

Company Name:	Equipment/Job Identification: Transportation and Storage of Explosives Type of Equipment: Make: Model: Year: Use:
Mine Name:	
Date of Analysis	

Pre-Assessment

- **List pre-requisites here**

- ATF Certification
- Blaster's License
- Part 46 Training
- Personal Protective Equipment
- Proper Lifting Requirements
- Haz Com Training (Hazardous Chemicals)
- Part 62 Training (Noise)
- Health
 - Silica
 - Heat Stress
- Traffic patterns and haulage
- Fall Protection (donning harness, etc.)

Duty 1: Receiving Explosives from Supplier

Learner will demonstrate the proper procedures for the handling and storage of explosives once received from supplier. Learner will explain the job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The proper procedures for the handling and storage of explosives includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Receive explosives (ATF Certified Person must receive)	ATF Requirement must be met			
Check order/manifest	Could result in criminal charges			
• Count each explosive received	Could result in criminal charges			
• Record	Could result in criminal charges			
• Sign invoice	Could result in criminal charges			
• Make copies of manifest/invoice and maintain copy in each magazine/anfo van and at office (usually 4 copies)	Could result in criminal charges			
• Add to existing inventory	Could result in criminal charges			Each magazine has own inventory book
Receive Detonators				
• Unload				
• Count	Could result in criminal charges			
• Store in magazine				Stack no more than 3 high
• Add to inventory for detonator magazine	Could result in criminal charges			
• Rotate by date				Best Practice
• Recheck inventory	Could result in criminal charges			
• Daily magazine check	Could result in criminal charges			
Receive Boosters				
• Unload				
• Count	Could result in criminal charges			
• Store in magazine	Could result in criminal charges			Do not stack more than 4 high
• Add to inventory for detonator magazine	Could result in criminal charges			
• Rotate by date				Best Practice
• Recheck inventory	Could result in criminal charges			

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
<ul style="list-style-type: none"> Conduct daily magazine check 	Could result in criminal charges			Initial calendar inside magazine
Anfo				Van serves a portable magazine for storing Anfo
<ul style="list-style-type: none"> Transport bags from previous van to new delivery van 				Discuss proper lifting requirements Fifo method (first-in, first-out Stacked 6 high, 7 wide
<ul style="list-style-type: none"> Ensure van is double-locked and grounded 	Lock serves as a theft deterrent Grounding helps to ensure stray currents are discharged			
<ul style="list-style-type: none"> Add to inventory for anfo van 	Could result in criminal charges			
<ul style="list-style-type: none"> Recheck inventory 	Could result in criminal charges			
<ul style="list-style-type: none"> Daily magazine check 	Could result in criminal charges			
Check ATF notification (phone number) posted at gate entrance				Best Practice
Ensure no signs are posted in direct path of stored materials	Deters the direct hit by gun fire			
Storage area				
<ul style="list-style-type: none"> Check 50' surrounding magazines - must be clear of debris, dry grass, ignition sources, etc. 	Prevent fire hazards			
<ul style="list-style-type: none"> Check that materials are stored at least 4" away from the wall of magazines 	Provides ventilation around stored explosives			Condensation could affect explosives

Duty 2: Transport to blasting area

Learner will demonstrate how to safely transport explosives to the blasting area. Learner will explain the job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The proper procedures for safely transporting explosives to the blasting area include the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Transport detonators and boosters				No smoking materials or open flames Explosives must be manually unloaded – no mechanization No riders allowed in vehicle when transporting explosives
<ul style="list-style-type: none"> Truck bed lined with non-sparking material 	Could result in an unplanned detonation of explosives			
<ul style="list-style-type: none"> Separate detonators and booster by 4" of hardwood or laminate if carried at same time 	Could result in an unplanned detonation of explosives			
<ul style="list-style-type: none"> Check for or place signage 	Warn person of the presence of explosives			Signs shall be visible from all angles
Transport Anfo				
<ul style="list-style-type: none"> Use tractor to transport anfo van to blasting area 	This tractor meets ATF requirements			Use designated tractor only Driver must pass an ATF back ground check
<ul style="list-style-type: none"> Remove lock from van pin 				
<ul style="list-style-type: none"> Hook up tractor 				
<ul style="list-style-type: none"> Un-chock van 				Usually use rocks for chocks
Disconnect ground				
Raise landing gear				
Record magazine activities	Could result in criminal charges			
<ul style="list-style-type: none"> Note explosives removed 	Could result in criminal charges			
<ul style="list-style-type: none"> Note explosives used 	Could result in criminal charges			
<ul style="list-style-type: none"> Note explosives returned 	Could result in criminal charges			
<ul style="list-style-type: none"> Note total inventory 	Could result in criminal charges			

Duty 3: Truck Pre-shift Inspection

Learner will demonstrate how to conduct a safe and thorough pre-operational inspection of the truck used to transport explosives. Learner will also explain the job steps, why they are conducted, any associated risk, and how to implement appropriate controls. A thorough pre-operational inspection of the truck includes the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
Conduct a daily pre-shift examination				Applies to any vehicle hauling explosives. Use normal checklist for truck inspection
Check signs				
Inspect extinguishers (2)				

Duty 4: Selecting truck route

Learner will demonstrate the proper procedures for selecting a truck route for transporting explosives. Learner will explain the job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The proper procedures for selecting a truck route include the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/Notes/Comments
		1=Important 2=Very Important 3=Critical		
Travel back roads when possible	Limits exposure to persons not involved in the explosive process			
Avoid transporting explosives through traffic/production areas when possible	Limits exposure to persons not involved in the explosive process			

Duty 5: Select parking area

Learner will demonstrate how to select a parking area. Learner will explain the job steps, why they are conducted, any associated risk, and how to implement appropriate controls. The procedures for selecting a parking area include the following job steps:

Job Steps	Importance Narrative (Consider Safety, Production, Maintenance)	Importance Ranking	Satisfactory or Needs Work	Procedures/Risk Resolution/ Notes/Comments
		1=Important 2=Very Important 3=Critical		
Park near blast holes				
Park trucks at least 50' apart	To prevent unplanned detonation of explosives			
Set park brake				
Chock trucks or turn toward berm				
Shut engine off				