

UNITED STATES MARINE CORPS
MARINE CORPS DETACHMENT
ENGINEER EQUIPMENT INSTRUCTION COMPANY
686 MINNESOTA AVE
FORT LEONARD WOOD, MO 65583

LESSON PLAN

GROUND SAFETY/ORM

NCOO A01

NON-COMMISIONED OFFICER OPERATORS COURSE

A16ACX1

02/08/2012

APPROVED BY _____ **DATE** _____

(ON SLIDE #1-17)

INTRODUCTION

(45 Min)

(SHOW VIDEO "SHAKE HANDS WITH DANGER". SHOW THE VIDEO IN ITS ENTIRITY. LENGTH OF VIDEO IS 25 MINUTES. VIDEO IS AN OLDER BUT EFFECTIVE SAFETY VIDEO PRODUCED BY CATERPILLAR FOCUSING EMPHASIS ON ENGINEER EQUIPMENT AND SHOP SAFETY.)

1. **GAIN ATTENTION**. Discussion of what the video presents for preventing and anticipating hazards in the heavy equipment field. Discuss the pictures on the power point for the real men of genius.

2. **OVERVIEW**

(ON SLIDE #18, 19)

"Good Morning my name is _____ and today's period of instruction is managing Ground Safety and mitigating risks through a comprehensive and aggressive Operational Risk Management program (ORM). The purpose of this period of instruction is to make you aware of safety procedures involved in the Marine Corps Safety Program and reducing and managing risks associated with engineer equipment operations. To do this we will discuss the duties of safety manager, safety programs available to all units, potential hazards, reporting and recording procedures and individual as well as unit training requirements. We will also cover the ORM process as it pertains to equipment and shop operations. As Engineer Equipment NCO Operators safety, particularly in the engineer equipment maintenance and construction arena, if not enforced could lead to catastrophic consequences. The loss of operational equipment and more importantly, fellow Marines due to inadequate or unenforced safety procedures is unacceptable. Failure in maintaining a solid safety program is a failure of leadership. During this period of instruction we will discuss the following:

- Mission of the Marine Corps Safety Program
- Where the responsibilities lie
- The background of the safety program
- Key definitions of terminology
- How to identify potential hazards
- How to report and record mishaps when they occur

- Training opportunities and resources
- And references where you can find all of this information
- The Operational Risk Management process

INSTRUCTOR NOTE

Introduce the following learning objectives to the students.

(ON SLIDE #20)

3. **LEARNING OBJECTIVES:**

a. **Terminal Learning Objectives**

(1) Provided a working environment with working personnel and references, conduct safety inspections to identify discrepancies in safety procedures and to provide for their immediate correction per the references. (1345-ADMIN-2005)

(ON SLIDE #21)

b. **Enabling Learning Objectives**

(1) Without the aid of reference, identify references required to run a safety program per the MCO 5100.29A. (1345-ADMIN-2005a)

(2) Without the aid of reference, identify the ORM process per the MCO 3500.27. (1345-ADMIN-2005b)

(3) Without the aid of reference, identify potential hazards per the MCO P5100.8. (1345-ADMIN-2005c)

(4) Without the aid of reference, identify the requirements for reporting accidents per the MCO P5100.8. (1345-ADMIN-2005d)

(5) Without the aid of reference, identify safety-training requirements of personnel per the MCO P5100.8. (1345-ADMIN-2005)

(ON SLIDE #22)

4. **METHOD/MEDIA:** This period of instruction will be taught using the lecture method with aid of power point presentation, a safety video, and practical applications.

INSTRUCTOR NOTE

Explain Instructional Rating Forms to students.

(ON SLIDE #23)

5. **EVALUATION:**

You will be evaluated by two written exams at the time indicated on the training schedule. The first written exam will cover ground safety in the Marine Corps and the second will test your knowledge on implementing ORM into your decision making process.

6. **SAFETY/CEASE TRAINING (CT) BRIEF.**

There are no safety / cease training concerns for this period of instruction.

INSTRUCTOR NOTE

Ensure to explain Crane Shed fire and inclement weather procedures.

(ON SLIDE #24)

TRANSITION: Are there any questions about what's going to be taught, or how it's going to be taught? If not let us discuss the Marine Corps Ground Safety Program.

(ON SLIDE #25)

BODY

(7 Hrs, 5 Min)

1. **MARINE CORPS SAFETY PROGRAM** (30 Min)

(ON SLIDES #26, 27)

a. **MISSION**

The mission of the safety program is to enhance the war fighting capability by minimizing personnel and material loss through the use of a systematic and progressive program of continuous hazard identification and risk reduction. The program provides policy, establishes instructions for the

administration of the Marine Corps Safety Program, and assigns responsibility.

(ON SLIDE #28)

b. **RESPONSIBILITIES**

(1) Safety is the inherent responsibility of command and implementation of all aspects of the Marine Corps Safety Program through a chain of command is mandatory.

(ON SLIDE #29)

(2) Commanders have overall responsibility for compliance with Marine Corps OSH standards and this Manual. They must implement an all-encompassing command safety program, to include tenants under their purview. They also need to prescribe and enforce additional safety requirements for local conditions." (MCO P5100.8F PG 2-6, para 2003)

(ON SLIDE #30)

(3) Safety managers shall:

- (a) Execute administrative details of the safety program.
- (b) Adapt safety directive details of the safety program.
- (c) Maintain complete mishap reports and make a comprehensive analysis of all mishaps.

(ON SLIDE #31)

- (d) Ensure workplace safety inspections are conducted on a periodic basis.
- (e) Advise commanders on safety matters.
- (f) Coordinate and consult with activity officials on safety matters.

(ON SLIDE #32)

- (g) Program and budget for corrections of safety and health deficiencies.
- (h) Establish liaison with local, municipal, state,

and federal safety agencies, as appropriate.

- (i) Organize, provide technical assistance to, and act as recorder of command safety councils.

(ON SLIDE #33)

- (j) Provide safety representation on activity or unit committees and boards.
- (k) Review suggestions pertaining to safety devices and practices and submit recommendations to the awards committee.
- (l) Study safety problems and develop remedial safety measures.

(ON SLIDE #34)

- (m) Organize, implement, and supervise a motor vehicle safety program for both government and private motor vehicle operation.
- (n) Oversee explosive and range safety programs.
- (o) Provide safety education to supervisors, collateral duty safety managers, and their assistants in subordinate units.

(ON SLIDE #35)

- (p) Initiate actions to stimulate interest in safety.
- (q) Keep commander informed of any safety problems.

(ON SLIDE #36)

TRANSITION: We have just discussed what safety is, the mission of the Marine Corps Safety Program, and responsibilities. Are there any questions?

OPPORTUNITY FOR QUESTIONS:

1. QUESTIONS FROM THE CLASS

2. QUESTIONS TO THE CLASS:

Q. What is the mission of the Marine Corps Safety Program?

A. Enhance warfighting capability by minimizing personnel/material loss through use of a systematic/progressive program of continuous hazard identification and risk reduction.

(ON SLIDE #37)

Q. (Open ended question) As you can see ground safety is very important to everything we do in the 1300 occupational field, but is this anything new?

A. If student answers "NO", then ask, "Why do accidents still occur?"

If student answers "YES", then have the student re-evaluate their answer by asking "Have you ever sat through a project safety brief?" or "Did you attend the basic equipment operator, mechanic, or welder schools?" or "Thinking about what we have just discussed, are there any safety elements in place at your shop? Why are those elements in place?"

TRANSITION: We will now look at agencies and programs that impact the Marine Corps Ground Safety Program.

TAKE A BREAK (10 MIN)

(ON SLIDE #38)

2. COMMAND DIRECTED SAFETY PROGRAMS (30 Min)

a. Background

The Marine Corps has conducted safety and health programs for many years. Historically, occupational safety has been an element of the overall Marine Corps safety program managed by Marine Corps command functions. Other elements of the safety program include aviation, ground, traffic (motor vehicle), explosives, fire protection, system safety, industrial hygiene, recreational, off-duty, and radiation safety (ionizing, laser, and radio frequency). The Navy Bureau of Medicine and Surgery (BUMED) provides the occupational health program element.

(ON SLIDE #39)

b. To fully understand why safety is such a high priority in the Marine Corps, you must understand that not only must the Marine Corps follow our own rules and regulations, but we must also follow and comply with federal rules and regulations that govern the military as well as our civilian counterparts;

(ON SLIDE #40)

(1) Occupational Safety and Health (OSH) Program gained special attention after passage of Public Law 91-596 on 31 December 1970. This law is also known as Occupational Safety and Health Act.

(ON SLIDE #41)

(2) Section 19 of the OSH Act, although directed at private sector employers, required Federal Agencies (such as the Marine Corps) to establish and maintain comprehensive and effective OSH programs consistent with standards promulgated under section 6 of the OSH Act. Simply stated, even though a piece of equipment is compliant with Marine Corps Orders and regulations to complete a mission specific task, it must also meet the Federal requirements established by OSHA.

(ON SLIDE #42)

(3) Occupational Safety and Health Administration (OSHA), Department of Labor, establishes and maintains regulations for federal employees and occupational safety and health programs, that applies to all federal Military and Civilian Personnel which are contained in the 29 CFR 1910. It details the federal guidelines we must follow.

(ON SLIDE #43)

(a) Listed below are some of the key points of OSHA.

- Supervisor and employee responsibilities.
- Compliance with OSHA standards.
- Inspection and abatement procedures.
- Training of all personnel.

(ON SLIDE #44)

- Record keeping and reporting requirements.
- Evaluation of federal OSH program.
- Field federal safety and health councils

(ON SLIDE #45)

(4) Title 5, United States code, Section 7902 "Safety Programs", directs safety programs for federal employees.

(5) Executive Order 12196, "Occupational Safety and Health Programs for Federal Employees," 26 February 1980, directs the military to comply with the OSH Act.

(ON SLIDE #46)

(6) Marine Corps Occupational Safety and Health (OSH) Program Manual (MCO P5100.8F)

To further clarify the federal guidelines; the Marine Corps developed its own policy that states: "All Marine Corps commands shall provide a safe and healthful workplace for all personnel. These conditions shall be ensured through an aggressive and comprehensive OSH program implemented through the appropriate chain of command." (MCO P5100.8F PG 1-4 para 1003)

(ON SLIDE #47)

c. Ground Safety

(1) The unit or installation commanders has overall responsibility for compliance to Marine Corps Occupational Safety and Health Standards (MCO P5100.8F) and are required to prescribe and enforce additional safety requirements for local laws and conditions. They are also responsible for the prevention of mishaps involving personnel, equipment, or property in their charge. Avoidable mishaps result in placing a burden on the command for the cost of personnel injury, equipment repairs, worker compensation, and civil claims against the Marine Corps as well as having a negative impact on mission readiness and public relations.

(ON SLIDE #48)

(2) To assist unit commanders with their safety responsibilities, Marine Corps installation commands shall provide the following safety support:

(a) Safety training

-Provides an appropriate course of instruction to unit safety managers, their assistants, and supervisory personnel for indoctrination of the safety and health program.

-Provides on-the-job training courses in safety inspection procedures.

-Provides professional training for specialized safety subjects such as electrical, hazard communication, and confined space entry as well as others.

(b) Safety inspections

-Conducting annual inspections.

(c) Safety education material

-Provide advisory assistance for maintaining publications and other educational materials.

(d) Personal Protection Equipment

-Provides advisory assistance to safety reps and managers on specifications for procurement and instructions concerning the use of PPE, safety equipment and devices.

(e) Reports and Investigations

-Provides training and assistance to unit safety reps and supervisors in reporting and investigating mishaps.

(ON SLIDE #49, 50)

TRANSITION: We have covered the different command directed safety programs and what those programs provide. Are there any questions?

OPPORTUNITY FOR QUESTIONS:

1. QUESTIONS FROM THE CLASS

2. QUESTIONS TO THE CLASS:

Q. What Marine Corps Order further clarifies federal guidelines for Occupational Safety and Health?

A. MCO P5100.8F

Q. Who has overall responsibility for compliance with Marine Corps OSH standard?

A. Unit/Installation Commanders

BREAK 10 MINUTES

TRANSITION: "Now let's look at what is considered a mishap, types and degrees of mishaps, potential hazards, recording and report mishaps."

(ON SLIDE #51)

3. MISHAPS AND HAZARDS (40 Min)

a. **DEFINITIONS** There are no such things as accidents in the Marine Corps. There are mishaps and degrees of mishaps. The following definitions are provided to help clarify what each type of mishap is.

(ON SLIDE #52)

(1) Mishap: An unplanned event, or series of events, which may result in one or more of the following:

(a) Fatality/injury to Marine Corps active duty personnel on or off duty.

(b) Fatality/injury to Marine Corps reserve personnel.

(c) Fatality/injury to on-duty Marine Corps civilian personnel.

(d) Fatality/injury to non-Marine Corps personnel as a result of Marine Corps Operations.

(e) Occupational illness to Marine Corps personnel.

(f) Occupational illness to non-Marine Corps personnel as a result of Marine Corps operations.

(g) Damage to Marine Corps property or equipment.

(h) Damage to non-Marine Corps property as a result of Marine Corps operations tactical or administrative.

(2) Lost Time Case. Is a nonfatal injury that causes any loss of time from work after a day or shift on which it occurred or a nonfatal occupational illness that causes loss of time from work or disability.

(ON SLIDE #53)

(3) Lost Work Days. The total number of full work days, consecutive or not, that a person was unable to work as a result of an injury or occupational illness, excluding the day of the mishap and the day returned to duty/work.

(a) For military personnel this includes day's hospitalized, sick in quarters or on convalescent leave as a result of an injury or occupational injury. Count every day lost including weekends and holidays.

(b) Marine Corps Reserve personnel in a Not Physically Qualified (NPQ) status sustained as a result of injury at any time en route to, during, or returning from drill or during annual training is considered lost time.

(c) For civilian personnel this includes continuation of paid leave, annual leave, sick leave, days hospitalized, and leave without pay granted, or full work shift missed because of an injury or occupational illness.

(ON SLIDE #54)

(4) On-Duty. Marine Corps personnel are on-duty when they are:

(a) Physically present at any location to perform their official assigned work. This includes those activities normally associated with work, such as walking to and from

parking lots, lunch periods, rest breaks, and all activities aboard military vessels.

(b) Being transported by GMV (government motor vehicle) or commercial vehicle for the purpose of performing officially assigned work. This includes travel in PMV (private motor vehicle), or commercial conveyance while performing official duty, but not routine travel to and from work.

(ON SLIDE #55)

(c) Participation in compulsory sports or physical training activity.

(d) Participation in installation sponsored, command sponsored, or MCCA sponsored sports or activities during normal work hours as a member of the military unit team.

(e) TAD personnel, away from their regular place of employment are covered 24 hours a day for any injury that results from activities essential or incidental to temporary assignment.

(f) Marine and Navy personnel are on duty when performing individual PT anytime after reaching their appointed place of duty.

(ON SLIDE #56)

(5) Off-Duty. Whether on or off duty aboard a DOD installation, Marine Corps personnel are off duty when they:

(a) Are on leave, liberty, or Permissive TAD.

(b) Are engaged in personnel activities unrelated to employment such as eating, physical training, resting, shopping, running errands, etc.

(ON SLIDE #57)

(6) Mishap Classes.

(a) Class A: Mishap resulting in a fatality or permanent total disability, or total reportable damage of 1 million dollars or more.

(b) Class B: Mishap resulting in permanent partial disability, inpatient hospitalization (admitted for reasons other than observation) of three or more personnel, or total reportable damage of \$200,000 or more, but less than \$1 million. A mishap that results in a person remaining in a coma in excess of 24 hours is considered a Class B mishap for safety investigation purposes.

(ON SLIDE #58)

(c) Class C: Mishap resulting in a lost time case or where total reportable damage is \$20,000 or more, but less than \$200,000.

(d) Class D: Mishap resulting in no lost time case or first aid case, or total reportable damages of at least \$2,000 but less than \$20,000 and no lost time.

(ON SLIDE #59)

(7) Potential Hazards

A potential hazard is any condition that has the potential to become a mishap. In the environment that we work in we come across these hazards daily. If we understand our potential hazards and what might occur, it gives us the ability to perform our mission in a manner which would lessen the possibility of a mishap. The following are some of the procedures that help us identify and share these potential hazards with other commands.

(ON SLIDE #60)

(8) Hazard Alerts:

Are a means for commander's to convey hazard information to other commanders for mishap prevention purposes. Utilize the procedures contained in MCO 5100.8F series regarding "Report of Unsafe or Unhealthful Working Conditions" and "Correction of Hazardous Conditions".

(9) Hazard Identification & Assessment:

The identification of hazards before a mishap occurs can be accomplished in a number of ways such as: analysis of mishap data, observation and investigation of near mishaps, reports of unsafe acts or hazards by personnel, safety

inspections, review of standard operating procedures (SOP's) and ORM.

(ON SLIDE #61)

TRANSITION: We have just covered definitions of lost time case, lost work day, the differences between on and off duty mishaps, the criteria of the four different classes of mishaps, a potential hazard.

OPPORTUNITY FOR QUESTIONS:

1. QUESTIONS FROM THE CLASS

2. QUESTIONS TO THE CLASS:

Q: Do 96's and 72's count for lost days?

A: Yes (including weekends and holidays)

Q: How many different classes of mishaps & what are they?

A: Four classes of mishaps, they are A, B, C, & D

TRANSITION: Now let's look at how to report a mishap if you have the unfortunate circumstance. We will also look at procedures for recording a mishap. Reporting and recording mishaps correctly will make investigations a great deal smoother and will allow for the quickest possible actions to prevent a future mishap of the same nature.

(ON SLIDE #62)

4. MISHAP REPORTING AND RECORDING (30 Min)

If potential hazards and mishaps are not known to other commands, then the opportunity for these hazards and mishaps are greatly increased. The more that is known by all commands on how a hazard or mishap occurred greatly decreases the chance for the same hazard or mishap to occur again. This is the reason we record and report mishaps to higher headquarters. So what are recordable and reportable mishaps?

a. **Recordable Mishap**. All mishaps that require medical treatment beyond first aid are recordable, with the exception of Non-Reportable Mishaps as described in paragraph 2005 of MCO P5102.1A.

b. **Reportable Mishaps**. The following mishaps are reportable via naval message within 30 days of mishap in a Safety Investigation Report (SAFEREP) to Commandant of the Marine Corps, Safety Division (CMC (SD)):

(ON SLIDE #63)

(1) Mishaps requiring a Safety Investigation Board (SIB):

(a) Class A and B mishaps that occur on duty, on or off duty on base, or on and off base while performing official duties.

(b) A Marine Corps operational mishap involving explosives, explosive devices, direct or indirect fire weapons, pyrotechnics, incendiary devices, or combat chemical agents that result in injury or Class D property damage.

(c) All on duty mishaps that require the inpatient hospitalization of three or more people, regardless of the extent of injury or damage.

(2) Mishaps not requiring a SIB but still require an investigation:

(a) Class A and B mishaps that occur off duty and off base.

(ON SLIDE #64)

c. **MISHAP FORMS**

(1) **Mishap Logs**. All mishaps must be recorded in a unit mishap log within six working days from notification of occurrence. Mishap logs shall be maintained for five years. A monthly mishap log report shall be sent electronically to COMNAVSAFECEN, no later than the 10th day from the last day of the reported month. All mishaps are reported through the monthly mishap logs reports.

(2) Mishap Summary. Consolidated report at the component commanders (COMMARFORLANT, COMMARFORPAC, COMMARFORRES) or at the highest level of command and submitted to CMC (SD). Mishap summaries are to be posted and due to CMC (SD) NLT twenty days after the end of the fiscal year. Mishap summaries will remain posted for 30 consecutive days.

(ON SLIDE #65)

(3) SAFEREP. Must be submitted via a naval message within 30 days of mishap for all reportable mishaps listed above. SAEREP's are privileged and designated "For Official Use Only" (FOUO). SAFEREP's shall neither include any part of, nor refer to, the corresponding Judge Advocate General Manual (JAGMAN) investigation. MCO P5102.1A gives instructions on preparing the SAFEREP.

(4) Special Report Notify CMC (SD) within 8 hours by telephone or electronic means (Personal Casualty Report (CPR), Serious Incident Report (SIR), or Operational Report-3 (OPREP-3)) for mishaps resulting in either a fatality or the inpatient hospitalization of three or more personnel.

(ON SLIDE #66)

NOTE: *Safety investigations are to be conducted separate from and independent of any JAG investigations. Individuals conducting or assisting in a safety investigation or assigned to a safety billet, shall neither assist nor be assigned to conduct any JAG investigation.*

(ON SLIDE #67)

TRANSITION: We have just covered reporting and recording. Are there any questions?

OPPORTUNITY FOR QUESTIONS:

1. QUESTIONS FROM THE CLASS

2. QUESTIONS TO THE CLASS:

Q: What are mishaps that require medical treatment beyond first aid?

A: Recordable

Q: A mishap must be recorded in a unit mishap log within how many days from notification?

A: 6 days

BREAK 10 MINUTES

TRANSITION: Everyone should be trained for safety. We will now move on to training requirements and opportunities for safety managers and Marines just working in a shop.

(ON SLIDE #68)

5. TRAINING (40 Min)

Marines train constantly, but without proper training is the mission being performed correctly. Once a mishap occurs, your training records will be reviewed and it will be too late to start safety training. Safety training is constant and continual.

a. **Safety Manager's** training must be completed no later than 90 days after appointment per U.S. Marine Corps Safety Campaign Plan 2002. These individuals shall attend the 80 hour Ground Safety for Marines course or a training course approved by COMMARFORPAC, COMMARFORLANT, COMMARFORRES, or CG Marine Corps Combat Development Command (MCCDC).

(ON SLIDE #69)

b. **Job Safety Training.** Before beginning work, newly assigned personnel will be given job safety training. This training is conducted and documented by the individual's work section. As a minimum, the training will consist of:

(1) General safety matters related to the work environment.

(2) Hazards associated with assigned task.

(3) Applicable safety and health standards.

(4) PPE required for each task.

(5) An overview of local safety and health problems with emphasis on individual rights and responsibilities.

(6) Prompt reporting to management of unsafe conditions, potential exposure to hazardous materials, or occupational injury or illness.

(7) Any additional specialized safety and health training the Marine is required to attend and a date and time schedule of applicable training sessions.

(ON SLIDE #70)

c. **Specialized Safety and Health Training**. When newly assigned personnel, or other workers, are involved in work environments, processes or task exposing them to hazardous conditions, they will receive applicable specialized training. References 5-4 and 5-5 of the MCO 4450.12 contain many specialized safety and health training requirements. Supervisors are responsible for providing or obtaining job unique safety training. Some training may be available from local safety, occupational health, or preventive medicine personnel. Documentation of this training is maintained by the Marine's work section supervisor. Some safety and health training programs or areas that may apply are:

- (1) Asbestos
- (2) Ergonomics/Back Injury Prevention
- (3) Fall Prevention
- (4) Hazard Communication Program
- (5) Hearing Conservation

NOTE: *This list is not all-inclusive and each item does not apply to every person. Therefore, supervisors must determine the safety training each person will receive based on a job hazard analysis, industrial hygiene survey, or both.*

(ON SLIDE #71)

d. **Student Safety Program References**

(1) MCO P5100.8F, USMC Occupational Safety and Health Program, applies to all USMC activities and personnel to include military, civil service and non-appropriated fund (MCCS) civilians.

(2) MCO P5100.29, Marine Corps Safety Program Manual, Provides policy, assigns responsibility, and establishes instructions for the administration of the Marine Corps Safety Program.

(3) MCO P5102.1A, Marine Corps Ground Mishap Investigation and Reporting Manual.

(4) MCO 5100.19E, USMC Traffic Safety Program (DRIVESAFE).

(ON SLIDE #72)

(5) MCO 4450.12A, Storage and Handling of Hazardous Materials.

(6) MCO 3500.27A, Operational Risk Management (CORRECTED COPY)

(7) MCO 6260.1E, Marine Corps Hearing Conservation Program.

(ON SLIDE #73)

(8) MCO P11262.2A, Inspection, Testing and Certification of Tactical Ground Load Lifting Equipment.

(9) Unites States Marine Corps Safety Campaign Plan 2002.

(10) 29 CFR 1910: Department of Labor General Industry Standards, covers Federal guidelines for the general industry to include civilian and military personnel on various subjects such as hearing, asbestos, lead, and hazardous materials.

(ON SLIDE #74)

TRANSITION: We have just covered reporting and recording of mishaps, training requirements and agencies, and reference you can use to as guidance for your safety program.

OPPORTUNITY FOR QUESTIONS:

1. QUESTIONS FROM THE CLASS

2. QUESTIONS TO THE CLASS:

Q Are all mishaps requiring more than first aid recordable?

A: Yes (Para. 2005 of MCO P5102.1A)

Q: How is a SAFEREP submitted?

A: Via naval message within 30 days of mishap

BREAK 10 MINUTES

TRANSITION: Now that we have discussed the focus of safety in the Marine Corps, let's take a look at one of the most important tools for an NCO which aids in decision making during planning and execution of shop or field operations; ORM.

(ON SLIDE #75)

6. OPERATIONAL RISK MANAGEMENT PROCESS (30 Min)

a. What is ORM?

(1) ORM is a decision making tool used by Marines at all levels to increase operational effectiveness by reducing the potential for loss, increasing the probability of a successful mission through a process of dealing with the risks associated with military operations, training, and daily activities which includes hazards assessment, risk decision making, and implementation of effective risk controls.

(2) ORM is arranged in a five-step process used for identifying hazards and the associated risks. Before you learn the ORM process, you must be able to define Operational Risk Management, hazard, and risk in order to understand how and why the process works.

(ON SLIDE #76)

b. Terminology and definitions associated with ORM

(1) Operational Risk Management is defined as the process of dealing with the risk associated with military operations, training, and daily activities which includes hazards assessment, risk decision making, and implementation of effective risk controls.

(ON SLIDE #77)

(2) Hazard is defined as a condition with the potential to cause personal injury or death, property damage, or mission degradation.

(ON SLIDE #78)

(3) Risk is defined as an expression of possible loss or injury in terms of severity. The cause risk include change in situation, resource constraints, new technology which may not be understood, complexity of circumstances, stress, human nature, high energy levels that lead to hasty actions, societal constraints, environmental influences, and speed or tempo of the operation.

(ON SLIDE #79)

c. Cause Factors

(1) Mishaps are caused by a single factor or a combination of cause factors. There are two (2) categories of cause factors; human factors and/or material factors.

(ON SLIDE #80)

(a) **Human Factors** - When an individual's actions or performance is different from what is required and causes or contributes to a mishap.

(ON SLIDE #81)

I. Individual Failure - Occurs when the Marine knows and is trained to standard (ITS) but elects not to adhere the standard (self-discipline). Individual failure is attributed to the Marine's attitude, fatigue (self-induced), overconfidence, haste, alcohol or drugs.

(ON SLIDE #82)

II. **Leader Failure** - Leaders that do not enforce known standards regardless of whether they are in the direct chain-of-command or not, constitutes a Leader Failure.

III. **Training Failures** - Occurs when Marines are not trained to a known standard because of insufficient, incorrect, or no training on the task.

(ON SLIDE #83)

IV. **Standards Failure** - Occurs when standards or procedures are unclear, impractical, or do not exist and are required.

(ON SLIDE #84)

(b) **Material Factors** - When a fault in the equipment keeps it from working as designed and causes or contributes to a mishap.

(ON SLIDE #85)

I. **Component.** The smallest, most specific component, assembly, or system that can be identified as having failed is the Component.

(ON SLIDE #86)

II. **Mode.** The manner in which the above component failed is the (failure) mode. Typical examples: brake master cylinder failure, hose failed, part not secured correctly (e.g., wrong bolt, nut, cotter pin reused and fractured, cotter pin end not opened).

(ON SLIDE #87)

III. **Agent.** The act, event, or agency that led to the failure mode is the (failure) agent. Typical examples: failure to service, improper installation, fire, overloading.

(ON SLIDE #88)

(c) **Environmental Conditions** - Environmental conditions are not causal factors. Environmental conditions are those conditions over which there is no human control such as day, night, weather, sea state, tidal waves, tornadoes, etc. A

causal factor of a mishap might be an inadequate weather forecast or improper weather avoidance procedures but not the environmental conditions of the thunderstorm turbulence or lighting.

(ON SLIDE #89)

TRANSITION: We have just covered what ORM is, terminology associated with ORM, and factors that can cause risk. Are there any questions?

OPPORTUNITY FOR QUESTIONS:

1. QUESTIONS FROM THE CLASS

2. QUESTIONS TO THE CLASS:

Q What is ORM?

A: A decision making tool used by Marines at all levels to increase operational effectiveness.

Q: What are the 4 factors of human failure?

A: Individual failure, leadership failure, training failure, and standards failure.

TRANSITION: Now that we have introduced ORM to you, let's take a look the different levels and the 5 step process of ORM.

(ON SLIDE #90)

BREAK 10 MINUTES

(ON SLIDE #91)

7. UNDERSTANDING ORM (1 Hr, 25 Min)

a. There are three levels of ORM:

(ON SLIDE #92)

(1) Time Critical:

This is the first level of ORM. Time Critical is an "on the run" mental or oral review of the situation using the 5-step process without recording the information on paper. Experienced Marines use a time critical level during a time compressed situation such as when the operation is underway.

(ON SLIDE #93)

(2) Deliberate:

This is the second level of ORM. The deliberate level applies all 5 steps to the ORM process. It records all the hazards, risks, and controls onto the ORM worksheet. The deliberate level is used when there is enough time to complete the ORM worksheet, but not sufficient enough time for research and analysis.

(ON SLIDE #94)

(3) In Depth:

This is the third level of ORM. The In Depth level is also a deliberate process with a more thorough risk assessment involving research of available data, use of diagrams and analysis tools, formal testing or long term tracking of the hazards associated with the operation or mission. Time permitting, this level of ORM supplies the leader and subordinate with the most information possible to identify any risks, implement the best possible controls, and ensures that instructions and directions are understood by all personnel involved.

(ON SLIDE #95)

(4) ORM can and should be utilized in anyone of the three levels when conducting **ANY** mission, task, or event, whether on or off duty.

(ON SLIDE #96)

b. **The ORM Five (5) Step Process**

ORM is divided into 5 steps-

Step 1: Identifying the hazards

Step 2: Assessing the hazards

Step 3: Identifying controls and making risk decisions

Step 4: Implementing the controls

Step 5: Supervising the mission

(ON SLIDE #97)

c. **Step 1: Identifying Hazards is divided into four parts-**

(ON SLIDE #98)

(1) Part 1: Operational Analysis

Every decision made can and will impact the unit's operational readiness. The impact will be positive or negative on a unit's ability to perform the intended mission. To better understand the impact a risk decision will have on readiness, each mission must be broken down into logical segments.

(ON SLIDE #99)

(2) Part 2: Preliminary Hazard Analysis (PHA)

Once the mission has been broken down into logical segments, the hazards associated with each segment need to be identified and listed in a logical order as they pertain to that segment of the mission. The identification of hazards during the PHA will require 30-40% of the total ORM time and resources in order to complete an accurate analysis of hazards associated with the mission. It is important to note that if all detectable hazards have not been identified, then unnecessary risks are being accepted.

(ON SLIDE #100)

(3) Part 3: Brainstorming "What If" scenarios

All individuals responsible for any phase or segment of the operation will be involved in the brainstorming process. The brainstorming process must be conducted with common sense thinking and the hazards should pertain to the mission. For example a meteor falling to Earth during a construction project is possible, but this will happen whether there a construction project or not, so this hazard does not need to be listed, but a person getting crushed by a piece of equipment is also possible but is directly related to the project.

(ON SLIDE #101)

(4) Part 4: Change Analysis

Every mission has events occur that are planned and unplanned. Planned events are evaluated throughout the ORM process. Unplanned events that occur can change the structure of the original plan and will need to be evaluated during the change analysis. A change analysis focuses on the differences between the original plan and the revised plan and how the differences will affect the safety of everyone involved in the mission. An example would be if you and several of your peers were going to a concert and a vehicle accident occurs somewhere in your path of travel that requires you to take an alternate route. There will be different circumstances along the new route that you may have not planned on such as driving through a town or city that you were going to be able to avoid using an interstate, or perhaps you planned on using a 4-lane highway and now must take a 2-lane highway instead.

(ON SLIDE #102)

d. **Step 2: Assessing Hazards**

The purpose of assessing hazards is to determine the degree of severity of injury from the hazard and the probability that the hazard may occur. In order to properly assess hazards, the probability and severity must be considered.

(ON SLIDE #103)

(1) Determine the severity:

(a) Each hazard will be assessed in terms of the severity of possible loss.

(b) What are the possible consequences for each hazard?

(ON SLIDE #104)

(2) Severity Categories:

(ON SLIDE #105)

Category I; The hazard may cause death, loss of facility/asset or result in grave damage to national interests.

Category II; The hazard may cause severe injury, illness, property damage, damage to national or service interests or degradation to efficient use of assets.

(ON SLIDE #106)

Category III The hazard may cause minor injury, illness, property damage, damage to national or service interests or degradation to efficient use of assets.

Category IV The hazard presents a minimal threat to personal safety or health, property, national, service, or command interests or efficient use of assets.

(ON SLIDE 107)

(3) Probability of the hazard occurring:

(a) Several considerations need to be taken into account when determining probability. The following list is a good starting point for predicting probability:

- past experience (self or others)
- available safety data (TM's, MCO's, other orders and Directive's, manufacturer recommendations, SOP, etc...)
- weather forecast
- time (day or night)
- terrain
- enemy situation (METTL)
- be prepared to react to uncertainty

(ON SLIDE #108)

(b) Cumulative probability is the overall probability of occurrence of all causative factors of a specific hazard.

(ON SLIDE #109)

(c) Causative factors are the specific factors such as personnel, equipment, procedures, materials, environment, or other factors that contribute to the cause of a mishap.

(ON SLIDE #110)

(d) Probability is broken down into 4 possible occurrences: likely, probably, may, and unlikely.

(ON SLIDE #111)

- **Likely**- The event or hazard is **LIKELY** to occur immediately or within a short period of time. Expected to occur frequently to an individual item or person, or continuously to a fleet, inventory, or group. The definition of likely: probably going to happen, a good chance, above average possibility.
- **Probably**- The event or hazard **PROBABLY** will occur in time or expected to occur several times to an individual item or person, or frequently to a fleet, inventory, or group. The definition of probably: to be expected, maybe, an average possibility.

(ON SLIDE #112)

- **May**- The event or hazard **MAY** occur in time. Can be reasonably expected to occur at some time to an individual item or person or several times to a fleet, inventory, or group. The definition of may: indicates something could happen, a less than average possibility.
- **Unlikely**- The event or hazard is **UNLIKELY** to occur at all. The definition of unlikely: improbable, doubtful, an improbable possibility.

(ON SLIDE #113)

(4) The Risk Assessment Matrix

(a) To find out how severe a hazard may affect the unit or the mission, the Marine Corps uses a risk assessment matrix. The matrix will help unit leaders determine the potential of loss the hazard could cause by matching the probability of occurrence with the severity of the hazard.

(b) The Risk Assessment Matrix uses 5 stages to determine the potential consequences associated with a hazard and when used in conjunction with the probability of occurrence and severity can be an easy and sensible guide to risk assessment.

(ON SLIDE #114)

1 = CRITICAL 2 = SERIOUS 3 = MODERATE 4 = MINOR
 5 = NEGLIGIBLE

		PROBABILITY OF OCCURENCE			
		LIKELY	PROBABLY	MAY	UNLIKELY
		A	B	C	D
S E V E R I T Y	CAT I	1	1	2	3
	CAT II	1	2	3	4
	CAT III	2	3	4	5
	CAT IV	3	4	5	5

Determining the probability of occurrence:

(ON SLIDE #115)

Instructor's Note

Have the students read through the example first before proceeding.
 Then discuss possibilities pertaining to the example.

EXAMPLE:

(ON SLIDES #116, 117)

You are planning a 4 hour road trip. One of the hazards identified is falling asleep at the wheel. Here are some questions you need to consider in order to conduct risk assessment...

Do you believe you will fall asleep as soon as you leave or soon thereafter or will you and all other drivers fall asleep many times at the wheel during the trip?

If this question accurately describes your circumstances, then there is a LIKELY probability of occurrence.
If your answer is no, then move on to the next question.

Do you believe you will fall asleep at some point in time during the trip or you and some of the other drivers will fall asleep at the wheel several times during the trip?

If this question accurately describes your circumstances, then your probability of occurrence is PROBABLY.

If your answer is no, then move on to the next question.

Do you believe that you could fall asleep at some point in time or could one of the other drivers on the road fall asleep?

If this question accurately describes your circumstances, then your probability of occurrence is MAY.

If your answer is no, then move on to the next question.

Do you believe that there is almost no chance that you and all other drivers on the road will fall asleep at the wheel?

It is unlikely that you will fall asleep as soon as you leave, it is also unlikely that all other drivers on the road will fall asleep at the wheel during your trip. So, it is safe to assume that LIKELY is not the probability that you would use. It is also unlikely that you know you will fall asleep or that several other drivers will fall asleep during your trip. So, it is safe to assume that probably is not the probability that you would use. It is, however, possible that you could fall asleep in time or that another driver on the road could fall asleep during your trip. So, the probability of occurrence will be MAY, particularly if the state of mind of all the other drivers on the road is unknown. There is a good possibility that someone driving along your route is not using ORM.

Now that you've determined the probability of occurrence, let's look at the severity of loss for the hazard of falling asleep at the wheel during the trip.

To determine the severity of loss, questions again must be answered. As in determining probability, the questions will go in order with the categories that rate severity of loss.

*With no controls in place, could falling asleep at the wheel during your trip cause **death** to you or another person, loss of facility/asset, or **grave** damage to national security?*

*With no controls in place, could falling asleep at the wheel cause **severe** injury/illness, property damage, damage to national/service interests, or **severe** degradation of efficient use of assets?*

*With no controls in place, could falling asleep at the wheel cause **minor** injuries/illness, property damage, damage to national, service, or command interests, or **minor** degradation of efficient use of assets.*

*With no controls in place, could falling asleep at the wheel present a **minimal** threat to safety/health, property, national, service, or command interests, or a **minimal** threat to efficient use of assets.*

If a driver were to fall asleep at the wheel while driving at 55-70 miles per hour there is a high probability of causing death and loss of the vehicle. Therefore, the severity of loss, for the example used, would be a category I. Here are some general guidelines for determining probability and severity.

(ON SLIDE #118)

-Don't be overly optimistic.

Meaning: Don't focus only on the positive outcome of a hazard or minimize the severity of possible damage or loss.

-Don't misrepresent the seriousness or probability.

Meaning: Don't assume a hazard won't happen.

-Don't be an alarmist.

Meaning: Every hazard or risk associated with a hazard is not life threatening, just as not every hazard means that you cannot continue training.

-Don't prejudice your judgment.

Meaning: Don't base hazards solely on your personal experience, but use other sources of reference such as TM's, other Marines, and safety messages.

-Don't inaccurately represent the hazard or ignore it.

Meaning: Don't lessen the severity or probability.

(ON SLIDE #119)

(5) The Risk Totem Pole can be used to assist in ranking risks for a hazard. The risk totem pole will give you a list of all risks associated with a hazard in order to identify

the most dangerous or severe risks so that the majority of time and resources can be spent to avert those risks.

(ON SLIDE #120, 121)

	HIGHEST RISK	
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
12		
	LOWEST RISK	

(ON SLIDE #122)

e. Step 3: Identifying Controls and Making Risk Decisions

(1) Identifying controls is divided into two parts:

- Identify the control options
- Determine the control effects

(ON SLIDE #123)

(a) Identify the control options

After assessing each hazard, one or more controls that will either eliminate the hazard or reduce the risk (probability and/or severity) of a hazardous event. Consider the reason for the hazard when developing controls and not just the hazard itself. There are three types of controls:

(ON SLIDE #124)

1 Engineering: These controls take the form of barriers, guards, or signs to warn individuals that a hazard

exists. This includes oversight personnel such as road guards, ground guides, riggers, etc. Design faults or material selection also fall into this category.

(ON SLIDE #125)

2 Administrative: These controls are based on knowledge or skill level. Administrative controls can be implemented through individual and collective training that ensures performance standards.

(ON SLIDE #126)

3 Personal Protective Equipment (PPE): These controls are applied when positive actions are taken to prevent personal contact or exposure to an identified hazard. PPE includes items such as helmets, ear protection, gloves, eye glasses, etc..)

(ON SLIDE #127)

Note: The key to a successful mission is to anticipate and manage each risk by implementing any one of these controls. To be effective each control must be:

-Suitable: the control must remove the hazard or reduce the residual risk to an acceptable level.

-Feasible: the capability to implement the control must be attainable.

-Acceptable: the benefit gained by implementing the control must justify the cost in resources and time.

(ON SLIDE #128)

(b) Determining Control effects

1 As you evaluate each control, ask yourself the following questions:

Q1. What impact will the control have on the probability of this hazard happening?

Q2. What impact will the control have on the severity of the injury or loss if this hazard happens?

Q3. What will the control cost?

Q4. How will this control work with other controls?

(ON SLIDE #129)

(c) Residual Risk: Once controls for the hazards identified have been developed, then it is time to determine the residual risk associated with each hazard and the overall residual risk for the mission or task.

1 Residual risk is the risk level remaining after controls have been selected for the hazard. Residual risk is only valid if the controls for the hazard are implemented. As controls for hazards are identified and selected, the hazards are reassessed as in step 2 (assessing the hazards) and the level of risk is then revised. This process is repeated until the level of residual risk cannot be further reduced.

2 Overall Residual Risk must be determined when more than one hazard is identified. The residual risk for each hazard may have a different level, depending on the assessed probability and severity of the hazardous incident. Overall residual risk should be determined based on the incident having the greatest residual risk. Determining overall mission risk by averaging the risks of all hazards is not valid. If one hazard has high risk, the overall residual risk of the mission is high, no matter how many moderate or low risk hazards are present.

(ON SLIDE #130)

(2) Making Risk Decisions

When making risk decisions, there are some questions that must be answered in order to identify who has the authority to make those decisions. The first and most important question would be "Who will answer in the event of a mishap?" The commanding officer is ultimately responsible and will have to answer for any mishaps that occur. The person that made the decision to accept any risk that led to a mishap is also responsible and accountable for any decision made. The second question is "Who has on-scene knowledge?" Although the commanding officer is the responsibility holder, he/she cannot be in several places at once. Often, a decision has to be made "on the fly" or as a situation developing. In those instances there is usually little time to make the decision. The follow-up question directly relates to the previous question, "Who has the maturity and experience to make decisions?" The senior individual is usually the answer for both. However, that Marine should also be willing to listen to those involved or are at risk, if time allows. The answer to the next question can conflict with the previous two questions in certain situations,

"Who has access to and the knowledge to effectively employ the resources used to mitigate the risk?" This is when the "duty-expert" can become a factor. When working a project that involves several Military Occupational Specialties that fall in the same chain of command, the decision will fall on the senior person on-scene with support and guidance from the person that has the greatest knowledge of the situation. And because "we train as we fight" the final question that requires an answer is "Who will have the authority to make the decision in combat?" The person that will have to make the risk decision in combat should also be the same person that makes the decision in garrison. When time allows for an In-Depth or Deliberate level of ORM to be used, the following guidance has been handed down by the CMC to determine the risk level decision making authority.

(ON SLIDE #131)

If the risk level is...	Make decisions at...
Critical	Battalion/Squadron Commander level
Serious	Company/Department Head level
Moderate	Platoon/Shop Supervisor level
Minor/Negligible	Decision can be made by Anyone using the 5 step process

(ON SLIDE #132)

Once the individual with the authority to make a decision has been determined, there is one more step to the decision making process. The decision making authority must consider the following:

- Are the risks justified?
- Do the benefits of the risk outweigh the cost?
- Are there no unnecessary risks being accepted?
- Have all the risks been anticipated and properly managed?
- Are the risk decisions being made at the appropriate level?

(ON SLIDE #133)

f. **Step 4: Implementing the Controls**

(1) Implementing controls includes close coordination and communication with the commanding officer and those individuals involved with the mission or task. The critical check for this step is to ensure that controls are converted into clear, simple, and concise orders and are understood by everyone involved. Other important elements of implementing controls is to ensure that the right control has been identified for the risk, that the implementation of the control does not interfere with other priorities or create risks of their own, and that the implementation is a feasible and manageable. Lastly, when implementing controls, consider what could go wrong with the implementation of the control.

(ON SLIDE #134, 135)

g. **Step 5: Supervision**

(1) Supervision is the last and the most important step in the ORM process. It is conducted in the same manner as any other supervisory process. During the supervision process, a supervisor will perform the following:

- Identify lessons learned from previous similar missions
- Conduct follow-up evaluations of the hazards and controls selected.
- Monitor the operational phases for changes and be prepared to make adjustments to the plan
- Take corrective actions when necessary

(2) A supervisor will know whether the mission has been successful through direct indicators such as the attitude and moral of the Marines involved, the skills and knowledge gained, and risks that have been mitigated. The ORM process provides an additional tool for commanders to use in reducing risks inherent in military operations. It is not a complete change in the way we approach the operational risk management problem, but rather provides a specific methodology for personnel to anticipate hazards and evaluate risk. Just as we have trained our personnel to focus on the mission, we can train our personnel to evaluate risk as part of the decision making process. As personnel are trained in and use the process, ORM will become intuitive, and applied automatically as a means to

aid in quickly developing an effective course of action to accomplish the mission.

(ON SLIDE #136)

TRANSITION: We have just covered the levels and 5 step process of ORM. Are there any questions?

OPPORTUNITY FOR QUESTIONS:

1. QUESTIONS FROM THE CLASS

2. QUESTIONS TO THE CLASS:

Q What are the 5 steps in the ORM process?

- A:**
- 1) Identify the hazards**
 - 2) Assessing the hazards**
 - 3) Identifying controls and making risk decisions**
 - 4) Implementing the controls**
 - 5) Supervise**

Q: What constitutes a category III severity?

A: The hazard may cause minor injury, illness, and property damage, damage to national or service interests or degradation to efficient use of assets.

TRANSITION: We have just discussed how to implement ORM into your planning process. Now let's go over the principles of ORM which are the basis for what we as Marines should consider before planning and conducting any operation.

BREAK 10 MINUTES

(ON SLIDE #137, 138)

8. PRINCIPLES OF ORM (20 Min)

ORM incorporates the following four principles that encompass the theory behind it:

a. **Accept Risk When Benefits Outweigh The Cost.** Naval Doctrine Publication 1 and Fleet Marine Force Manual I

(WARFIGHTING) state, "Risk is inherent in war and is involved in every mission. Risk is also related to gain; normally greater potential gain requires greater risk." Our Marine Corps tradition is built upon principles of seizing the initiative and taking decisive action. The goal of ORM is not to eliminate risk, but to manage the risk so the mission can be accomplished with the minimum amount of loss.

b. **Accept No Unnecessary Risk.** Naval Doctrine Publication 1 and Fleet Marine Force Manual I also state, "We should clearly understand that the acceptance of risk does not equate to the imprudent willingness to gamble. Take only risks that are necessary to accomplish the mission."

c. **Anticipate And Manage Risk By Planning.** Risks are more easily controlled when they are identified early in the planning process.

d. **Make Risk Decisions At The Right Level.** ORM decisions are made by the leader directly responsible for the operation. Prudence, experience, judgment, intuition, and situational awareness of leaders directly involved in the planning and execution of the mission are the critical elements in making effective ORM decisions. When the leaders responsible for executing a mission determine the risk associated with that mission cannot be controlled at the unit level, or goes beyond the commander's stated intent, they shall elevate the decision to their chain of command.

(ON SLIDE #139)

INTERIM TRANSITION: Now that we have covered safety/ORM in its entirety, are there any questions we fill out an ORM worksheet and discuss the different aspects of information that goes into the ORM process.

PRACTICAL APPLICATION (1). (2 Hr) Think of a realistic scenario (i.e. trip to St. Louis, field meet, or a current event). Hand out and have the students fill out the Detachment Operational Risk Assessment Worksheet based on this scenario. This is a thinking exercise in which the instructor can be the "devil's advocate". There is no right or wrong answers for this exercise. Ensure the students are thinking realistically and sensibly.

PRACTICE: For practice, students will fill out all blocks of the ORM assessment worksheet that we use here in the Det. As a

class, discuss the 5 step process, major steps, sub steps, hazards, controls, implementing, and supervision.

PROVIDE-HELP: Discuss various options and attempt to bring up real world hazards that the students may have overlooked. Use "brainstorming" as a method of developing hazards and controls.

- 1. Safety Brief:** There are no safety concerns for this practical application.
- 2. Supervision & Guidance:** Treat this practical application as a guided discussion. Ensure the students are seriously considering realistic hazards with risk and ways to mitigate that risk.
- 3. Debrief:** Are there any questions or comments concerning filling out an ORM worksheet? The ORM worksheet is a thinking tool that leaders can use to identify hazards and mitigate risks.

(ON SLIDE #140)

TRANSITION: Now that we have completed an ORM worksheet, you now have a better understanding of the ORM process and possibly a view of a different worksheet setup as fleet units will use similar but not exactly the same format for the assessment worksheet. Do you have any questions? I have some for you.

OPPORTUNITY FOR QUESTIONS:

1. QUESTIONS FROM THE CLASS

2. QUESTIONS TO THE CLASS:

Q What are the 4 Principles of ORM?

- A:**
- 1) Accept risk when the benefits outweigh the cost**
 - 2) Accept no unnecessary risk**
 - 3) Anticipate and manage risk by planning**
 - 4) Make risk decisions at the right level**

(ON SLIDE #141, 142)

Summary:

(10 Min)

Today we have covered the mission of the Marine Corps safety program, responsibilities, background, definitions, hazards, reporting and recording, training and references. We then discussed the Operational Risk Management process, the

levels and steps involved with ORM, and why ORM is important to you. With this knowledge I am confident that this information will help improve the safety program at your unit. I am also confident that you are now better prepared to analyze risks associated with hazardous operations. That concludes this period of instruction.

(ON SLIDE #143)

INSTRUCTOR'S NOTE

Collect up the IRF's and Safety Questionnaire.

BREAK 10 MINUTES

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National Institute for Occupational Safety and Health (NIOSH)

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National Highway Traffic Safety Administration

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Safety-Kleen Corp.

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U.S. Dept. of Labor Occupational Safety and Health Administration (OSHA)

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