
Dam Safety Officer & Integrity Engineer

BC Oil & Gas Commission, Fort St. John*

OGC 1	\$62,141.09 - \$70,913.23
OGC 2	\$74,104.45 - \$84,565.51
OGC 3	\$87,525.30 - \$100,437.31
OGC 4	\$103,952.65 - \$119,288.03

** Posted salary includes a JFMM Allowance of 27% & a Location Allowance of 3%*

Engineering - Integrity Engineering

Qualifications

Consideration will be given to those with:

- A bachelor's degree in engineering, with a minimum of five years related experience, or
- A master's degree in engineering with a minimum of three years related experience, or
- An equivalent combination of education, experience and/or training; and
- Registration with the Association of Professional Engineers and Geoscientists of British Columbia as a professional Engineer.

Preference will be given to qualified applicants who have demonstrated experience:

- Designing, evaluating and reporting on the structural and hydraulic integrity of dams,
- Reviewing, evaluating and approving preliminary engineering design proposals and detailed plans for dams,
- Providing input and evaluating integrity management initiatives for pipelines, wells and facilities,
- Conducting inspections, audits and meetings for technical areas such as seismic impacts, slope stability, road design and bridges.

In submitting your application, you confirm you have reviewed the job description posted on our [website](#) for a complete list of duties and qualifications. We encourage all applicants to apply, even if they do not currently meet the qualifications as an employee development plan may be established for lesser qualified applicants to progress to the full working level. Classification and salary will be based on level of education, experience and training requirements. An eligibility list may be established. Occasional overtime work may be required.

To submit your application, please select the "[Apply Now](#)" button on the BCOGC [website](#). After clicking the button, you will need to fill in the required fields (e.g. name, address, education etc.) and attach your resume and cover letter (only Microsoft Word or PDF documents can be attached). Please note applicants will only be contacted if they are selected to proceed further in the process. You are encouraged to view the Commission [Website](#). For additional information regarding this position, please contact **Recruitment** at 250 419-4463.

Competition Number:
Closing Date:
For More Information:

201709
February 28, 2017
Recruitment 250 419-4463

POSITION TITLE	Dam Safety Officer and Integrity Engineer	POSITION #:	573799
DIVISION/UNIT:	Engineering/Integrity Engineering	LOCATION:	Fort St. John
SUPERVISOR'S TITLE:	Supervisor and Lead Integrity Engineer	POSITION #:	573789
SUPERVISOR'S CLASSIFICATION:	OGC 5	LOCATION:	Kelowna
APPROVED CLASSIFICATION:	OGC 4	CLASS CODE:	
ENTERED BY:	Kathy Caveney	PHONE NUMBER:	250-419-4463

PROGRAM

The BC Oil and Gas Commission (Commission) is an independent, single-window regulatory agency with responsibilities for regulating oil and gas operations in British Columbia, including exploration, development, pipeline transportation and reclamation.

The Commission's core roles include reviewing and assessing applications for industry activity, consulting with First Nations, ensuring industry complies with provincial legislation and cooperating with partner agencies.

Dam safety in British Columbia required for oil & gas activities is delivered by Engineering and others within the Commission. The Dam Safety Officer (DSO) is responsible for administration of the provincial dam safety program delegated to the Commission, regulating between 50 and 200 oil & gas active dams and permit applications or required documentations under the Act.

The Commission's Integrity Management Program (IMP) provides technical reviews and assessments of all areas of oil and gas activities the Commission regulates, including, but not limited to, pipelines, facilities, roads, crossings, work around water etc. Seismic, civil and geotechnical evaluations that affect oil and gas assets are reviewed and company submissions that require consideration of hazards are part of the responsibilities.

PURPOSE OF POSITION

The position is responsible for ensuring that dams permitted for use in oil and gas activities are safe. In addition, the position provides support and technical input to the IMP that the Commission operates.

NATURE OF WORK AND POSITION LINKS

The DSO is appointed by the Comptroller of Water Rights under the Dam Safety Regulation. The position may have statutory authority under the Dam Safety Regulation to approve, accept, direct and make decisions regarding the safety of dams associated with oil and gas activities. The position may also be designated as an Assistant Regional Water Manager so that it will have the same authority

under the Water Act as the Engineer or Regional Water Manager. A failure of any one of the high consequence regional dams would result in loss of life, severe damage to the environment and/or extensive economic and social losses. Regional dams are not as large as major dams but, in most cases, dam owners have limited resources and expertise in the field of dam safety and require considerable assistance and focused compliance regulation.

The DSO provides leadership and is the key contact for all aspects of dam safety for oil and gas activities throughout the entire life cycle of the dam, from conception to removal. The DSO undertakes safety audits, site assessments following reports of hazardous conditions and monitors dam owner compliance. The position is responsible for developing and delivering continuing education on dam safety and investigates a wide range of issues in the potential dam break inundation area downstream of dams, including land, property, environmental and infrastructure value, to determine risk and dam classification. It contributes to the development of policies, procedures, legislation, programs and standards that support the dam safety program.

This position is also responsible for integrity issues that are assigned by the Supervisor and Lead Integrity Engineer. Integrity initiatives that may be included are the IMP for dams, pipelines, wells and facilities and the various inspections, audits, interface and meetings both inside and outside the Commission. Examples of other technical areas that may require this position's input are seismic, slope stability, road design and bridges. These issues arise from activities of oil and gas companies working or planning to work under regulations for which the Commission is responsible.

Position linkages include:

- **Dam Owners/Reservoir Operators (and their engineering consultants)** i.e. independent hydro power producers, corporations, municipalities, major land holders (ranchers), First Nations, provincial and federal governments and private individuals – to provide education and awareness through instruction and training initiatives, dam auditing, compliance monitoring and enforcement, plan review and approval, and emergency planning.
- **Federal, Provincial and Local Government Agencies** including: MFLNRO (Regional Managers, Section Heads and other Senior Dam Safety Officers); MEM(Manager Geotechnical Branch); EAO; Emergency Management BC(Regional Managers); RCMP; Ministry of Transportation and Infrastructure; Regional Districts and Municipal Governments – to collaborate on a variety of issues.
- **New Applicants** – to contact and instruct as part of the education and awareness service which includes explaining: regulations, plan submission guidelines, application, water licence requirements, and land tenure applications ensuring concerns and issues are addressed.
- **Associations (e.g., Canadian Dam Association, BC Water and Waste Association, Canadian Water Resources Association, Association of State Dam Safety Officials) and larger dam safety community** – to represent the provincial dam safety program and to act in the role as an educational resource with respect to dam safety issues.
- **Others** include: engineering consultants, contractors and owners – to provide advice and direction on technical and legal (duty of care) issues.

SPECIFIC ACCOUNTABILITIES / DELIVERABLES

1. Manages a portfolio of dams that are requested or operating by oil and gas companies for oil and gas activities throughout all phases of each dam's life cycle through monitoring, investigation and direct action to ensure they are maintained and operated safely:

- a) Undertaking or reviewing scheduled compliance audits of dams and their owner's dam safety; requiring, directing, approving and assessing remedial action taken; reporting degree of compliance and remedial action required.
 - b) Evaluating and reporting on the structural and hydraulic integrity of dams.
 - c) Exercising statutory authority under the *Dam Safety Regulation*.
 - d) Classifying the consequence rating of a dam.
 - e) Maintaining, updating and modernizing the regional dam database of dam owner compliance data.
 - f) Determining and prioritizing the level of regulatory involvement necessary using risk based analysis.
2. Undertakes plans review and approval for dam rehabilitation, new dams and dam removal:
- a) Classifying the consequence rating of a proposed new dam to determine the appropriate dam design and construction standards.
 - b) Reviewing, evaluating and approving preliminary engineering design proposals, detailed plans and the validity of the project and construction procedures,
 - c) Determining, at any stage of a project, the requirement for and scope of a review by an independent engineering consultant,
 - d) Undertaking construction inspections, project regulation and issuing compliance instructions.
 - e) Developing, implementing and/or approving plans for the removal of unsafe dams and for the rehabilitation of unused structures deemed beneficial to the public or the economy; acting as project lead where necessary.
3. Prepares for, responds to, and mitigates flood emergencies on major and regional dams but also includes non dam related flooding events:
- a) Prioritizing dams for inspection, undertaking first response emergency assessments, determining and directing agency action when an eminent threat to the dam is discovered, may assist Incident Commander as required and preparing action plans for further work to be undertaken pursuant to the Provincial Dam Emergency Response Plan.
 - b) Acting as liaison officer (dam safety expert opinion) to Emergency Management BC's PECC or PEOC during wide scale emergencies.
 - c) Ensuring dam owners understand their responsibility and have appropriate Emergency Preparedness Plans in place.
 - d) Assessing situation and recommending an Order be issued on a dam requiring the owner to: reduce or release storage, make spillway/outlet modifications, breach the dam and, if determined that there is not sufficient time, independently carrying out these functions.
 - e) Researching, investigating and reporting incidents and failures of major and regional dams.
 - f) Independently assessing flood and erosion dangers and implementing appropriate action.
4. Reviews, prepares and assesses company integrity management programs (IMP):
- a) Providing input and evaluating integrity management initiatives for pipelines, wells and facilities.
 - b) Meeting with companies to review their plans and mitigations.
 - c) Ensuring non compliances are followed up until completed.
 - d) Working with other regulators to ensure consistent review and exchange of information.
 - e) Attending field inspections and verification initiatives.

5. Performs other related duties:

- a) Hiring and supervising temporary staff to help with various short term projects.
- b) Perform duties as a Regional Water Manager if designated as an Assistant Regional Water Manager
- c) Preparing official responses for the Commission to inquiries pertaining to dam safety issues; preparing briefing notes and decision issues with the Ministry.
May perform duties if delegated as Deputy Inspector of Dykes and/or Water Stewardship Officer, as required.

DIRECT SUPERVISION (i.e., responsibility for signing the employee appraisal form)

Role	# of Regular FTE's	# of Auxiliary FTE's
Directly supervises staff	3	0-2
Supervises staff through subordinate supervisors	0	0

PROJECT /TEAM LEADERSHIP OR TRAINING

Role	# of FTE's	Role	# of FTE's
Supervises students or volunteers	1-3	Provides formal training to other staff	1-10
Lead project teams	0	Assigns, monitors & examines the work of staff	0-2

FINANCIAL RESPONSIBILITY

- Manages contracts for program improvements and consulting expertise (e.g., database, outside trainers, vehicle maintenance), researching and purchasing engineering/hydrology software and field equipment – budget to be specified annually by the Commission.
- Assesses and advises on liability management issues regarding dams.

WORKING CONDITIONS/SPECIAL REQUIREMENTS/TOOLS & EQUIPMENT

- Travel required (via aircraft, automobile and boat) 7-14 days/month throughout the Province. Overnight travel. Valid B.C. Driver's Class 5 Licence is mandatory. Canadian Passport is mandatory.
- Must be physically able to lift small equipment and be able to traverse rough terrain.
- Willingness to undertake emergency response work under stressful circumstances.
- During a provincial emergency, may be required to perform a variety of duties within the scope of their regular responsibilities. Required to work irregular hours including some weekends, statutory holidays and evenings.
- Must be available 24/7 during response to emergencies and disasters.
- Must have knowledge of outdoor survival requirements (first aid, avalanche safety, animal encounter strategies).
- All Microsoft Office products, educational and presentation tools, etc.
- Hydrology modelling programs such as HEC-RAS, FLDWAVE & DAMBREAK.
- Maintains and operates a 4-wheel drive in all types of driving conditions, both on and off road.

PREPARED BY

NAME: Frank Austin	DATE: January 2017
-----------------------	-----------------------

EMPLOYEE SIGN OFF

NAME:	DATE:
-------	-------

EXCLUDED MANAGER AUTHORIZATION

I confirm that: 1. The accountabilities / deliverables were assigned to this position effective: January 2017 2. The information in this position description reflects the actual work performed. 3. A copy has / will be provided to the incumbent(s).		
NAME: Frank Austin	SIGNATURE:	DATE: January 2017

ORGANIZATION CHART

Commissioner, Chief Executive Officer
Executive Vice President, Chief Engineer
Vice President, Pipelines, Facilities, Drilling & Production
Supervisor & Lead Integrity Engineer
Dam Safety Officer & Integrity Engineer

SELECTION CRITERIA**Education:**

A bachelor's degree in engineering, with a minimum of five years related experience, OR a Master's degree in engineering with a minimum of three years related experience, OR an equivalent combination of education, experience and/or training; and

Registration with the Association of Professional Engineers and Geoscientists of British Columbia as a professional Engineer.

Experience:

- Conducting water investigations including watershed assessments, water monitoring and compliance; preferably some experience in the complex physical settings in British Columbia.
- In hydrology, soil mechanics, open channel hydraulics, dam and dike design and operation, river engineering, geotechnical engineering, design and construction of flood protection projects, economics, engineering design, and construction related to community water supply engineering.
- In a compliance and regulatory environment requiring the assessment of physical infrastructure (preferably water related), and infrastructure management programs.

- Working in the field of public safety, risk management and emergency management.
- Solving complex technical problems related to water and producing technical reports, and interpreting and analyzing maps and data related to resource and water management.
- In the oil and gas industry with facilities and pipelines.

Knowledge of:

- Water and dam safety management principles, related legislation and associated policies and procedures (e.g., Dam Safety Regulation).
- The role of dams in the province from the supply of water and electricity to the potential hazard that dams present in event of incident, failure or negligent operation.
- A variety of water related technical areas including hydrology, open channel hydraulics, river engineering, geotechnical engineering, geomorphology, design and construction of flood protection projects.
- Resource planning principles, provincial and regional planning processes.
- The *Dam Safety Regulations* as they apply to operation, maintenance, inspection, rehabilitation and removal of dams.
- The *Water Act*, *Land Act* and related legislation pertaining to sound land and water management and water use/supply principles.
- The Canadian Dam Association Guidelines, provincial Dam Safety Guidelines and MOE auditing and monitoring policy and procedures.
- The BC Emergency Response Management System (BCERMS) as it relates to the emergency plans for the Province of BC, dam owners and local governments.
- Extreme flood flows related to dam failure and downstream consequence classification.
- Contract administration and management
- BC mapping systems (BCGS, cadastral, topographic, TRIM, GIS and GPS).
- Integrity Management systems: their design, implementation or assessment.
- Safety systems and compliance management.

Skills And Abilities:

- Superior written and oral communication, team participation, interpersonal, planning and coordination skills.
- Must possess a high degree of tact, judgment and initiative in the performance of duties.
- Ability to analyse complex regulatory issues and prepare professional standard technical reports.
- Ability to deal with emergency or major incident situations.
- Ability to work outdoors in the field, in all weather conditions often for long hours.
- Ability to prioritize workload, handle multiple projects, and adjust to changing work priorities.
- Ability to prepare and conduct educational workshops and presentations.
- Good facilitation, negotiation and conflict resolution skills.
- Ability to supervise technical or casual staff and contractors.
- Ability to represent the Commission in meetings with companies, media or in legal proceedings.

KEY COMPETENCIES

Analytical Thinking is the ability to comprehend a situation by breaking it down into its components and identifying key or underlying complex issues. It implies the ability to systematically organize and compare the various aspects of a problem or situation, and determine cause-and-effect relationships ("if...then...") to resolve problems in a sound, decisive manner. Checks to ensure the validity or accuracy of all information.

Customer/Client Development involves the genuine intent to foster the learning or development of a diverse clientele. "Customers/clients" include the public, internal clients, colleagues, partners, co-workers, peers, branches, ministries/agencies and other government organizations.

Expertise includes the motivation to expand and use technical knowledge or to distribute work-related knowledge to others.

Holding People Accountable involves setting high standards of performance and holding team members, other government jurisdictions, outside contractors, industry agencies, etc., accountable for results and actions.

Impact and Influence is the ability to influence, persuade, or convince others to adopt a specific course of action. It involves the use of persuasive techniques, presentations or negotiation skills to achieve desired results.