

**Job Class Profile: Mines Inspection Engineer II****Pay Level: CG-45 Point Band: 1136-1189**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	8	7	3	6	8	7	6	2	4	
Points	373	117	19	29	240	152	124	43	43	1140

**JOB SUMMARY**

The Mines Inspection Engineer II performs highly responsible specialized professional engineering work in the regulation of the mining industry of the province to ensure the health and safety of the workers and the general public. Work includes carrying out advanced engineering inspections and evaluations of mining methods and equipment used.

**Key and Periodic Activities**

- Inspects, evaluates and makes written reports on mining operations with respect to engineering and safety functions to ensure the health and safety of miners and other persons and for compliance with the Regulation of Mines Acts and Regulations.
- Examines and evaluates plans and specifications of mining, beneficiating, mechanical, electrical and civil engineering projects for new or existing mining sites; advises on aspects of plans and specifications which are contrary to regulations or as to established engineering and safety principles, methods and techniques.
- Provides technical advice and guidance to junior engineering staff. Examines complex problems and suggest solutions or methods of approach.
- Investigates accidents, complaints and contraventions; collects and analyzes facts, and determines conclusions, discusses findings with mine management personnel and suggests or orders remedial action. Prepares official reports in consultation with senior staff. Investigates fatal accidents and prepares the official written report of such accidents.
- Maintains effective communications, both oral and written, with mine management and labour leaders at mining properties.
- Uses or directs the use of a variety of equipment for detecting and measuring environmental hazards, ground stress and movement, equipment testing and for mine rescue training.
- Performs occupational health and safety duties and administers and enforces applicable provisions of the Occupational Health and Safety Act.
- Develops and maintains statistical records, drafts safety regulations and maintains technical publications and report files.
- Participates in the development of national standards and acts as a member of intergovernmental and national committees; keeps abreast of mining developments by attending engineering meetings and seminars; provides consultative engineering service to other branches of government; and assists in policy formulation.

## SKILL

Knowledge
<p><b>General and Specific Knowledge:</b></p> <ul style="list-style-type: none"> <li>— Thorough understanding of a number of different engineering disciplines applicable to the mining industry.</li> <li>— Legislation applicable to health and safety in the mining industry.</li> <li>— Current trends and developments in a number of mining related specialized fields.</li> <li>— Technology related to mining operations and processing fields.</li> </ul> <p><b>Formal Education and/or Certification(s):</b></p> <ul style="list-style-type: none"> <li>— Minimum: an Undergraduate Degree in Mining, Electrical or Mechanical Engineering and a Professional Engineering Designation (i.e. P. Eng.).</li> </ul> <p><b>Years of Experience:</b></p> <ul style="list-style-type: none"> <li>— Minimum: 5 to 6 years experience in an engineering role in mining and/or industrial related operations.</li> </ul>
Interpersonal Skills
<ul style="list-style-type: none"> <li>— A wide range of interpersonal skills are used to: listen; ask questions; provide routine information; communicate complex or specialized information to the industry and senior managers; interpret legislation to industry and labour leaders; report findings and suggest remedial actions to mine management; arbitrate disputes related to the regulation of mining operations; make formal presentations; and represent the department as a member of intergovernmental and national committees.</li> <li>— Communications occur with: co-workers, peers, supervisors/managers, mining industry management, engineering professionals and labour leaders; and from time to time with other government staff, department executives, professional associations, and professional advisors.</li> </ul>

## EFFORT

Physical Effort
<ul style="list-style-type: none"> <li>— The demands of the job generally do not result in fatigue requiring periods of rest.</li> <li>— Physical effort may include constant fine finger/precision work and sitting with periods of standing, walking and driving. There is the requirement to regularly visit and inspect mining and mineral related extraction, processing, transportation, shipping and metallurgical operations and mine rehabilitation sites requiring walking, standing and climbing and extended driving.</li> </ul>
Concentration
<ul style="list-style-type: none"> <li>— <b>Visual</b> concentration is required to carry out advanced engineering inspections and evaluations of mining methods and equipment and procedures used to protect the health and safety of workers, review and approval of engineering plans and specifications, investigation of accidents, and creating reports, spreadsheets and statistical data.</li> <li>— <b>Auditory</b> concentration includes listening and communicating in person with the general public, industry personnel, supervisors and co-workers, and on the phone with internal and external stakeholders and when listening for mechanical equipment issues. Auditory</li> </ul>

challenges are present when working in noisy industrial environments.

- Other sensory demands such as **smell** may be required to detect hazardous fumes/ chemicals, equipment malfunction and the presence of hydrocarbons.
- While on mine and mineral processing sites there is a need to remain **attentive for health and safety of self and others**.
- There are **time pressures** and **deadlines** to complete inspections to ensure the health and safety of miners and other persons, approving plans and specifications, and responding to emergency situations or investigating fatal accidents.
- **Exact results and precision** is required in inspecting, examining, analyzing and calculating, data entry and when using a variety of equipment for detecting and measuring environmental hazards, ground stress and movement, equipment testing and for mine rescue training.

### Complexity

- Tasks vary in complexity from well defined to broad in scope, highly technical and unrelated and with policy implications requiring a broad range of skills and knowledge.
- Tasks tend to require different solutions, and often creative solutions must be developed to assist industry to meet legislative guidelines. Must apply professional engineering skills to carry out advanced engineering inspections and evaluations of mining methods and equipment used to protect the health and safety of workers in mining and mineral related industries. Regulations, guidelines and technology are constantly changing so this needs to be researched and revised. Technologies vary considerably across the industrial area of responsibility.
- Tasks can have strategic or policy significance.
- Varied work responsibilities include: the inspection of mining operations and procedures and the preparation of reports related to the engineering and safety functions of mines and related equipment; examination, evaluation and approval of plans and specifications; investigation of accidents; preparation of statistical data; liaison with mine management and labour leaders; review of existing mining methods and operations and suggesting ways of making improvements; overseeing of construction and monitoring of engineering, transportation and shipping of production, mineral beneficiating and metallurgical works, rehabilitation of mines for industrial use; and arbitration of disputes related to regulation of mining operations.
- Materials/resources available include Acts and regulations, guidelines, industry best practices, standard operating procedures, engineering standards, departmental reference materials, safety codes, policies and procedures, scientific journals, and co-workers.

## RESPONSIBILITY

### Accountability and Decision-Making

- Work tasks are generally prescribed or controlled. Receives technical and administrative guidance from a superior who evaluates results through conference and reports.
- Requires approval for purchases, participation on departmental commitments, policy changes and awarding contracts.
- Exercises considerable independent judgment and initiative in making technical decisions and in devising new approaches or modifying existing procedures and techniques.

### Impact

- Impact of recommendations, solutions and/or advice/interpretations provided generally affect: the immediate work area; department; organization; and on industry and the general public.
- Work activities impact resources such as: facilities; the environment; finances; information; material and human resources; processes and systems; health and safety; and corporate image. The most extreme impacts are on the environment, industry, and staff.
- Work could either negatively or positively impact the environment, worker's health and safety, industrial projects, and new initiatives for mining related economic development. Depending on the nature of the impact, errors could be found and solved in a relatively short time period, but may impact the environment and the mining industry and result in injury/occupational illness of workers.

#### **Development and Leadership of Others**

- There is no responsibility for the ongoing supervision of staff.
- May be required to perform a wide range of tasks such as on the job technical advice and guidance to others, and acting as technical mentor or subject matter expert.

### **WORKING CONDITIONS**

#### **Environmental Working Conditions**

- Required to wear safety equipment such as safety boots, hard hat, safety vests, safety glasses and personal protection measures when in the field/on-site.
- The likelihood of serious injury or illness is limited if normal precautions are followed but the potential exists.
- Works is performed both in an office setting and outside at industrial mining operations. May be exposed to a variety of undesirable working conditions, including but not limited to unusual/distracting noise, dirt/dust/garbage, glare, dangerous heights/depths, wet or slippery surfaces, heavy equipment, physical dangers/threats, adverse weather conditions, and travel.