PowerTools Group

Wire





Limitations of Hazardous and Toxic Substances



Can not be Reuse or Recycle

BMPs Do Not Relieve Contractors
from Responsibility for Compliance





Construction Site Safety and Health



4 Categories of Potential Worksite Hazards

Safety	Physical Agents	Chemical Exposure	Biological
Trenching	Exposure to Heat/Cold/Noise	Solvents, Cadmium	Blood Born Pathogens
Electrical	Vibration	Paint, Pesticides	Poison Ivy
Slip, Trip, Fall	Radiation	Welding Fumes	Rattle Snake



We will Review



1. Governing Regulations
2. Safety Communication
3. Hazards and Toxic Material Safety on Site

➤ **Ventilation and PPE**

➤ **Storage and Spill**

➤ **Disposal**





Governing Regulations



Code of Federal Regulations (CFRs)

29 CFR Occupational Safety and Health Administration

40 CFR Environmental Protection Agency

49 CFR U.S. Department of Transportation

- **OPNAVINST 5100.23G, Chapter 7
Hazardous Materials Control and Management**
- **State and Regional Agencies**



Environmental Site Audit



➤ Environmental

- Posting Temporary Waste Area Properly
- Hazardous Waste Management/Storage
- Qualified Transporter /Ultimate Disposal Site
 - Waterways Protection Measures
- Personal Training/Personal Protective Equip.
 - Container and packaging Integrity
 - Marking and Labeling
- Communication for Emergency & Operation
 - Inspection Procedures

Hazardous Communication

- Written Program
- MSDS availability
- Control and disposal Methods
- Stored and Labeled
- Log of all Chemicals
 - Training
 - Documentation



Playing It Safe in the Workplace



We must comply with all applicable standards and regulations to reduce concentration of contaminants the **GOAL** is ALARA (As Low as Reasonably Achievable)



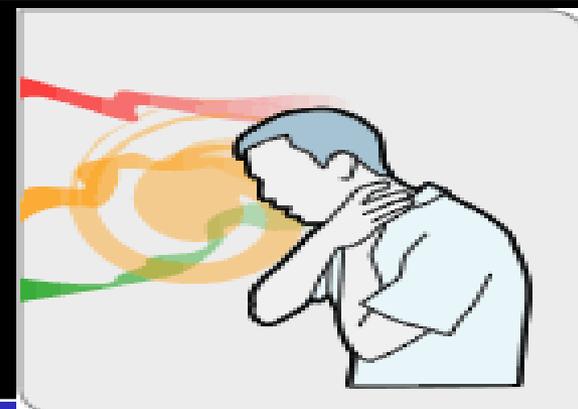
Exposure to Hazardous Toxin Depends Upon



Duration and Frequency

vs.

Reasonable Exposure Limits



Exposure Directly to Human

Release to the Environment

Inhalation

Evaporation to Air

Ingestion

Residuals to Soil

Skin absorption /Contact

Infiltration and runoff to Water



Cumulative Effects of Release of Toxic Substances from Worksite





Disregard of Regulations can be Costly \$



**ENVIRONMENTAL
HAZARD**



Chemical Hazard Communication Plan



per 29 CFR -1910.1200 (OSHA)

Plan should include:

- Basic Inventory (how to use, quantity, location stored)
- Labeling according to MSDS
- Update Employees as necessary
- Training (initially and periodically)





QC Personnel Responsibilities



As Part of Communication QC Personnel shall

- Conduct and document any observed deficiency on daily QC log
- Provide trainings to correct deficiencies or bad habits
- Provide briefing and refresher training every time new products/equipments are used in daily basis.



Proper Labeling-part of Communication Plan



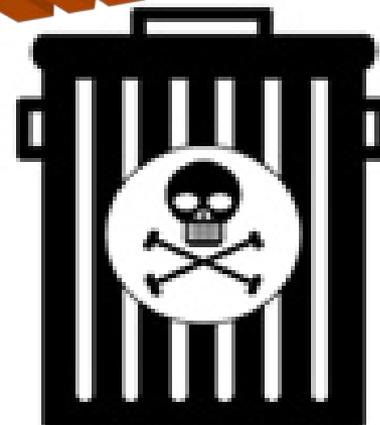
A key provision of EPCRA (1986) requires anyone storing certain amounts of hazardous chemicals must maintain a material safety data sheet (MSDS).

Material safety data sheets are basic information on products that:

- Tells what chemicals are in the product
- What the hazards of the chemicals are
- How to protect yourself from the hazards.



MSDS

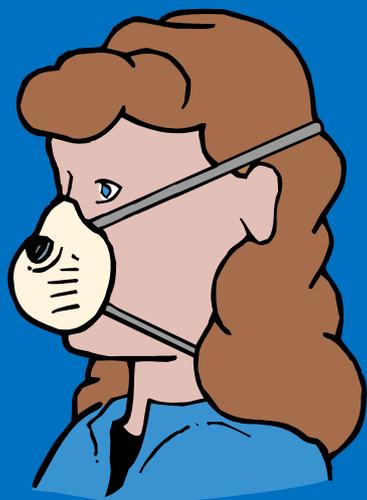




Personal Protective Equipment



- Employer Shall provide appropriate PPE and chemical hygiene facility for cleanup
- Qualified hygienist should determine type of PPE

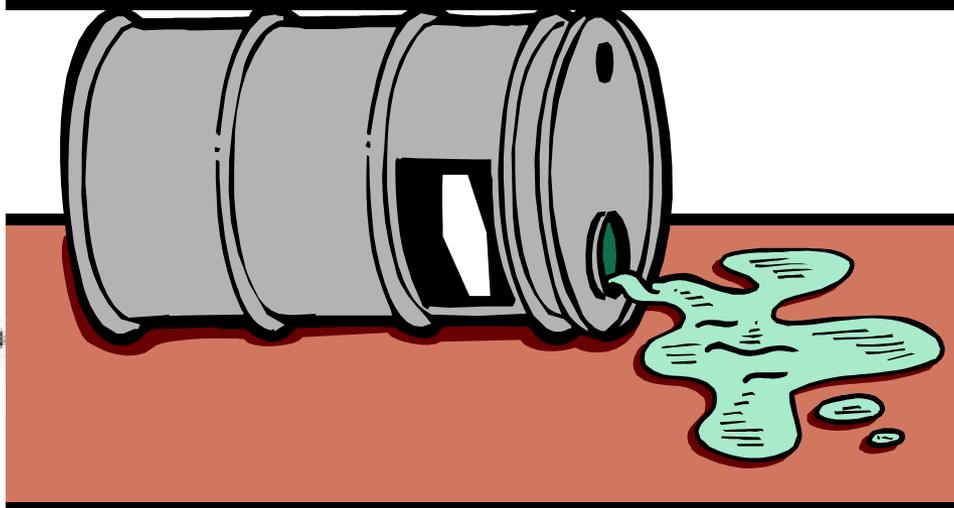




Work Site Environmental Safety



- **Ventilation and Air Quality Management**
 - **Storage and Spill Prevention**
 - **Disposal**





➤ Ventilation and Air Quality





➤ Ventilation and Air Quality



Concentration of Contaminants
Acceptable limit -
Portable/temporary ventilations
Make-up air unit





Storage Requirement





Storage





Disposal





Not in Dumpster



- Pesticides, herbicides, and fertilizers.
- Containers having paint, stains, oils, solvents or adhesives.
- Non-empty aerosol containers having hazardous ingredients.
- Fluorescent lights.
- Batteries (dry cell, nickel-cadmium, lead acid, etc.).
- Medical waste (syringes and sharps).
- Cleaning or stripping chemicals and solutions.
- Any liquid household type hazardous items.
- Non-drained oil and fuel filters.
- Computer monitors, televisions, and other e-wastes.



Waste Reduction – Doing it right



LEED – Leadership in Energy & Environmental Design





We Maintain High Standards



**Environmental Management
Protect and Defend Navy Does the Best**



**Thank You for
Partnering with
the NAVY**

QUESTIONS ?

CONCRETE MIX TIME

CONCRETE MIX TIME



- **ASTM C94 paragraph 12.7 (truck mixers)**

- Discharge of the concrete shall be **completed within 1 ½ h**, or before the drum has revolved 300 revolutions, whichever comes first, **after the introduction of the mixing water** to the cement and aggregates or the introduction of the cement to the aggregates
- These limitations are permitted to be waived by the purchaser if the concrete is of such slump or slump flow after the 1 ½ h time or 300-revolution limit has been reached that it can be placed, without the addition of water, to the batch.
- In hot weather, or under conditions contributing to quick stiffening of the concrete, a time less than 1 ½ h is permitted to be specified by the purchaser.

CONCRETE MIX TIME



DISCUSSION: Is the 90 minute requirement on placement of concrete problematic on Camp Pendleton?

What did we not talk about?

Q&A

DROICC CURT KRONBERG

CLOSING REMARKS