

NATIONAL OCCUPATIONAL STANDARD



HOIST OPERATOR



MINING INDUSTRY
HUMAN RESOURCES COUNCIL

INTRODUCTION

National Occupational Standards (NOS) establish clear, objective benchmarks of the skills and knowledge required for workers to perform in a particular occupation. Each NOS reflects a complete list of competencies required to perform a specific job.

The Mining Industry Human Resources Council (MiHR) developed and maintains a suite of seven NOS for the Canadian mining industry. The development and maintenance of each NOS is led by a National Occupational Standard Development Committee (NOSDC) made up of

subject-matter experts from various groups across Canada, including industry, labour and education. NOS development committees undertake a regular review (every three to five years) of the NOS to ensure they remain current and relevant to industry.

For more information on the NOS or our Canadian Mining Skills Development Strategy, please visit mihhr.ca/standards-training-recognition or email standards@mihhr.ca.

UNDERSTANDING THE NOS

Each National Occupational Standard reflects a complete list of competencies required to perform a specific job. All areas of competence and their tasks for the entire suite of seven NOS have been pulled together in MiHR's Master Competency List. The Master Competency List allows you to understand those competencies and tasks that are common across multiple occupations versus the specialties that set them apart.

Competency areas that are common across multiple occupations within the mining industry are referred to as common competencies. They are the foundational competencies and skills required to work in the mining industry, and include tasks such as working safely, and knowledge of workplace policies and legislation.

Each NOS builds on the common competencies by including additional competencies that are unique to each occupation. Both types of

competencies are referenced in the NOS document with multiple tasks and sub-tasks to provide a deeper context and understanding of each area of competency. Each task is further defined by its general frequency. References and examples of abilities and knowledge are included to ensure adequate interpretation of each sub-task.

MiHR's Master Competency List reflects all areas of competency for MiHR's suite of NOS and each area of competency and its related tasks keep the same identification number regardless of the NOS in which they are included.

Should an area of competency or task not be included in an NOS, the related details for that area of competency or task will not be present in the NOS. In its place, there will be an indication that the task is not applicable to this NOS.

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Area of Competency 1: Policies and Legislation



TASK 1.1

COMPLY WITH COMPANY POLICIES AND PROCEDURES

✓ SUB-TASK

1. Understand, sign off and follow company policies and procedures.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Includes Standard Operating Procedures (SOP)
- Includes policies on the use of personal electronic devices, wearing jewellery, contact lenses, long hair, etc.
- Includes procedures on operation of equipment, use and handling of chemicals, care and maintenance of sumps and ventilation.
- Understand and apply human resource policies, procedures and collective bargaining agreements.
- Comply with drug and alcohol policy.
- Comply with updates and revisions to policies and procedures.



TASK 1.2

UNDERSTAND AND COMPLY WITH APPLICABLE WORKPLACE LEGISLATION AND REGULATIONS

✓ SUB-TASK

1. Understand and follow work processes mandated by legislation and regulations.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Includes Mine Health and Safety Act and Regulations, Workers' Compensation Regulations, Labour Standards, Hoisting Regulations, Environmental legislation, Explosive Regulations.
- Comply with updates and revisions to legislation and regulations.

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Area of Competency 2: Work Safely

**TASK 2.1****SELECT, USE AND MAINTAIN PERSONAL PROTECTIVE EQUIPMENT (PPE)****✓ SUB-TASKS**

1. Recognize situations that require use of PPE.
2. Select, inspect, use, maintain and store appropriate PPE for:
 - Head protection
 - Eye protection
 - Foot protection
 - Hand protection
 - Hearing protection
 - Respiratory protection
 - High-visibility clothing and apparel
 - Specific conditions (fall protection, welding, radiation, handling chemicals, energized work, roasting)
3. Wear clothing appropriate for work conditions and tasks.
4. Follow site, provincial and territorial standards.
 - Practice personal hygiene.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Select appropriate PPE.
 - Wear PPE approved by recognized authority (Canadian Standards Association (CSA), American National Standards Institute (ANSI), Underwriters Laboratories (UL)).
 - Identify limitations of PPE.
 - Workers may not be aware of approved PPE and/or the PPE may be assigned by the company.
 - Contractors can be required to select their own PPE.
 - Ensure PPE is appropriate for the assigned work task.
- Inspect PPE.
 - Inspect PPE for wear, damage and defects before using.
 - Replace worn, damaged or defective PPE.
 - Report defects to appropriate personnel.
- Use PPE.
 - Ensure PPE fits correctly and is adjusted properly.
 - Follow manufacturer's instructions and specifications for proper use and maintenance of PPE.
 - Maintain and store PPE.
- Wear clothing appropriate for work conditions and tasks.
 - Do not wear loose or torn clothing.
 - Ensure all clothing adequately covers body to protect against hazards, contaminants, work and weather elements.
 - Dispose of contaminated clothing in compliance with company policies and legislation.
 - Use appropriate eye protection in place of contact lenses.
 - Wear high-visibility PPE as required.
- Practice personal hygiene.
 - Keep work clothes separate from street clothes if required.
 - Change and clean work clothes regularly.



TASK 2.2

PRACTICE AND MAINTAIN GOOD HOUSEKEEPING

✓ SUB-TASKS

1. Maintain clean work area.
2. Use appropriate equipment for task.
3. Take corrective action as required.
4. Appropriately dispose of waste materials safely.
5. Organize and classify materials, supplies and equipment.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Maintain clean work area.
 - Ensure priority areas are clear first as identified in policies and procedures.
 - Keep work areas free from clutter.
 - Keep work areas free of ice, grease and mud.
- Use appropriate equipment for task (e.g., broom, scraper, water hose, vacuum, blow pipe or air lance, mobile equipment).
 - Clean, maintain and return tools and equipment to storage immediately after use.
 - Report, tag out and/or remove defective equipment.
- Take corrective action as required.
 - Clean all spills and/or leaks.
 - Install signs and barricades as required.
 - Ensure work area is free of obstructions.
- Dispose of waste materials.
 - Follow environmental plan.
- Organize and classify materials.
 - Use shadow boards for storing equipment.
 - Use tool cribs, bins and dedicated areas for storing similar materials.



TASK 2.3

IDENTIFY AND RESPOND TO WORKPLACE HAZARDS

✓ SUB-TASKS

1. Recognize hazardous or potentially hazardous conditions.
2. Observe safety precautions in hazardous conditions.
3. Take corrective action.
 - If hazardous condition cannot be immediately corrected: put up signs, barricade area or post guard, lock out and tag and de-energize.
4. Record and report all hazardous or potentially hazardous conditions to appropriate personnel.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Recognize hazardous or potentially hazardous conditions.
 - Use risk assessment tools as per site policies and procedures.
 - Follow water management plans.
 - Types of hazardous conditions may include: dangerous weather and environmental conditions, heat and cold stress, wildlife, poor ground conditions (loose rock, swamp, ice), overhead hazards (trees, power lines, screen, vent tubing), underground hazards (gas lines, power lines), open holes (sumps, chutes, shafts, trapdoors, hoist pits, ladder ways), protruding objects (nails, anchors), tripping or slipping hazards (hoses, rocks, muck, ice, lichen, spills), moving equipment (trucks, loaders, forklifts, aircraft), explosives (dangerous gases, e.g., oxy-acetylene, methane, propane, H₂S, HCN, chlorine), inadequate ventilation (ripped or torn vent tubing, non-operating fans), lack of or inadequate safety guards on equipment with moving or rotating parts, energy sources, reagents, engulfment, potential chemical reactions, dust, confined space, flocculants.
- Take corrective action.
 - Isolate hazard or potential hazard.
 - Guard all identified hazards using barricades and signs.
 - Post guard, if required.
 - Stop work if there are unsafe conditions.
 - Complete job hazard analysis.
 - Evacuate area if necessary.
- If hazardous condition cannot be immediately corrected.
 - Put up signs, barricade area or post guard.
 - Ensure safety of self and others.
 - Lock out, tag and de-energize as per site policies and procedures.

TASK 2.6 **WORK AROUND MOBILE EQUIPMENT**

SUB-TASKS

1. Work in authorized locations only.
2. Communicate with equipment operator.
3. Obey rules of conduct.
4. Avoid hazardous conditions.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Communicate with equipment operator.
 - Communicate with equipment operator/skip tender/cage tender/dispatch and verify acknowledgement.
 - Be aware of locations of communication equipment.
 - Use hand signals.
- Obey rules of conduct.
 - Maintain safe working distance and loads in tow.
 - Obey vehicle warning signals and alarms.
 - Yield the right of way.
- Avoid hazardous conditions.
 - Use designated travel ways around equipment.
 - Stay clear of suspended loads.
 - Avoid blind spots, remain visible.
 - Do not cross guards or barricades.
 - Recognize and utilize safety bays.
 - Be aware of trailing cables.
 - Obey signage and established right of way policies.

TASK 2.7 **WORK AROUND STATIONARY EQUIPMENT**

SUB-TASKS

1. Work in authorized locations only.
2. Communicate with equipment operator.
3. Obey rules of conduct.
4. Avoid hazardous conditions.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Work in authorized locations only.
 - Including but not limited to: drill, pumps, pneumatic equipment, high pressure hoses and generators, ensuring guards are in place.
 - Work from safe location.
- Obey rules of conduct.
 - Maintain safe working distance.
 - Observe alarms and warning systems.
 - Communicate with co-workers.
- Avoid hazardous conditions.

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Area of Competency 3: Signs, Barricades, Traffic, Plans and Drawings



TASK 3.1

RECOGNIZE AND COMPLY WITH SIGNAGE, BARRICADES, AUDIBLE ALARMS AND EQUIPMENT LIGHT INDICATORS

✓ SUB-TASKS

1. Recognize and comply with signage.
2. Recognize and comply with barricades.
3. Recognize equipment and system audible and visual alarm signals.
4. Recognize equipment and system indicator lights.
5. Do not alter or remove warning signs, lights, audible alarms or barricades, without proper authorization.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Recognize and comply with signage.
 - Includes informational signs and tags, cautionary and danger signs (e.g., electrical hazard), directional signs, labels (e.g., Workplace Hazardous Information System (WHMIS)).
- Recognize and comply with barricades.
 - Includes cautionary tape, danger/do not enter tape, physical barriers (i.e., berms, concrete stoppers, steel cable) and protective barriers (i.e., snow fence, environmental).
- Recognize equipment and system audible and visual alarm signals.
 - Includes bells, buzzers, horns, whistles, sirens, shaft signals.
 - Includes ready lights, fault indicators, emergency indicators.
- Recognize equipment and system indicator lights.
 - Includes shaft warning lights, open hole lights, transportation of explosives, strobe light, equipment audible alarms, blast warning signs and lights, gaseous alarms, equipment start up, mixing alarms, amperes meter, pressure gauges, fault finder alarms.



TASK 3.5

UNDERSTAND AND USE INFORMATION PRESENTED ON PLANS AND DRAWINGS

✓ SUB-TASKS

1. Recognize symbols, abbreviations, colour coding.
2. Interpret drawings.
3. Recognize and comply with Emergency Response Drawings.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Recognize symbols, abbreviations, colour coding.
 - Includes direction, scale, elevation, depth.
- Interpret drawings.
 - Includes blueprints, P&ID (piping and instrumentation diagram), drill layout patterns, evacuation routes, shaft compartments, services (e.g., air, water, ventilation).

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Area of Competency 4: Fire Safety

TASK 4.1 **BE PREPARED TO RESPOND TO FIRES**

SUB-TASKS

1. Classify fires by hazard.
2. Know location of fire extinguishers and fire hoses.
3. Demonstrate knowledge of components and use of fire extinguishers.
4. Inspect fire extinguishers and keep up to date.
5. Report all discharged or defective fire extinguishers to appropriate personnel.
6. Demonstrate knowledge of equipment fire suppression system.
7. Know location of emergency evacuation/in-evacuation/muster points.
8. Knowledge of location of fire suppression activation points.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Classify fires by hazard.
 - Rubber, compressor rooms, electrical, grease, oil, equipment, chemical, concentrate.
- Demonstrate knowledge of components and use of fire extinguishers.
 - Identify classes of fires: A - paper, wood, trash; B - flammable liquids, lubricants, paints; C - electrical; D - combustible metals.
 - Recognize potential for explosion (e.g., equipment fire, tire fire).
 - Identify standard types, sizes and applications of fire extinguishers.
- Identify names and functions of principal components of fire extinguishers.
- Identify ranges and limitations of fire extinguishers.
- Understand safety precautions for fire extinguishers, including CO2 hazards due to misuse.
- Demonstrate knowledge of equipment fire suppression system.
 - Activate fire suppression system.
 - Ability to dismount safely after activation if needed.

TASK 4.2 **EXTINGUISH MINOR FIRES*, IF SAFE TO DO SO**

SUB-TASKS

1. Report all fires and discharged or defective fire extinguishers to appropriate personnel.
2. Know location of emergency evacuation/in-evacuation/muster points.
3. Select and use appropriate fire extinguisher and/or suppression equipment.
4. Use proper fire extinguishing techniques.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Select and use appropriate fire extinguisher and/or suppression equipment.
 - 10- or 20-pound extinguisher.
 - Fire suppression system.
 - Know manual bypass of suppression system.
- Use proper fire extinguishing techniques.
 - P.A.S.S. (Pull, Aim, Squeeze and Sweep).
 - Follow operational instructions.

**Excluding battery fires, report to appropriate personnel.*

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Area of Competency 5: Emergency Situations



TASK 5.1

PREPARE FOR EMERGENCY SITUATIONS AND CONDITIONS

✓ SUB-TASKS

1. Know the locations of emergency evacuation/in-evacuation/muster points.
2. Know the locations of fire extinguishers, hoses, equipment.
3. Know the location of first aid kits, stations and attendants.
4. Know the location of and how to use eye wash stations, emergency showers, Safety Data Sheets (SDS), respiratory protection (e.g., self-contained breathing apparatus (SCBA), self-rescuer), gas detectors.
5. Know the location of emergency tents, escape way locations, routes and markings, refuge stations.
6. Know the location of equipment emergency stop devices.
7. Know the location of spill kits.
8. Know the emergency procedures.
9. Know emergency reporting protocols.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Know the location of equipment emergency stop devices.
 - E.g., pull cord on conveyors, fuel shut offs, positive air shut offs, AED equipment.
- Know the emergency procedures.
 - E.g., alarm procedure, communication protocol and emergency response.
 - Emergency contact number, appropriate radio channel to report emergency.



TASK 5.2

COMPLY WITH WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEMS (WHMIS)

✓ SUB-TASKS

1. Identify hazard symbol classifications.
2. Access, understand and follow SDS instructions.
3. Maintain WHMIS certification.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Identify hazard symbol classifications.
 - Hazard symbols include: Class A: compressed gas; Class B: flammable and combustible material; Class C: oxidizing material; Class D: poisonous and infectious material; Class E: corrosive material; Class F: dangerously reactive materials.
- Access, understand and follow SDS instructions.
 - Knowledge of location of further instructions and key contact personnel.



TASK 5.3

PARTICIPATE IN SAFETY PROGRAMS

✓ SUB-TASKS

1. Attend and participate in safety meetings.
2. Follow company safety initiatives.
3. Management of change.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Attend and participate in safety meetings.
 - Identify types of safety meetings (site orientation, work area orientation, toolbox meeting, joint health and safety committee meeting).
- Follow company safety initiatives.
 - Safety initiatives include (zero harm, five-point safety, behavioural-based safety).
 - Implement safety practices such as Internal Responsibility System (IRS), Job Task Observations.
 - Conduct risk assessments.
- Management of change.
 - Understand and participate in development safety protocols and documents including but not limited to JHA, JHC.



TASK 5.4

UNDERSTAND, RESPOND TO AND REPORT EMERGENCIES

✓ SUB-TASKS

1. Understand and properly respond to all emergencies.
2. Report all incidents/emergencies, as per company policies.
3. Secure incident/emergency site.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Respond to all emergencies.
 - E.g., fire, medical, chemical, equipment, environmental (in-rush of water, major falls of ground, rush of muck), inadvertent stops, stray bells, dogging, high water shaft bottom, power failure.
 - Stay calm and assess the situation.
 - Interpret alarms and other indicators to determine type of emergency and need for evacuation.
 - Activate emergency protocol, release stench gas (if applicable).
 - Follow emergency response plan.
 - Evacuate if necessary.
 - Follow safest escape route.
 - If unable to reach refuge station, barricade self in safe location, ensuring supply of air.
 - Await further instructions.
 - Follow instructions of designated emergency personnel.
- Report and document all emergencies and incidents.
 - Complete all required reports and forms.
 - Report emergency or incident to appropriate personnel according to policies and procedures.
- Secure incident/emergency site.
 - Secure and freeze the scene.
 - Warn others.
 - Activate alarms.
 - Follow communication protocols.
 - Take corrective action if appropriate (e.g., emergency shutdown procedure).

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Area of Competency 6: Energy Sources



TASK 6.2

WORK AROUND ENERGY SOURCES

✓ SUB-TASKS

1. Understand and recognize energy sources, stored and potential.
 2. Recognize when equipment is locked out and tagged and de-energized.
-

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Recognize energy sources, stored and potential.
 - Mechanical, hydraulic, kinetic, potential, pneumatic, electrical, thermal, chemical, nuclear, overhead and underground services.

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Area of Competency 8: Communicate

TASK 8.1 **LISTEN ACTIVELY**

SUB-TASKS

1. Pay attention to person giving the message.
2. Ask person to repeat information if not understood completely.
3. Confirm information by repeating or rephrasing.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Pay attention to person giving the message.
 - Reduce surrounding noises by stopping equipment and tools or moving away from noise.
 - Allow speaker to finish message before responding.

TASK 8.2 **SPEAK CLEARLY AND CONCISELY**

SUB-TASKS

1. Give clear and concise directions.
2. Use common language and terminology of work site.
3. Confirm understanding.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Give clear and concise directions.
 - Organize your thoughts before speaking.
 - Use appropriate volume and tone of voice.
 - Use appropriate body language.
 - Use sketches as required to assist in understanding.
- Confirm understanding.
 - Ask open-ended questions to make sure directions were understood.

TASK 8.3 **USE COMMUNICATION DEVICES**

SUB-TASKS

1. Familiarize self with equipment.
2. Know how to use equipment.
3. Conduct pre-operational check.
4. Use proper communication etiquette.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Familiarize self with equipment.
 - Includes: two-way radios, telephones, bells, pager phones, public address systems, CB radios, dispatch system (e.g., Modular, WENCO).
 - Use only authorized communication systems.
- Conduct pre-operational check.
 - For two-way radios and pager phones (prepare radio, ensure battery is fully charged, test radio).
 - Use proper communication etiquette.
- Use appropriate radio channels, language and codes.
 - Avoid unnecessary chatter.
 - Maintain radio silence as appropriate.
 - Reduce background noise, such as satellite radio.
 - Follow control room protocol.

TASK 8.4 **CONVEY MESSAGE USING SIGNALS**

SUB-TASKS

1. Ensure visual contact.
2. Use and understand appropriate signals for the task.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Ensure visual contact.
 - Take signals from one person only.
 - Confirm signals.
- Use appropriate signals for the job.
 - Includes visual and audible (e.g., hand signals, light signals, horns, bells and whistles).
 - Includes signals for: lifting devices (cranes, cage, skip), tramming, conveyance, aircraft and helicopters.

TASK 8.5 **USE WORKPLACE TECHNOLOGIES**

SUB-TASKS

1. Use digital-based training modules.
2. Read and understand machine parameters.
3. Receive and follow dispatch instructions.
4. Use digital input services.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Use digital-based training modules.
 - Interactive digital program, simulators.
 - Enter and track training data.
- Read and understand machine parameters.
 - Electronic warning cluster, warning lights and audible alarms, computer screens.
 - Includes heavy equipment status monitoring screens, in-plant diagrams, on-line references (SDS, SOPs).
- Receive and follow dispatch instructions.
 - Dispatch screen (e.g., Modular, WENCO, Mine Star).
- Use digital input services.
 - Electronic forms, databases, Internet, e-mail.
 - Control and maintenance of Standard Operating Targets and Standard Operating Procedures.

TASK 8.6 **COMPLETE WORKPLACE DOCUMENTATION**

SUB-TASKS

1. Use appropriate form.
2. Write legibly.
3. Be specific.
4. Use correct terminology.
5. Submit or file immediately, as required.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Use appropriate form.
 - Includes inspection checklists, logbooks, cross shift notes, shift reports, production reports, near miss reports, incident reports, safety system cards, time cards, training status reports.
- Be specific and timely.
 - Include accurate information, appropriate details and complete report in full and submit in a timely manner.



TASK 8.7

COACH OR MENTOR OTHER COWORKERS/PEERS

✓ SUB-TASKS

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Demonstrate proper technique. 2. Check for understanding. 3. Observe coworkers/peers. | <ol style="list-style-type: none"> 4. Provide assistance and appropriate feedback. 5. Continue to observe/follow up. 6. Report to supervisors, if applicable. |
|--|--|

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- No additional references or examples.

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Area of Competency 9: Be Professional

TASK 9.1 **WORK IN A TEAM ENVIRONMENT**

SUB-TASKS

1. Respect team members.
2. Be professional.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Respect team members.
 - Accommodate each other's communication needs (language differences).
 - Cooperate with each other (need to be able to trust one another and rely upon each other).
 - Be tolerant of others.
 - Be willing to learn from others; be willing to mentor others.
- Be professional.
 - Understand requirements for the job.
 - Show up to work on time.
 - Demonstrate a strong work ethic.
 - Understand chain of command.
 - Follow, model and promote safety and legislative requirements.

TASK 9.2 **WORK IN A CULTURALLY DIVERSE ENVIRONMENT**

SUB-TASKS

1. Respect practices of co-workers and local populations.
2. Respect social and cultural differences.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Respect practices of co-workers and local populations.
 - Be open-minded.
- Respect social differences.
 - Show interest in others (ask about work experience, family).
 - Be a role model for others.

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Area of Competency 10: Equipment Knowledge



TASK 10.1

DEMONSTRATE EQUIPMENT KNOWLEDGE

✓ SUB-TASKS

1. Trained, qualified and authorized for proper use and operation of equipment.
2. Conduct pre-operational checks.
3. Properly mount and dismount equipment.
4. Start equipment.
5. Conduct operational checks.
6. Drive equipment to worksite, as required.
7. Shut down equipment (normal and emergency situations).
8. Conduct post-operational check.
9. Knowledge of refueling procedure.
10. Toggle controls to release stored energy.
11. Use appropriate ventilation supplies for operating.

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Trained and authorized for proper use and operation of equipment.
 - Follow manufacturer's recommendations and specifications.
 - Follow safe operating procedures.
 - Know capabilities and limitations of equipment.
- Conduct pre-operational checks.
 - Inspect equipment for defects, hazards and potential hazards.
 - Identify and assess severity of equipment defects.
 - Take corrective action to restore normal equipment operation.
 - Record defect(s) and corrective action taken in logbook.
 - Damage to equipment.
 - Steering.
 - Test brakes, as per manufacturer's specifications.
 - Tires and undercarriage pre op check.
 - Know and understand fire suppression systems.
 - Bolts, keepers and holders.
 - Oil spills and/or excessive grease.
 - Pinion and ball gears.
 - Rope windows.
- Inspect layout of hoist.
 - Conveyance inspections.
 - Test all forms of communication – radio, bell phones, pager phones.
 - Mechanical, electrical and HMI (Human-Machine Interface).
- Properly mount and dismount equipment.
- Ensure equipment is shut down before exiting.
 - Use three-point contact.
 - Use grab handles and handrails.
- Start equipment.
 - Neutralize controls (transmission, control levers).
 - Activate power supply (master switch).
 - Use warning signal before start-up.
 - Activate ignition.
- Conduct operational checks.
 - Read and countersign logbook.
 - Fill out pre-operational check sheet.
 - Check gauges, consoles and alert indicators.
 - Ensure air and oil are at required levels.
 - Listen for unusual noises (engine, power train).
 - Check brakes and steering are functional.
 - Check warning systems and lights are operating.
- Hoist testing (trial run, brake tests, conveyance checks, cage and skip checks).
 - Test hoist limits of travel – over wind, under wind, track limit.
- Drive equipment to worksite, as required.
 - Wear seat belts.
 - Use appropriate warning lights and signals.
 - Test service and emergency brakes.
 - Follow designated travel routes.
 - Observe speed limit, traffic signs, traffic patterns and rights-of-way.
 - Adjust speed according to road and weather conditions.
 - Listen for unusual noises (engine, power train).
- Operate equipment.
 - Wear seatbelts.
 - Use appropriate warning lights and signals.
 - Test service and emergency brakes.
 - Follow designate travel routes.
 - Observe speed limit, traffic signs, traffic patterns and rights-of-way.
 - Operate machine controls smoothly.
 - Adjust speed according to road and weather conditions.
 - Listen for unusual noises (engine, power train).
 - To maximize efficiency and ensure safety of other personnel and equipment.
 - Assess material and site conditions to determine appropriate operating techniques and speeds.
 - Monitor ammeter.
- Shut down equipment (normal situations)
 - Park in designated areas.
 - Set parking/emergency brake.
 - Ground all equipment implements.
 - Shut off ignition and/or fuel supply.
 - Toggle controls to release stored energy.
 - Shut off master switch.
 - Set wheel chocks.
 - Lock out and tag as required.
- Shut down equipment (emergency situations).
 - Recognize and respond to alarms.
 - Shut down as prescribed for type of hazard.
 - Set off fire suppression system, as required.
 - Report incident to appropriate personnel.
- Conduct post-operational check.
 - Fill out logbook.

TASK 10.2 **WORKING WITH MOBILE EQUIPMENT**

SUB-TASKS

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Use appropriate personal protective equipment. 2. Be cautious around moving parts of equipment. 3. Identify potential pedestrian, traffic interaction, subsurface and overhead utilities. | <ol style="list-style-type: none"> 4. Avoid hazardous conditions. 5. Demonstrate knowledge of working in vicinity of explosives. 6. Demonstrate knowledge of working in close quarters and around equipment. |
|--|---|

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- | | |
|--|--|
| <ul style="list-style-type: none"> • Be cautious around moving parts of equipment. <ul style="list-style-type: none"> - Avoid pinch points. - Ensure appropriate guards are in place. - Stay clear of moving pulleys and belts. | <ul style="list-style-type: none"> • Avoid hazardous conditions. <ul style="list-style-type: none"> - Identify blind spots. - Use designated travel ways. - Check for power, telephone and cable lines, guy wires and fences, low clearance areas and stationary equipment. - Call before you dig. - Avoid debris resulting from work or movement of equipment. |
|--|--|

TASK 10.3 **WORK WITH STATIONARY EQUIPMENT**

SUB-TASKS

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Use appropriate personal protective equipment. 2. Avoid hazardous conditions. | <ol style="list-style-type: none"> 3. Demonstrate knowledge of working in close quarters and around equipment. |
|---|---|

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- | | |
|--|---|
| <ul style="list-style-type: none"> • Be cautious around moving parts of equipment. <ul style="list-style-type: none"> - Avoid pinch points. - Ensure appropriate guards are in place. - Stay clear of moving pulleys and belts. | <ul style="list-style-type: none"> • Avoid hazardous conditions. <ul style="list-style-type: none"> - Identify blind spots. - Use designated travel ways. - Avoid debris resulting from work or equipment. |
|--|---|

HOIST OPERATOR

Area of Competency 34: Conduct Hoist Operations

TASK 34.1 **OPERATE HOIST**

SUB-TASK

1. Demonstrate equipment knowledge.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Equipment knowledge.
 - Knows and understands hoist, shaft layout and auxiliary equipment.
 - Testing of brakes.
- Testing of overwinds and underwinds.
- Conducting trial trips.
- Working condition of signaling apparatus.
- Working condition of safety devices.

TASK 34.2 **TRANSPORT LOADS**

SUB-TASKS

1. Perform cage operations.
2. Perform skip operations.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Perform cage operations.
 - Transport personnel.
 - Transport material, equipment and explosives.
- Perform skip operations.
 - Transport muck.
 - Operate in required mode and at required speed.
- Operate in required mode and at required speed.

TASK 34.3 **OPERATE MUCK FEEDING SYSTEMS**

SUB-TASKS

1. Select product - waste/ore.
2. Activate/deactivate system.
3. Monitor system.

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Includes conveyors, loading pockets.



TASK 34.4

OPERATE HOIST DURING MAINTENANCE WORK

✓ SUB-TASKS

- | | |
|---|----------------------------------|
| 1. Adjust hoist position, speed and settings during maintenance operations. | 2. Change conveyances. |
| | 3. Prevent inadvertent movement. |

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- | | |
|---|---|
| <ul style="list-style-type: none"> • Adjust hoist position, speed and settings during maintenance operations. <ul style="list-style-type: none"> - Rope maintenance. - Drum end cuts. - Shaft inspections. - Electromagnetic testing. - Brake maintenance. - Electrical/mechanical maintenance. | <ul style="list-style-type: none"> • Change conveyances. <ul style="list-style-type: none"> - Conveyance free fall testing. • Prevent inadvertent movement. <ul style="list-style-type: none"> - E-stop. - Inspection mode. - Lockout/tag out, if applicable. |
|---|---|



TASK 34.5

PERFORM SPECIAL HOISTING TECHNIQUES

✓ SUB-TASKS

- | | |
|-----------------------------|--------------------------------------|
| 1. Hoist personnel in skip. | 3. Conduct slinging operations. |
| 2. Chair and unchair loads. | 4. Perform shaft sinking operations. |

✓ REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- | | |
|--|--|
| <ul style="list-style-type: none"> • Hoist personnel in skip. <ul style="list-style-type: none"> - Transport personnel in skip according to regulations and policies. | <ul style="list-style-type: none"> • Perform shaft sinking operations. <ul style="list-style-type: none"> - Using buckets, crossheads, Galloway systems, winch systems. |
|--|--|