



Rail/Line Haul Operations





Agenda

- Overview
- Rail Team Organization
- Risk Assessments
- Medical support
- Safety support
- Ground guides
- Maintenance
- PPE/Load teams
- Spanners
- Standards of Conduct
- Visibility



Overview

- **High hazard activity**
- **Local policy**
- **Strong chain of command presence**
- **Effective rail operations organization**
- **Safety support structure**
- **Medical support**
- **PPE**
- **Inclement weather plan**



Rail/Line Haul Operations





Rail Team Organization

- Dedicated rail team to run operation
- Not linked to unit on the railhead
- Composition varies
- OIC/NCOIC
- Recovery assets
- Maintenance assets
- UMO and HAZMAT
- Liaison with ITO/DTO
- Only ITO/DTO coordinates with Railroad company



Rail/Line Haul Operations





RISK ASSESSMENT RAIL HEAD LOADING

OPERATION	PROBLEM	CAUSE	PROBABILITY EFFECT RISK ASSESSMENT			COUNTERMEASURE	RESID. RISK
<u>Loading Ramp/surface</u>	Skidding of vehicles	Snow, ice, rain	C	III	Medium	Remove snow/ice prior to loading operation	E-IV/Low
<u>Railroad Track Area (gravel/tracks)</u>	Tripping/falling	Inattentive walking/ insufficient illumination	B	III	Medium	Instruct personnel to walk carefully Provide sufficient illumination	E-IV/Low
<u>Railcars</u> - Ground Guide	Crushed between vehicles/hit by vehicle	Improper distance to vehicle/ ground guide on same railcar	C	III	Medium	Ground guide will not be on the same railcar on which a vehicle is being moved	E-IV/Low
	Falling between railcars	Walking backwards	C	III	Medium	Ground guides will be instructed not to walk backwards on railcars	
Vehicle movement	Vehicle driving off railcar	Lack of communication (hand signal)	C	III	Medium	Ensure drivers and ground guides are proficient in the use of hand signals Proper driver selection	E-IV/Low
		Improper driving skills	D	III	Low		
Ground guide, driver, tie-down personnel getting off railcar	Jumping onto gravel surface	Not using railcar steps	C	III	Medium	Only railcar steps will be used/prohibit jumping from railcar	E-IV/Low
<u>Installing chock blocks</u>	Hand/arm injuries	Vehicle still moving	C	III	Medium	Ensure vehicle engine is shut off/driver dis-mounted prior to operation	E-IV/Low
<u>Tie-down operation</u>	Hand/head injuries	Lack of PPC&E (gloves/ hard hat)	C	III	Medium	Provide PPC&E an control usage	E-IV/Low
Moving of equipment by crane	Possible injuries by falling parts or equipment	Personnel standing underneath moving or lifted equipment	C	III	Low	Use of guiding ropes, personnel are not admitted within the range of crane operation, especially not under lifted equipment	E-IV/Low

FORSKOM



RISK ASSESSMENT RAIL HEAD - OFF LOADING

OPERATION	PROBLEM	CAUSE	PROBABILITY EFFECT RISK ASSESSMENT			COUNTERMEASURE	RESID. RISK
Off-loading Ramp/surface	Skidding of vehicles	Snow, ice, rain	C	III	Medium	Remove snow/ice prior to loading operation	E-IV/Low
Railroad Track Area (gravel/tracks)	Tripping/falling	Inattentive walking/ insufficient illumination	B	III	Medium	Instruct personnel to walk carefully Provide sufficient illumination	E-IV/Low
Ground guide at railcar	Crushed between vehicles/hit by vehicle	Improper distance to vehicle/ ground guide on same railcar	C	III	Medium	Ground guide will not be on the same railcar on which a vehicle is being moved	E-IV/Low
	Falling between railcars	Walking backwards	C	III	Medium	Ground guides will be instructed not to walk backwards on railcars	E-IV/Low
Vehicle movement	Vehicle driving on railcar	Lack of communication (hand signal)	C	III	Medium	Ensure drivers and ground guides are proficient in the use of hand signals Proper driver selection	E-IV/Low
		Improper driving skills	D	III	Low		
Ground guide, driver, personnel getting on/off railcar	Jumping onto gravel surface	Not using railcar steps	C	III	Medium	Only railcar steps will be used/prohibit jumping from railcar	E-IV/Low
Removing chock blocks	Hand/arm injuries	Vehicle is moving	C	III	Medium	Ensure vehicle engine is shut off/driver dismounted prior to operation.	E-IV/Low
Removing Tie-down equipment	Hand/head injuries	Lack of PPC&E (gloves/ hard hat)	C	III	Medium	Provide PPC&E an control usage	E-IVLow
Moving of equipment by crane	Possible injuries by falling parts or equipment	Personnel standing underneath moving or lifted equipment	C	III	Low	Use of guiding ropes, personnel are not admitted within the range of crane operation, especially not under lifted equipment	E-IV/Low



Rail/Line Haul Operations



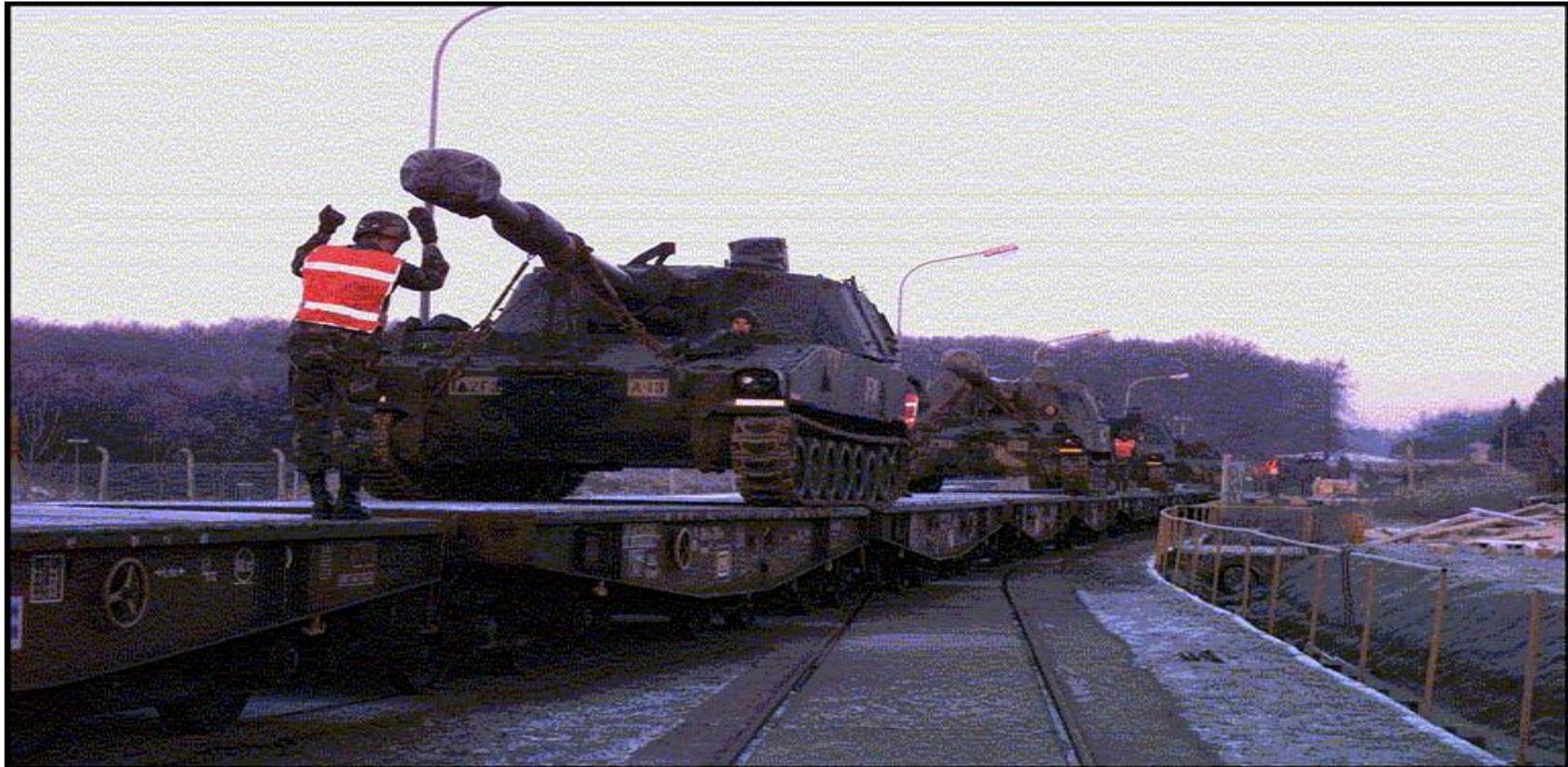


Medical Support

- **Emergency medical support on station at all times**
- **91W, Combat Lifesaver**
- **Dedicated ambulance or evacuation vehicle**
- **Strip map to medical treatment facility**
- **Identify location during briefing**
- **Dedicated communication**



RAIL/LINE HAUL OPERATIONS





Safety Support

- **Safety briefing before operations given by Rail OIC**
- **Identify safety officer/NCO**
- **Dedicated safety officer/NCO on each spur**
- **Safety officers will not have other duties**
- **Safety officers will stop unsafe acts**
- **Senior safety staff oversight**
- **Safety input from ITO/DTO**



Rail/Line Haul Operations





Ground Guides

- 3 ground guides per vehicle
- 1 on the rail car in front of the rail car the vehicle is traveling on
- 1 on each side of the rail car on the ground
- Ground guides on the ground will be adjacent and to the front of the vehicle far enough way in the event of a rollover
- Ground guides will never be on the same car as the vehicle
- Avoid being between 2 vehicles during chain down
- Ground guides must maintain situational awareness continuously
- Only the front ground guide will control movement
- Driver will continuously maintain eye contact with ground guide
- No running or walking backwards on a rail car at any time



Rail/Line Haul Operations





Maintenance/Recovery

- Vehicles that won't start
- Vehicles that have flat tires or thrown track
- Recovery capability, M88, forklifts, winch
- Maintenance contact team
- Repair most any problem to get vehicle off track
- If its something small, it can be lifted off



Rail/Line Haul Operations





Rail/Line Haul Operations

- Ensure load teams have appropriate PPE .
- Kevlar helmet, gloves, eye protection
- Ensure load teams are properly trained.
- Provide instruction in proper use of tools. Inspect tools, blocking, lashing, spanners, and tow bars for serviceability before use.
- Require all tank turrets and howitzer tubes to be in travel lock.
- Prohibit sleeping on, in or around rail cars.
- Road guard vests at night for ground guides/safety personnel
- Warming tent/shade/hot/cold drinks



Rail/Line Haul Operations





Spanners

- **Poorly designed piece of equipment**
- **Must be placed with kick plate in the direction of travel**
- **Must not move during movement of vehicle**
- **Do not stop vehicles on spanners**
- **Do not take running start to go over spanners**



Rail/Line Haul Operations





Standards of Conduct

- No horseplay
- Personnel will stay clear of rail cars while they are docking/moving
- Designated smoke and break areas
- No smoking in rail operational area
- No POVs, parked in designated areas
- Do not move between or underneath rail cars
- Drivers will not move vehicles except under the control of ground guide
- All vehicles 2.5T and larger will have ground guide in rail area
- Only driver in vehicle
- Driver will stop when he loses contact with ground guide
- If rail cars start moving, cease operations
- Cease operations during lightning/electrical storms
- Seatbelt on, driver in vehicle if engine is running
- Equipment tied down



Rail/Line Haul Operations





Special Considerations

- Only qualified/licensed drivers
- Keep all personnel away from power lines
- Remove or tie down antennas
- Antennas must have caps
- No standing on top of vehicles, 3 points of contact
- No jumping off of rail cars or vehicles
- Chain down process
- Emergency operations/evacuation plan
- Rest plan for extended operations



QUESTIONS?