ACCIDENT PREVENTION PROGRAM
HAZARD ANALYSIS

SAFETY HEIRARCHY

Engineering Controls

Work Practices

Personal Protective Equipment (PPE)
SAFETY HIERARCHY

Engineering Controls Example:
Three foot high parapet wall on building

Work Practice Examples:
Working from bucket truck to
bolt steel instead of climbing steel

Personal Protective Equipment
Safety Harness
QUESTION

WHAT TWO WORD EXPRESSION PRECEDED THE TERM “ACTIVITY HAZARD ANALYSIS” THAT MEANS EXACTLY THE SAME TYPE OF ACTION WE TAKE TO AVOID ACCIDENTS

Only 2 words?
# ACCIDENT PREVENTION PROGRAM
## HAZARD ANALYSIS

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### 7. PRINCIPAL STEPS

### 8. POTENTIAL HAZARDS

### 9. RECOMMENDED CONTROLS

### 10. EQUIPMENT TO BE USED

### 11. INSPECTION REQUIREMENTS

### 12. TRAINING REQUIREMENTS

13. Contractor (Signature & Date)

14. Report discussed with contractor/superintendent on

15. Contracting Officer (Signature & Date) or Contracting Officer Representative
EM 385-1-1 para 01.A.13b: Work will not begin until the AHA for the work activity has been accepted by the GDA and discussed with all engaged in the activity, including the contractor, subcontractor(s), and Government on-site representative at preparatory and initial control phase meetings.

“Principle Steps” column identify “Sequences of Work” such as Mobilization, Fencing, Demolition, Asbestos Abatement, Electrical Distribution, etc. Contractor “Construction Schedule or Construction Progress Chart” is a good guide to identify “Sequences of Work” (See page 2).

Within each identified “Sequences of Work” there may be other successive steps to complete that phase of work such as Removal of lockers, LOTO of electrical systems, Protecting members of the public, A/C ducting installation work, Use of crane to lift 5,000 lbs. A/C unit, Excavations deeper than 6 ft for utilities, etc.
The below are examples of major “Sequences of Work” or “Phases of Work” that could be identified on the AHA as “Principle Steps” or successive steps to complete a sequence or phase of work.

EM385-1-1 para 01.A.13a: AHA will define the activities being performed and identify the sequences of work, the specific hazards anticipated, site conditions, equipment, materials and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level of risk.
List of questions that will help you identify most hazards:

(a) Is there danger of striking against, being struck by, or otherwise making injurious contract with an object?

(b) Can the employee slip or trip?

(c) Can the employee be caught in, on or between objects?

(d) Can the employee fall on the same level or to another?

(e) Can the employee strain themselves by pushing, pulling or lifting?

(f) Is there possibility of electrical, health or fire hazards?

(g) Is there a possibility of employee coming in contact with a hazardous chemical or substance?

Past experiences and common sense will enable development of a useful list
“Potential Hazard” column can have “General Safety” as a potential hazard to include minimal PPE dress for ROICC projects. “General Safety” should be identified for every phase of work.

Good examples of “Potential Hazards”
"Recommended Controls" column identify site specific control measures to be implemented to eliminate or reduce each hazard identified in the “Potential Hazard” column to an acceptable level.

To help you come up with ideas for the best solution ask the following:

(a) How can the conditions be changed to eliminate the hazard?

(b) What can the employee do to prevent an accident or eliminate the hazard?
Your recommended controls measures are to be site specific and should provide sufficient information to personnel on how to eliminate or reduce anticipated hazards for each phase of work. General statements such as Provide adequate fall protection, Proper shoring techniques will be followed, LOTO procedures will be implemented, etc. are not site specific recommend controls measures and will not be accepted. Site specific plans such as Fall Protection, Confined Space, LOTO, Critical Lift, etc. can be attached to the AHAs as a supplement to the AHAs.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date of Preparation</th>
<th>Analysis by/Date</th>
<th>Recommended Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEMOLITION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project:</td>
<td>Remove Wall Lockers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td>Pearl Harbor, Hawaii</td>
<td></td>
<td></td>
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<tr>
<td>Work Order:</td>
<td>205</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal Steps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential Hazards</td>
<td></td>
<td></td>
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<tr>
<td>Personal Protective Equipment</td>
<td>Ensure personnel have the use of hard hats, safety glasses, gloves &amp; short sleeve shirts.</td>
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<tr>
<td></td>
<td>Ensure personnel use gloves to protect hands from sharp edges.</td>
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<tr>
<td>Electric Shock</td>
<td>Survey the work area and check utilities that needs to turn off.</td>
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<tr>
<td></td>
<td>Each employee handling small tools will be instructed as to safe handling and its use.</td>
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<tr>
<td>Faulty Equipment</td>
<td>All plugs in power tools to use GFCI.</td>
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<tr>
<td></td>
<td>Ensure equipment is maintained in good working order &amp; properly tested.</td>
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<td></td>
<td>Ensure that equipment is stopped and secured from movement before servicing or reused.</td>
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<td></td>
<td>Check equipment daily before use.</td>
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<tr>
<td>General Safety</td>
<td>Ensure that proper barricades and signs have been placed.</td>
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<td></td>
<td>Use proper barricades, the tape to mark off limits area.</td>
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<td></td>
<td>Supervisor and Foreman are to actively stop non-construction personnel from entering job site area without prior consent.</td>
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<td>Ensure proper caution signs posted.</td>
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<td>Ensure flying dust is controlled by mapping with wet map.</td>
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<td>Back strains</td>
<td>Each employee should be instructed in safety training procedures.</td>
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<td>Objects weighing over 500 lb requires 2 people.</td>
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<tr>
<td>Falling, tripping and cuts</td>
<td>Ensure personnel practice proper housekeeping to prevent tripping or cutting.</td>
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### ACTIVITY HAZARD ANALYSIS (AHA) REVIEW

<table>
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<th>Equipment To Be Used</th>
<th>Inspection Requirements</th>
<th>Training Requirements</th>
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<tr>
<td>Falling Loads</td>
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- **List equipment to be used for the phase of work such as crane, backhoe, powder actuated tools, electric saws/drill, etc.**
- **List inspection requirements for the phase of work such as confined space by an experienced person, attach proof of competent person to AHA, daily housekeeping, hand and power tools daily inspections, machinery and equipment inspected daily, etc.**
- **List training requirements for the phase of work such as fall protection, confined space, HAZCOM, qualified equipment operators, safe use of ladders, HAZWOPER, etc.**

01.A.13c The names of the competent/person(s) required for a particular activity (i.e., excavations, scaffolding, fall protection, other activities as specified by OSHA and this annual) will be identified and included in the AHA. Proof of their competency/qualification must be submitted to the GDA for acceptance prior to the start of that work activity.
HAZARD ANALYSIS

EVERY CONSTRUCTION, REPAIR OR ALTERATION PROJECT HAS HAZARDS!!!

AHA IS IDENTIFYING THE HAZARDS....

DETERMINING WHAT TO DO TO OVERCOME THE HAZARDS
A HA can be used to evaluate and identify all substances, agents, and environments that present a hazard and the recommendations for control measures. Physical controls should be considered first (work practices), and in cases where not possible, then PPE may be used.

Yea I Remember!
1st Engineering Controls
2nd Work Practices (physical controls)
3rd PPE
REQUIRED AS PART OF QUALITY CONTROL PREPARATORY/INITIAL INSPECTION
CONTRACTOR QC DUTIES

AS PART OF THEIR QUALITY CONTROL RESPONSIBILITIES

CONTRACTOR QC PERSONNEL SHALL CONDUCT & DOCUMENT DAILY SAFETY INSPECTIONS

01.A.12 b & SPECS. 013526
DOES THE PRIME CONTRACTOR SUBMIT HIS A.H.A WITH THE ACCIDENT PREVENTION PLAN?

I SAW SOMETHING IN THE APP??
Requires contractor to list the phases of work and Hazardous activities requiring activity hazard analysis.

Appendix “A” Paragraph 2-f.
WHEN DOES THE CONTRACTOR SUBMIT THE H.A?
Submit the HA for the Preparatory Phase before each phase of work and at initial phase meeting. Submit subsequent AHA for each major phase of work prior to start of that phase. NO WORK WILL START UNTIL THE AHA HAS BEEN ACCEPTED BY THE DESIGNATED GOVERNMENT REPRESENTATIVE. Format subsequent AHA as amendments to the Accident Prevention Plan specifications section 013526.
Who would normally develop the H.A?
THE CONTRACTOR WHO WILL ACTUALLY BE DOING THE WORK
As a minimum, define activity being performed, sequence of work, potential hazards, control measures to eliminate or reduce each hazard to an acceptable level, inspection & training & equipment needed. Name the **competent person** for the phase of the work. Proof of their competency/qualification must be submitted to the GDA for acceptance prior to the start of that activity.

**ACCIDENT PREVENTION PROGRAM**

**HAZARD ANALYSIS**

COE Page 8 & 9, Figure 1-2

WHAT IS AN ACCEPTABLE H.A?

CLASS DISCUSSION OF SAMPLE HA

Construct new masonry wall that is 8 foot high and 20 foot long.

See sample on page 26
ACCIDENT PREVENTION PROGRAM

HAZARD ANALYSIS

Prime Contractor: ABC Construction
Superintendent: Joe Can Do
Masonry Sub-Contractor: Masonry Inc.
Forman for Sub-Contractor: I. KnowItAll

Materials: All Materials on site
Equipment: On site ready to perform work
Electric Mortar Mixer
Forklift on Site
Scaffolding on Site
Personnel: All Prime and Masonry sub-contractor personnel on site
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HA PRACTICE

CONSTRUCT AN 8' HIGH x 20' LONG MASONRY WALL

PPE (STANDARD)
ADDITIONAL PPE?? (Block Cutter)

SCAFFOLDING

EQUIPMENT/QUALS/TRAINING

MSDS INFORMATION (Mortar)

DESIGNATED COMPETENT PERSON

MORTAR MIXER GFCI

BLOCK SAW GFCI

TRAINING DOCUMENTATION

LIMITED ACCESS ZONE??
Once the HA has been completed and accepted by the Government the project work can start. Is it necessary to do another HA for this same phase of work on this same project?
HAZARD ANALYSIS

PRIOR TO START OF ANY NEW PHASE OR TYPE OF WORK PRESENTING HAZARDS NOT PREVIOUSLY EXPERIENCED

A NEW/DIFFERENT WORK CREW OR SUB-CONTRACTOR ARE EMPLOYED.
Under what circumstances should a contractor's work operations be stopped?
IMMINENT DANGER !!!!
IMMINENT DANGER DEFINITION

Immediately dangerous to life or health (IDLH – respiratory hazard):
an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual’s ability to escape from a dangerous atmosphere

Immediately dangerous to life or health (IDLH-confined space):
any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or would interfere with an individual’s ability to escape unaided from a permit space

APPENDIX Q page Q-40
A condition or practice exists in any place of employment (our jobs) which could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through the enforcement procedures (ie: Administrative Procedures)

Ref: OSHA 1903.13 Imminent Danger Situations
ACTION

The observation of ANY IMMINENT DANGER situation---the work and/or situation should immediately stop… the imminent danger eliminated …. then resolution action can be worked out after employees/situation are no longer in jeopardy (“A” Pgs 17-20)
Prime Contractor submit APP listing phases of work and qualifications of personnel, QC does document safety

HA submitted before work starts to be accepted by GDA

Imminent danger requires ACTION!
SAFETY QUESTION

WHEN SHOULD A CONTRACTOR SUBMIT HIS ACCIDENT PREVENTION PLAN?
SAFETY QUESTION

WHO USUALLY IS RESPONSIBLE FOR COMPLETING THE HA?

WHY?

We can’t start work until you finish the HA!
SAFETY QUESTION

WHAT OTHER DUTIES DOES THE CONTRACTOR QUALITY CONTROL PERSON HAVE BESIDES QUALITY CONTROL?
SAFETY QUESTION

WHAT IS THE NAME OF THE DOCUMENT THAT MUST BE COMPLETED AND ACCEPTED BY THE GOVERNMENT REPRESENTATIVE BEFORE ANY PHASE OF WORK IS STARTED?
SAFETY QUESTION

Once an HA has been developed, work environments and hazards involved in the work identified, what control measures should be taken to reduce the hazard.

a. Chemical and mechanical controls, then environmental controls
b. Engineering and administrative controls, then PPE
c. Physical and environment controls, then PPE
d. Environmental and Engineering controls, then mechanical controls
SAFETY QUESTION

WHEN YOU ARE VISITING A JOB SITE. HOW CAN YOU KNOW WHAT PHASES OF WORK ARE IN PROGRESS?

HINT: See 01.A.06d
FINAL QUESTION: WHAT TIME IS IT?

Who Knows?

Time to STOP!