

NATIONAL OCCUPATIONAL STANDARD INDUSTRY TRAINER



INTRODUCTION

For more information on the NOS and CMCP, please visit www.miningcertification.ca.

National Occupational Standards (NOS) establish clear, objective benchmarks of the skills and knowledge required for workers to perform in a particular occupation. In other words, they list the competencies a fully experienced worker can perform on the job.

The Mining Industry Human Resources Council (MiHR) develops and maintains the suite of NOS for the Canadian mining sector. The development and maintenance of each National Occupational Standard is led by a stakeholder committee called the *National Occupational Standard Development Committee (NOSDCs)* which is made up of subject-matter experts from various groups across Canada, including industry, labour, and education. NOS development committees undertake a regular review (3-5 years) of the NOS to ensure they remain current and relevant to the Canadian mining industry.

NOS also form the basis for workforce development, driving curriculum development within educational institutes, and the alignment of company training programs by establishing learning outcomes and thereby contributing to the attraction, recruitment and retention of a skilled and safe workforce.

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.

ACKNOWLEDGEMENTS

The Mining Industry Human Resources Council would like to acknowledge the contributions of all participants, past and present, to the development of the National Occupational Standards. For a full list of past participants, please consult our website at www.miningcertification.ca.

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AREA OF COMPETENCY 1: **POLICIES AND LEGISLATION**

TASK 1.1 **COMPLY WITH COMPANY POLICIES AND PROCEDURES**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Understand 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**

Importance: Very Important
Frequency: Daily

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
- Comply with updates and revisions to legislation and regulations

AREA OF COMPETENCY 2: WORK SAFELY

TASK 2.1 **SELECT, USE, AND MAINTAIN PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Recognize situations that require use of personal protective equipment (PPE)
2. Select, inspect, use, maintain, and store appropriate PPE for:
 - head protection
 - eye protection
 - foot protection
 - hand protection
 - hearing protection
 - respiratory protection
 - specific conditions (fall protection, welding, radiation, handling chemicals, energized work, roasting)
3. Wear clothing appropriate for work conditions and tasks
4. Practice personal hygiene

- 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

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

AREA OF COMPETENCY 2: **WORK SAFELY**

TASK 2.2 **PRACTICE GOOD HOUSEKEEPING**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Maintain clean work area
2. Take corrective action as required
3. Appropriately dispose of waste materials
4. Organize and classify materials

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Maintain clean work area
 - ensure priority areas are clear first as identified in policies and procedures
 - use appropriate equipment for task (e.g. broom, scraper, water hose, vacuum, blow pipe or air lance, mobile equipment)
 - keep work areas free from clutter
 - keep work areas free of ice, grease and mud
 - clean, maintain and return tools and equipment to storage immediately after use
 - report 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

AREA OF COMPETENCY 2: **WORK SAFELY**

TASK 2.3 **IDENTIFY AND RESPOND TO WORKPLACE HAZARDS**

Importance: Very Important
Frequency: Daily

SUB-TASK:

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

- 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
 - ensure safety of self and others
 - lock out, tag and de-energize as per site policies and procedures

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Recognize hazardous or potentially hazardous conditions
 - use risk assessment tools as per site policies and procedures
 - 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

AREA OF COMPETENCY 2: **WORK SAFELY**

TASK 2.4 **MANUALLY LIFT AND CARRY MATERIALS**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Assess the load
2. Inspect pathway and destination
3. Prepare to lift the load
4. Make the lift
5. Carry the load
6. Ground the load

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Assess the load
 - estimate size, weight, centre of gravity and dimensions of load
 - determine if assistance is required
 - determine if mechanical lifting equipment is needed
- Inspect pathway and destination
- Prepare to lift the load
 - identify and remove hazards, where possible
 - identify resting places, if needed
 - ensure clear path to travel
- Make the lift
 - work within personal physical limits and limits identified in policies and procedures
 - ensure good footing and well balanced stance
 - select safe and comfortable hand holds
 - grip with full palm of hand
 - use sit down position and keep back straight
- Ground the load
 - use proper lifting technique to avoid muscular skeletal injuries
 - keep back straight and use leg muscles to lower load

TASK 2.5 is not applicable to this occupation

AREA OF COMPETENCY 2: **WORK SAFELY**

TASK 2.6 **WORK AROUND MOBILE AND STATIONARY EQUIPMENT**

Importance: Very Important
Frequency: Daily

SUB-TASK:

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

- Obey rules of conduct
 - maintain safe working distance
- Avoid hazardous conditions
 - use designated travel ways around equipment
 - avoid blind spots
 - do not cross guards or barricades
 - recognize and utilize safety bays
 - be aware of trailing cables
 - obey signage and established right of way policies

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

TASKS 2.7-2.10 are not applicable to this occupation

TASK 2.11 **RECOGNIZE AUTHORIZED AREAS**

Importance: Important
Frequency: Daily

SUB-TASK:

1. Recognize restricted areas
2. Complete necessary training for entry to restricted areas
3. Follow entry and exit protocols

- Complete necessary training for entry to restricted areas
 - training could include applicable respiratory protection training (e.g. SCBA), WHMIS, Transportation Dangerous Goods, Arc flash training
- Follow entry and exit protocols
 - follow notification process
 - utilize sign-in, sign-out sheets

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Recognize restricted areas
 - examples include: reagent room, electrical rooms, leach plant, hot work, confined spaces, explosive magazines, active lifting areas

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**

Importance: Very Important
Frequency: Daily

SUB-TASK:

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

- 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

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)

TASK 3.2 **INSTALL, REMOVE, MAINTAIN AND STORE SIGNS AND BARRICADES**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Select correct sign/barricade for specific application (e.g. unsafe walkway, open hole)
2. Follow site policy and procedure for posting/installing signs and barricades
3. Maintain and store signs and barricades in proper locations

AREA OF COMPETENCY 3: **SIGNS, BARRICADES, TRAFFIC, PLANS AND DRAWINGS**

TASK 3.3 **RECOGNIZE AND COMPLY WITH TRAFFIC SIGNS, LIGHTS AND PATTERNS**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Recognize traffic signs and lights
2. Comply with traffic rules and patterns

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Recognize traffic signs and lights
 - includes: traffic signs, blasting signs, directional signs, restricted area signs
- Comply with traffic rules and patterns
 - includes: traffic lights, restricted traffic area, right of way, right and left hand drive areas, emergency vehicle movement
 - follow site policies and procedures (e.g. call-in protocols, ramp protocols, designated parking)

TASK 3.4 **INTERPRET AND USE INFORMATION PRESENTED ON PLANS AND DRAWINGS**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Recognize symbols, abbreviations, colour coding
2. Interpret drawings

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Recognize symbols, abbreviations, colour coding
 - includes direction, scale, elevation, depth
- Interpret drawings
 - includes drill patterns, evacuation routes, shaft compartments, services (air, water, ventilation, etc.)

AREA OF COMPETENCY 4: FIRE SAFETY

TASK 4.1 BE PREPARED TO RESPOND TO FIRES

Importance: Very Important
Frequency: Daily

SUB-TASK:

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
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

Importance: Very Important
Frequency: Rarely

SUB-TASK:

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
 - 0 pound or 20 pound extinguisher
 - fire suppression system
 - know manual bypass of suppression system
- Use proper fire extinguishing techniques
 - point directly at fire, use sweeping motion
 - follow operational instructions

AREA OF COMPETENCY 4: FIRE SAFETY

TASK 4.3 FIRE PREVENTION

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Properly store combustible materials
2. Proper maintenance of equipment
3. Control sources of flame / ignition
4. Safely operate open flame equipment

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Properly store combustible materials
 - combustible wastes in covered bins or other designated containers
 - oily rags, oil, empty grease tubes, waste paper, coal, sulphide, wood and timber
- Proper maintenance of equipment
 - ensure fire suppression is intact
 - portable fire extinguisher working properly
 - clean grease build up
 - clean diesel filters
 - do not overfill fluid levels
- Control sources of flame / ignition
 - cigarettes, sparks, electrical discharges, friction, foreign material near exhaust, open flame
- Safely operate open-flame equipment
 - includes: acetylene torch, tiger torch, coil torch, diesel heater and stove
 - follow manufacturer's instructions for use (e.g. use for intended purpose only, follow lighting and extinguishing procedures, follow re-fueling procedures, adhere to maintenance procedures and inspections)
 - have appropriate class of fire extinguisher available

AREA OF COMPETENCY 5: EMERGENCY SITUATIONS

TASK 5.1 PREPARE FOR EMERGENCY SITUATIONS

Importance: Very Important
Frequency: Daily

SUB-TASK:

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 and first aid station
4. Know the location of and how to use eye wash stations, emergency showers, Material Safety Data Sheets (MSDS), 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

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
- 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)

Importance: Very Important
Frequency: Daily

SUB-TASK:

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

- Access, understand and follow MSDS instructions
 - knowledge of location of further instructions and key contact personnel

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

AREA OF COMPETENCY 5: EMERGENCY SITUATIONS

TASK 5.3 PARTICIPATE IN SAFETY PROGRAMS

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Attend safety meetings
2. Follow company safety initiatives

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Attend safety meetings
 - identify types of safety meetings (site orientation, work area orientation, tool box 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

TASK 5.4 RESPOND TO AND REPORT EMERGENCIES

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Respond to all emergencies
2. Report all incidents/emergencies
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 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
- 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)
- 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

AREA OF COMPETENCY 6: ENERGY SOURCES

TASK 6.1 WORK AROUND ENERGY SOURCES

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. 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

TASK 6.2 LOCK OUT, TAG AND DE-ENERGIZE EQUIPMENT

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Lock out equipment for repair or maintenance as per site policies and applicable regulations
2. Tag equipment for repair or maintenance as per site policies and applicable regulations
3. De-energize equipment and verify zero energy state for repair or maintenance

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Lock out equipment for repair or maintenance as per site policies and applicable regulations
 - de-energize equipment
 - ensure safety of self and others
 - ensure safety of equipment
 - identify types of locks including personal locks, enclosures, multi-locks, lock boxes
- Lock out and tag for commissioning and testing as per site policies and procedures
- Electrically powered equipment
 - isolate power supply by: disconnecting switch, shutting

- off breaker, using isolation bar/scissor locks, locking out equipment correctly, attaching required lock to isolation bar/scissor lock, ensuring appropriate key storage and handling
- Mechanical equipment
 - lock out by: ensuring that no material can enter equipment being repaired/maintained, shutting down process as required, shutting off valve nearest flange to be blanked, draining, purging, depressurizing or flushing lines before repair/maintenance to ensure that stored energy is dissipated or contained, locking out valves using chain lock where applicable
- Tag equipment for repair or maintenance as per site policies and applicable regulations
 - identify types of tags, the colours and their use
 - complete all required information on tag
 - record lock out
 - inform appropriate personnel of equipment lock out
- De-energize equipment for repair or maintenance
 - ensure zero energy state (ZES) for equipment (e.g. local and remote bump test)

AREA OF COMPETENCY 7 IS NOT APPLICABLE TO THIS OCCUPATION

AREA OF COMPETENCY 8: **COMMUNICATE**

TASK 8.1 **LISTEN ACTIVELY**

Importance: Very Important
Frequency: Daily

SUB-TASK:

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**

Importance: Very Important
Frequency: Daily

SUB-TASK:

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 questions to make sure directions were understood

AREA OF COMPETENCY 8: **COMMUNICATE**

TASK 8.3 **USE COMMUNICATION DEVICES**

Importance: Very Important
Frequency: Daily

SUB-TASK:

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**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Ensure visual contact
2. Use 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

AREA OF COMPETENCY 8: **COMMUNICATE**

TASK 8.5 **USE WORKPLACE TECHNOLOGIES**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Use computer based training modules
2. Read and understand machine parameters
3. Receive and follow dispatch instructions
4. Use computer software

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- 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 (MSDS, SOPs)
 - Receive and follow dispatch instructions
 - dispatch screen (e.g. Modular, WENCO, Mine Star)
 - Use computer software
 - electronic forms, databases, Internet, e-mail
- Use computer based training modules
- interactive computer program, simulators
 - enter and track training data

TASK 8.6 **COMPLETE WORKPLACE DOCUMENTATION**

Importance: Very Important
Frequency: Daily

SUB-TASK:

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

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Use appropriate form
 - includes inspection checklists, log-books, cross shift notes, shift reports, production reports, incident reports, safety system cards, time cards, training status reports
- Be specific
 - include accurate information, appropriate details, and complete report in full

TASK 8.7 **COACH OR MENTOR OTHER EMPLOYEES**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Demonstrate proper technique
2. Check for understanding
3. Observe employee
4. Provide assistance and feedback

AREA OF COMPETENCY 9: BE PROFESSIONAL

TASK 9.1 WORK IN A TEAM ENVIRONMENT

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Respect team members
2. Respect each other
3. Be professional

- Respect 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

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)

TASK 9.2 WORK IN A CULTURALLY DIVERSE ENVIRONMENT

Importance: Very Important
Frequency: Daily

SUB-TASK:

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

AREA OF COMPETENCY 9: **BE PROFESSIONAL**

TASK 9.3 **MAINTAIN GOOD COMMUNITY RELATIONS**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Consider yourself an ambassador for the industry and the company
2. Support local businesses and events

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Consider yourself an ambassador for the industry and the company
 - recognize that personal behavior affects public perception of employer
- Support local businesses
 - buy supplies locally

TASK 9.4 **DEMONSTRATE HIGH STANDARDS OF CONDUCT**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Model safety leadership
2. Be both consistent and fair

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Model safety leadership
 - lead by example, “walk the talk”
 - lead toolbox/ safety huddle and safety meetings
- ensure safety of crew (fit for work, proper PPE)

AREA OF COMPETENCY 10: EQUIPMENT KNOWLEDGE

TASK 10.1 DEMONSTRATE EQUIPMENT KNOWLEDGE

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Trained and authorized for proper use and operation of equipment
2. Inspect equipment for defects, hazards and potential hazards
3. Conduct pre-operational checks
4. Properly mount and dismount equipment
5. Start equipment
6. Conduct operational checks
7. Drive equipment to worksite, as required
8. Shut down equipment (normal situations)
9. Shut down equipment (emergency situations)
10. Conduct post-operational check
11. Knowledge of refueling procedure

- rope windows
- inspect layout of hoist
- conveyance inspections
- test all forms of communication – radio, bell phones, pager phones
- mechanical, electrical and HMI
- Properly mount and dismount equipment
 - 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 log-book
 - 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 – overwind, underwind, 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

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Trained and authorized for proper use and operation of equipment
 - follow manufacturer's recommendations
 - follow safe operating procedures
 - know capabilities and limitations of equipment
- 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 and corrective action taken in log-book
- Conduct pre-operational checks
 - damage to equipment
 - steering
 - test brakes
 - tires and undercarriage
 - fire suppression and extinguishers
 - bolts keepers and holders
 - oil spills and/ or excessive grease
 - pinion and ball gears

AREA OF COMPETENCY 10: **EQUIPMENT KNOWLEDGE**

- 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
- 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
 - shut off ignition and/or fuel supply
 - 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 log-book

TASK 10.2 **WORKING WITH EQUIPMENT**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Use appropriate personal protective equipment
2. Be cautious around moving parts of equipment
3. Identify potential pedestrian and traffic interaction
4. Avoid hazardous conditions
5. Demonstrate knowledge of working in vicinity of explosives

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Be cautious around moving parts of equipment
 - avoid pinch points
 - ensure appropriate guards are in place
 - stay clear of moving pulleys and belts
- Avoid hazardous conditions
 - identify blind spots
 - use designated travel ways
 - check for power, telephone and cable lines, guy wires and fences, low clearance areas
 - avoid debris resulting from work or movement of equipment

AREA OF COMPETENCY 11 IS NOT APPLICABLE TO THIS OCCUPATION

AREA OF COMPETENCY 12: OPERATE SUPPORT EQUIPMENT

TASK 12.1 OPERATE LIGHT OR SERVICE VEHICLE

Importance: Important
Frequency: Daily

SUB-TASK:

1. Demonstrate equipment knowledge
2. Load, transport and unload materials, supplies and/or personnel

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Load, transport and unload materials, supplies and/or personnel
 - ensure protection of self and others
 - ensure non-movement of vehicle while loading
 - observe load limitations
 - secure seats, safety bars and chains
 - ensure proper hook-up of carrier
 - secure loads

TASKS 12.2 – 12.32 are not applicable to this occupation

AREA OF COMPETENCY 13: **PROTECT THE ENVIRONMENT**

TASK 13.1 **COMPLY WITH ENVIRONMENTAL POLICIES, PROCEDURES AND PERMITS**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Minimize environmental impact of operations
2. Follow appropriate handling and clean-up procedures for various substances
3. Follow site abandonment and reclamation practices
4. Comply with permit conditions

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Minimize environmental impact of operations
 - minimize waste produced (use recommended quantities of additives, do not let equipment run/idle unnecessarily, recycle fluid returns)
 - use biodegradable and non-toxic additives and store and handle with caution to prevent loss
 - use appropriate waste disposal measures
 - be aware of restrictions for emissions and noise
 - avoid practices that may cause erosion, soft ground rutting
 - follow existing roads when possible
 - when constructing new access routes avoid sensitive areas (swamps, rivers, streams, lakes), avoid cutting, pushing or dumping debris into water courses, use proper bridging techniques, avoid recreational and historical/cultural/ archaeological sites, plantations, fish, wildlife and their habitats, and whenever possible, minimize tree cutting
- Follow appropriate handling and clean-up procedures for various substances
 - identify environmental issues
 - assess severity of environmental issue
 - take corrective action
 - report environmental issue and corrective action to appropriate personnel
 - record environmental issue and corrective action in log-book
- Follow site abandonment and reclamation practices
 - cement holes, if required
 - stop or cap artesian wells
 - return sumps to original ground condition
 - restore work site back to an acceptable environmental state

TASK 13.2 is not applicable to this occupation

AREA OF COMPETENCY 13: **PROTECT THE ENVIRONMENT**

TASK 13.3 **MANAGE WASTE**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Manage solid waste
2. Manage liquid waste
3. Manage recycling waste

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Manage solid waste
 - use approved septic or sewer system for sewage
 - use sumps to remove excess water from solids (ensure sumps are of adequate size and capacity; direct water to designated areas with good drainage where natural percolation can occur without reappearance)
- Manage liquid waste
 - includes sewage, sludge, cuttings, waste oil
 - document and follow instructions for disposal of all effluent
 - collect used petroleum products (transfer used oil into clean pails/containers marked "waste oil" and dispose of as required)
 - use special precautions when working adjacent to lakes, rivers or creeks (do not direct excess fluid into any watercourse unless treated and approved by regulatory authorities)
- Manage recycling waste
 - cardboard, scrap metal, empty fuel drums, empty propane tanks and unused lumber must be salvaged and recycled

TASK 13.4 is not applicable to this occupation

AREA OF COMPETENCY 13: **PROTECT THE ENVIRONMENT**

TASK 13.5 **RESPOND TO SPILLS**

Importance: Very Important
Frequency: Daily

SUB-TASK:

1. Assess danger
2. Manage spill
3. Complete follow-up

- Complete follow-up
 - follow spill reporting procedures (notify proper authorities (Spill Line))
 - notify supervisor
 - complete required documentation (Spill Report form)

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Assess danger
 - halt operations
 - identify substance
 - determine risk to self and others
 - take precautions if substance is highly volatile
- Manage spill
 - take action to stop a continuous spill (turn off pump, reposition overturned containers)
 - determine spill spread (into ground, run off into watercourse)
 - initiate spill containment (initiate company contingency plan for specific situation, isolate and remove spill material and contaminated material under and around spilled material if possible)
 - monitor safe, uncontained spill until relieved by appropriate personnel

AREAS OF COMPETENCY 14 – 30 ARE NOT APPLICABLE TO THIS OCCUPATION

AREA OF COMPETENCY 31: TRAINING AND ASSESSMENT

TASK 31.1 CREATE TRAINING PLAN

Importance: Important
Frequency: Weekly

SUB-TASK:

1. Consult with supervisors and others to determine training needs
2. Confirm training completed/ prerequisites required
3. Create training schedule
4. Arrange logistics
5. Prepare training materials

- Create training schedule
 - coordinate trainee availability
 - develop alternate plan to cover sudden changes
- Arrange logistics
 - order materials, arrange for PPE, arrange internet access, if required
 - organize and confirm equipment availability
 - enter trainees in Learning Management System (LMS)

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Confirm training completed/ prerequisites required
 - review trainee skill inventory to identify performance gaps and progression sequence
 - assess training needs based on safety and production

TASK 31.2 DESIGN TRAINING PACKAGES

Importance: Important
Frequency: Weekly

SUB-TASK:

1. Update/ edit training packages
2. Develop training packages
3. Review/ develop Standard Operating Procedures (SOP)
4. Assist with Job Task Analysis (JTA)

- Develop training packages
 - consult with subject matter experts
 - review equipment manufacturers' maintenance operation manual
 - e-learning modules

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Update/ edit training packages
 - modify training handouts
 - modify performance checklists
 - add test items

AREA OF COMPETENCY 31: TRAINING AND ASSESSMENT

TASK 31.3 DELIVER AND ASSESS THEORY TRAINING

Importance: Important
Frequency: Daily

SUB-TASK:

1. Lead theory training
2. Conduct orientations
3. Assign and mark theory test
4. Collect and review trainee course evaluation
5. Facilitate e-learning

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Lead theory training
 - be aware of and accommodate learning styles
 - be prepared to adjust / modify presentation style
- Conduct orientations
 - new hires
 - site and workplace tours

TASK 31.4 FACILITATE AND ASSESS ON-THE-JOB PRACTICAL TRAINING

Importance: Important
Frequency: Daily

SUB-TASK:

1. Demonstrate required skills and/or assign trainee to a coach/mentor
2. Supervise simulator training
3. Ensure all SOPs are followed
4. Observe trainee progress
5. Conduct follow-up training, as required
6. Monitor and document training progress
7. Assess trainee competency/ demonstrated skill
8. Manage trainee performance

- Assess trainee competency / demonstrated skill
 - determine if trainee is “good to go”, can operate under supervision, requires additional training
- Manage trainee performance
 - determine need for coaching, counselling, other corrective action
 - participate in probationary and progression reviews

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Observe trainee progress
 - job observation spot check
 - discussion with coach / mentor
 - discussion with supervisor

AREA OF COMPETENCY 31: TRAINING AND ASSESSMENT

TASK 31.5 MAINTAIN TRAINING RECORDS

Importance: Important
Frequency: Daily

SUB-TASK:

1. Enter competency assessments into Learning Management System (LMS)
2. Update training hours accumulated
3. Prepare training status report
4. Review training matrix with supervisors

TASK 31.6 TRAIN COACHES OR MENTORS

Importance: Important
Frequency: Monthly

SUB-TASK:

1. Identify potential coach/mentors
2. Train the coach/mentor
3. Assign trainee to coach
4. Assess coach/mentor
5. Plan progression with coach/mentor

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Identify potential coach/mentors
 - consult with supervisors
 - consider knowledge and experience of the individual
- Train the coach/mentor
 - develop proper training techniques and procedures
 - conduct on-the job training
 - training assessment
 - competency assessment
- Assign trainee to coach/mentor
 - consult with supervisor
- Assess coach/mentor
 - observe coach/mentor
 - quality of instruction
 - incidents and deficiencies
 - provide assistance and feedback
 - self-evaluation of training effectiveness (e.g. coach's notes, competency checklist)
- Plan progression with coach/mentor
 - identify short term goals
 - identify long term goals (e.g. certification, qualification, professional development)

AREA OF COMPETENCY 31: TRAINING AND ASSESSMENT**TASK 31.7 TRAINER DEVELOPMENT**

Importance: Very Important
Frequency: Rarely

SUB-TASK:

1. Participate in on-going trainer development activities

REFERENCE/EXAMPLES OF ABILITIES AND KNOWLEDGE

- Participate in on-going trainer development activities
 - train-the-trainer programs (e.g. new equipment purchases, instructor certification, confined space, fall arrest, rigging)

