

# Weekly NEWS



An Information Service for Alberta's Environment Industry

The Week Ending September 14<sup>th</sup>, 2018



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**The ESAA Weekly News is published weekly by:**

Environmental Services  
Association of Alberta  
102, 2528 Ellwood  
Drive SW  
Edmonton, AB T6X 0A9  
(P) 780.429.6363  
(F) 780.429.4249  
[info@esaa.org](mailto:info@esaa.org)  
[www.esaa.org](http://www.esaa.org)

Comments & submissions are welcome!

Please submit your announcement via e-mail to:  
[weeklynews@esaa.org](mailto:weeklynews@esaa.org)



## 2018 ESAA PHOTO CONTEST - HELP US CHOOSE THE WINNERS!

### Last Chance to Vote

ESAA has selected six finalists for the ESAA Photo Contest but we need your help selecting the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners!

We also need your help in selecting a non-member photo winner! Please select your favourite from the two choices found after our six member photos.

Please click the link below to be directed to the voting site.

**All voters will be entered into a draw to receive a canvas print of the 1<sup>st</sup> place member photo!** You do not need to be an ESAA member to vote, so pass the link on to your friends and family.

All four winners will receive a canvas print of their photo and their photo will be displayed at *RemTech* 2018. Additional copies will be made and auctioned off at *RemTech* 2018 with all proceeds going to charity.

**VOTING WILL CLOSE ON SEPTEMBER 14<sup>th</sup> at 5:00PM.**

**[VOTE NOW](#)**



you

### CALL FOR SILENT AUCTION ITEMS

A big part of **RemTech** each year is the silent auction. Once again we are asking you to donate items to the auction. Proceeds from the auction are donated to the **RemTech** charities.

If you are interesting in donating an item - email: [chowaniec@esaa.org](mailto:chowaniec@esaa.org) for further details. Thank you in advance.

Silent Auction Sponsored by: [ClearStream Environmental Services](#)

## AER DIRECTIVE 084: REQUIREMENTS FOR HYDROCARBON EMISSION CONTROLS AND GAS CONSERVATION IN THE PEACE RIVER AREA

[View PDF](#) (524 KB)

**Release Date: September 11, 2018**

**Effective Date: September 27, 2018**

Released with [Bulletin 2018-25](#).

Previous Version: [View PDF](#) (520.23 KB)

**Release Date: February 23, 2017**

**Effective Date: April 01, 2017**

Released with [Bulletin 2017-06](#).

### PURPOSE OF THIS DIRECTIVE

This directive sets out requirements for addressing odours and emissions generated by heavy oil and bitumen operations in the [Peace River area](#) of Alberta.

This directive applies to all AER-regulated wells and facilities associated with heavy oil and bitumen operations in the Peace River area regardless of whether the facility is exempt from *Directive 056: Energy Development Applications and Schedules* licensing requirements. Where a conflict arises between the requirements in this directive and any other AER directive, the requirements in this directive prevail unless otherwise directed by the AER. Licensees are advised that requirements in other AER directives continue to apply to heavy oil and bitumen operations in the Peace River area.

This directive does not apply to AER-approved waste disposal facilities located in the Peace River area. For these, see the applicable odour and emission requirements in *Directive 060: Upstream Petroleum Industry Flaring, Incinerating, and Venting* and *Directive 058: Oilfield Waste Management Requirements for the Upstream Petroleum Industry*.

### ATTACHMENTS

[Directive 084: Stakeholder Feedback and AER Response](#) [PDF]

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### ***AER: CHANGES TO THREE WATER ACT FORMS***

Effective immediately, operators must use the following revised *Water Act* forms:

- Application for *Water Act* Licences (submitted via email)
- Code of Practice for Hydrostatic Testing: Registration under *EPEA* and Notification under the *Water Act* (submitted via OneStop)
- *Water Act* Code of Practice – Notification (submitted via OneStop)

The updated forms are available on our website, [www.aer.ca](http://www.aer.ca), Regulating Development > AER Forms > [Water Act Forms](#).

No requirements have changed.

We have changed these forms as part of the ongoing implementation of the Integrated Decision Approach. For more information on the Integrated Decision Approach, please visit our website > Regulating Development > [Integrated Decision Approach](#).

For more information on the revised forms, contact our Customer Contact Centre by phone at 403-297-8311 or 1-855-297-8311 (toll free) or by email at [inquiries@aer.ca](mailto:inquiries@ aer.ca).

## ***NEW EDMONTON PLANT MAKES FERTILIZER FROM WASTE WATER***

### ***Phosphorous and nitrogen removed from wastewater and turned into 'pearls' of fertilizer***

(Source: CBC News) The new facility is expected to produce 1,000 one-tonne bags of fertilizer each year, says Simon Thomas, director of the Gold Bar waste-water treatment plant. (CBC)

Epcor unveiled a new facility Wednesday that removes phosphorous and nitrogen from waste water and turns it into "pearls" of fertilizer to be spread on farmers' fields.

The facility, which Epcor describes as "Canada's largest waste water nutrient recovery facility," was built in partnership with Ostara Nutrient Recovery Technologies.

Sewage from the city flows into the Gold Bar waste water treatment plant, and after an initial round of treatment is piped to Clover Bar, said Simon Thomas, plant director.

At Clover Bar the material is placed in ponds, where the heavier materials settle.

The new \$18-million plant, located at Clover Bar, then takes in the remaining water and recovers phosphorous and nitrogen from it, turning it into pellets of slow-release fertilizer, Thomas said.

The water is then sent back to the Gold Bar plant.

The process provides a few benefits for Epcor, Thomas said.

The phosphorous contributed to the development of a crystal, called struvite, that was coating the pipes in the water treatment plant, he said. This process reduces that.

"We'd have to clean these pipes every year or two because the pipes would get clogged over time," Thomas said. "It's going to save us maintenance costs."

The new facility will save Epcor maintenance costs on its piping system, says Simon Thomas, director of the Gold Bar waste-water treatment plant. (CBC)

The process also helps to reduce the amount of phosphorous that would ultimately end up in the North Saskatchewan River, said Ahren Britton, chief technology officer with Ostara.

"Nutrients in rivers can end up growing algae blooms and depleting oxygen supplies that's needed for fishes in the rivers," Britton said.

The fertilizer produced is not water soluble, so it isn't washed away by rain, he said.

"It literally waits for a plant root to come close to the granular of fertilizer," Britton said. "The natural acids the roots secrete when the plant is hungry is what causes the pearl to dissolve and release the nutrients for the plant to grow."

That results in efficient plant growth, and less runoff from farmers' fields, he said.

The pearl fertilizer is more expensive than other common fertilizers but has been shown to increase crop yields for canola, potatoes and wheat, Britton said.

The new plant is expected to produce 1,000 one tonne bags per year, about three bags a day, that will be sold primarily to farmers, Thomas said.

The facility will "turn something a lot of people consider garbage into what some people are considering gold," said Coun. Aaron Paquette.

The technology was developed at the University of British Columbia, and the demonstration system was established with the City of Edmonton in 2007 at Clover Bar.

The demonstration project proved commercial viability, and Ostara nutrient recovery facilities have since been built in Canada, the U.S., Europe and are under construction in the Middle East.

### ***MERCURY POLLUTION THREATENS TO IMPAIR THE ABILITY OF BIRDS TO MIGRATE***

(Source: Phys.org) Migrating birds today must contend with numerous dangers and challenges that never existed before, from twirling wind turbines and shiny glass buildings in the sky to ever-shrinking amounts of stopover habitat and scores of outdoor cats lying in wait. A report from the Connecticut-based Great Hollow Nature Preserve & Ecological Research Center is now warning of a new, invisible threat to bird migration — mercury pollution. The article, recently published online in the journal *Ecotoxicology*, presents a sobering assessment of the many ways in which global mercury pollution from coal combustion and other human activities threatens to interfere with the ability of birds to successfully migrate, including their ability to navigate, sustain flight for long periods, rapidly refuel during stopovers, and avoid sickness and oxidative stress.

"Conservation practitioners are greatly concerned about anthropogenic threats to bird migration and they are also concerned about the environmental impacts of pollution, but few people seem to have put two and two together," said Great Hollow's Executive Director and the author of the study, Chad Seewagen. "While there have been many studies of the effects of mercury on reproduction and other endpoints related to fitness and health in birds, we know practically nothing about its effects on migration compared to other life cycle events."

Recent research on songbirds in Canada found that [mercury levels](#) were higher in autumn migrants than those passing through the same place the following spring, suggesting that the birds that started out with the greatest amount of mercury exposure were at some point lost from the population ([DOI:10.1111/jav.01656](https://doi.org/10.1111/jav.01656)). This raises many questions about the mechanisms by which mercury could have this possible influence on migration performance and survival. To identify potential ways in which mercury could affect a migrating bird, Seewagen synthesized literature concerning the physiological and histological effects of mercury on non-migrating birds as well as non-avian vertebrates, including humans and other mammals, amphibians and fish, while keeping the biological requirements of migration in mind. What he found was alarming: many of the unique and specialized neurological and biochemical processes that make long-distance bird migration possible appear to be ripe for disruption by mercury exposure.

Seewagen first noticed that there are wide-ranging neurotoxic and biophysical effects that mercury is known to have on the visual systems of humans and many other non-avian vertebrates, which could also interfere with the sensory pathway that underlies the amazing ability of migratory birds to "see" and navigate by Earth's magnetic fields. Visual magnetoreception is fundamental to the navigational abilities of nocturnal migrants, and any disruption of it could be disastrous for a bird attempting to find its way to a destination that is thousands of miles away.

Seewagen then considered the unique physiological processes that allow birds to fuel those long-distance flights with fat rather than carbohydrates and thereby achieve a level of endurance that is nearly unrivaled in the animal kingdom. He found that mercury has a broad ability to inactivate enzymes, which could include the many enzymes that play critical roles in the rapid mobilization and catabolism of a bird's fat stores during flight. He then found evidence to suggest that mercury could limit the upregulation of transport proteins that are equally important to quickly getting those fatty acids into the cells of working muscles for use as energy. What's more, mercury has been found in non-migrating birds to inhibit the production of hemoglobin, which is responsible for carrying oxygen to the muscles for the aerobic conversion of fat into flight energy. Any such impediments to fatty acid catabolism would be sure to compromise the endurance of migratory birds that allows them to fly astonishingly long distances.

Next, the study found that mercury could spell additional trouble for birds during and immediately following flight by challenging their ability to maintain oxidative balance. Mercury is a well-known contributor to [oxidative stress](#) in birds and other vertebrates due to its ability to generate reactive oxygen species while simultaneously impeding antioxidant defenses. This double whammy raises concerns that birds exposed to mercury are sustaining additional oxidative stress beyond that which is already imposed by the extreme energetic demands of migration, and potentially later experiencing adverse effects on their health and fitness as a result.

Seewagen goes on to posit that [mercury exposure](#) could limit a bird's ability to rapidly replenish its fat stores during the brief stopovers that separate flights. The study points to the endocrine-disrupting effects of mercury that have been observed in many vertebrates, including humans, and the important role of hormones, such as insulin, in the physiological processes involved in fattening. Any inhibition of the refueling rates of birds could prolong their stopovers, delay arrival to their final destination, and ultimately limit their access to the highest quality mates and breeding/overwintering habitat.



## **New ESAA Members**

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ESAA's Board of Directors and staff would like to welcome the following new members:

### **Associate Member:**



### **Aspenleaf Energy Limited**

#2100 240 2 Ave SW

Calgary, AB T2P 4H4

**Phone:** (403) 404-9989

**Website:** [www.aspenleafenergy.com](http://www.aspenleafenergy.com)

Colleen Krahn, HSE & Regulatory Manager

**e-mail:** [colleen.krahn@aspenleafenergy.com](mailto:colleen.krahn@aspenleafenergy.com)

### **Profile:**

Aspenleaf Energy Limited is a private oil and gas exploration and production company that is pursuing an acquisition and exploitation strategy in western Canada. The company is focused on light oil and liquids-rich gas opportunities and is led by a team of seasoned industry professionals with extensive acquisition and operations experience

### **Full Members:**



### **Eosense Inc.**

13-7 Mellor Ave.

Dartmouth, NS B3B 0E8

**Phone:** Phone: (888) 352-8313

**Website:** [www.eosense.com/](http://www.eosense.com/)

Nick Nickerson, President

**e-mail:** [nick@eosense.com](mailto:nick@eosense.com)

### **Profile:**

Eosense is an environmental gas monitoring company. We provide robust monitoring solutions for environmental consultants, landowners and other stakeholders working with hydrocarbon contaminated sites. Our mission is to provide devices, data and visualization tools that will help academics and industry monitor greenhouse gases to manage climate change impacts. From environmental research scientists to upstream oil and gas service providers, we help our customers stay focused on their applications with easy-to-use hardware and software, expert knowledge, and enthusiastic support.



**GTS Geo-Technical Services Inc.**

18 Valley Pointe Bay NW  
Calgary, AB T3B 6B6  
**Phone:** (403) 991-2800

Glen Anhorn, Owner/Operator  
**e-mail:** [ganhorn@shaw.ca](mailto:ganhorn@shaw.ca)

**Profile:**

We specialize in environmentally responsible, specifically designed direct push technology and drilling equipment to obtain continuous, undisturbed soil samples, install groundwater monitoring wells and soil vapor recovery wells. We are proud to be the first company in Canadian service to be operating the Geoprobe 3230 DT Direct Push unit.



Hydrovac Waste Management

**Harbour Environmental Group Ltd.**

4544 Elgin Ave S.E.  
Calgary, AB T2Z 0E8  
**Phone:** (780) 812-0502

**Website:** [www.harbourenvgroup.ca/](http://www.harbourenvgroup.ca/)

Joseph Sullivan, President  
**e-mail:** [joseph@harbourenvgroup.ca](mailto:joseph@harbourenvgroup.ca)

**Profile:**

We are Western Canada's leader in Hydrovac waste management. Through quality customer service, industry-specific expertise and an eye to innovation, our team will provide you with cost-effective solutions to your environmental needs. Harbour Environmental Group is revolutionizing the Waste management industry. By 2019 we plan to reduce the impact on hazardous landfills by over a million tonnes of waste per year.



**Ram River Environmental Consultants Ltd.**

PO Box 1030  
Rocky Mountain House, AB T4T 1A7  
**Phone:** (403) 755-6297  
**Website:** <http://rrec.ca/>

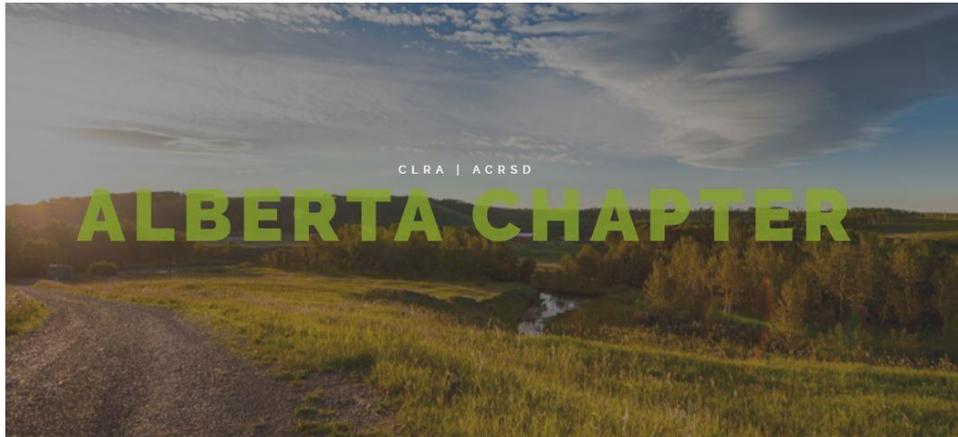
Blake Crawford, General Manager  
**e-mail:** [Blake.Crawford@rrec.ca](mailto:Blake.Crawford@rrec.ca)

**Profile:**

Ram River Environmental Consultants Ltd. (RREC) is a professional environmental consulting firm that provides reclamation program management and project supervision for upstream oil and gas clients in Alberta and Saskatchewan.

## Upcoming Events

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### CLRA: 2018 SOUTHERN ALBERTA FALL TOUR

The CLRA Alberta Chapter 2018 Fall Tour is now open for registration! Experience the Turner Valley Gas plant historical site and marvel at Western Sky's conservation efforts to protect this part of our province. For more information visit:

[HTTPS://CLRA.MEMBER365.COM/PUBLIC/EVENT/DETAILS/92245527709E24DF6C426E9EE4297CCD18FECFA7/1](https://CLRA.MEMBER365.COM/PUBLIC/EVENT/DETAILS/92245527709E24DF6C426E9EE4297CCD18FECFA7/1)

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### SMART Remediation Seminar Series 2019 CALL FOR SPEAKERS

SMART Remediation invites you to submit an abstract to present at our 2019 Seminar Series. Presentations should focus on the remediation of contaminated sites, showcase case studies, provide regulatory or industry perspectives or other similar topics related to addressing contaminated lands.

We invite abstracts on real-world applications on how to improve remedial success (i.e. better understanding/characterization), on new technology, complicated use of an existing technology (i.e. tricky excavations, pump and treat systems in complex environments), use of a combination of technologies, or other technical recommendations. Some topics of interest could include (but not limited to):

- Treatment Systems / Methods (Physical / Biological / Chemical / Thermal)
- Advances with in-situ and ex-situ remediation
- On-site excess soil treatment and management
- Risk Assessments and Remediation
- Sub-slab depressurization and vapour intrusion control
- Regulatory / Industry Perspectives on site remediation
- Solidification / Stabilization
- Natural Attenuation
- Advanced site characterization, delineation and monitoring
- Emerging Technologies

- Emerging Contaminants
- Interesting developments in the research field
- Case Studies

For more information on SMART Remediation and past topics, visit [www.smartremediation.com](http://www.smartremediation.com)

Abstracts should be no more than 500 words and include a presentation description and presenter biography. Also please include your preferred speaking location (Toronto, Ottawa or both locations). If you are interested in submitting an abstract or have any questions, please contact [Bruce Tunncliffe](mailto:Bruce.Tunncliffe). Please submit your abstract/presentation to [info@smartremediation.com](mailto:info@smartremediation.com) by October 19, 2018.

Toronto - January 24, 2019  
Ottawa - February 7, 2019

For more information, please visit [www.smartremediation.com](http://www.smartremediation.com)

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## ***Industry Positions Openings***

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***For more information visit ESAA's Job Board under the news section of [www.esaa.org](http://www.esaa.org)***

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### **Project Manager – Contaminated Sites**

**Term:** Full-Time  
**Number of Positions:** 1  
**Application Deadline:** October 2, 2018  
**Job Location:** Calgary



Dillon is a well established, employee-owned professional consulting firm operating across Canada and internationally. We provide a wide range of consulting and design services related to the infrastructure, real estate, resource, industrial and government sectors in Canada and abroad.

We are currently seeking candidates for the position of Project Manager (**Contaminated Sites**) in our **Calgary** office.

#### ***Responsibilities***

- Manage contaminated sites projects in Western Canada, including preparation of work plans with associated budgets and schedules.
- Manage health and safety onsite for field projects, coordinate field programs, prepare project contracts/agreements, complete sub-contractor oversight and organize/manage field teams.
- Respond to Request to Proposals related to contaminated sites work and develop strong client relationships.
- Understand environmental regulations related to contaminated sites work in Alberta and other jurisdictions (e.g., Federal Lands)
- Coordinate and manage environmental projects including environmental site assessments (ESAs), ongoing monitoring programs, hydrogeological studies, and site remediation projects.
- Design sampling programs for the collection of soil, groundwater, surface water and sediments.
- Work with remediation technical teams on development of site remediation options and/or contaminant site management options.
- Lead the management and interpretation of data, and preparation of technical contaminated site reports.

- Input to the career development of junior staff including providing technical direction, training recommendations, coaching and mentoring
- Contributions to Dillon's corporate profile through active participation in professional associations and committees.
- Business travel and field work may be required.

### **Qualifications**

- A degree in geology, environmental engineering, hydrogeology, or another relevant environmental science is required.
- Licensed to practice as a Professional Engineer (P. Eng.) or Geoscientist (P.Geo.) in the province of Alberta.
- Experience in contaminated site management under Provincial, Federal or Territorial regulatory frameworks.
- Experience with field techniques and sampling protocols.
- 7 to 10 years' experience, including consulting and/or environmental related fields.

### **Experience**

- Strong background in project management, contaminated site management, geosciences, and health and safety.
- Strong interpersonal, oral and written communication, and organizational skills.
- Demonstrated capabilities in multidisciplinary teamwork well as the ability to work independently.
- Strong working knowledge of the Microsoft Suite of products.
- Understanding of Surfer, GINT or database abilities will be an asset.

### **How to Apply Details:**

Apply online or by providing a cover letter and resume of education and experience to:

Recruitment Manager, Dillon Consulting Limited  
 800-235 Yorkland Blvd., Toronto, ON, M2J 4Y8  
 Fax: 416-229-4692  
[careers@dillon.ca](mailto:careers@dillon.ca)

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## **ENVIRONMENTAL PLANNER**

**Term:** Full-Time

**Number of Positions:** 1

**Application Deadline:** September 26, 2018

**Job Location:** Edmonton

**ENVIRONMENTAL PLANNER  
 ENVIRONMENT & LAND  
 ATCO ELECTRIC TRANSMISSION & DISTRIBUTION  
 EDMONTON, AB**

### **WHO WE ARE**

With approximately 7,000 employees and assets of \$22 billion, ATCO is a diversified global corporation delivering service excellence and innovative business solutions in Structures & Logistics (workforce housing, innovative modular facilities, construction, site support services, and logistics and operations management); Electricity (electricity generation, transmission, and distribution); Pipelines & Liquids (natural gas transmission, distribution

and infrastructure development, energy storage, and industrial water solutions); and Retail Energy (electricity and natural gas retail sales).

## **DESCRIPTION**

Reporting to the Supervisor, Environment and Land Planning, this position is responsible to provide environmental expertise specific to the planning of all key environmental components for Transmission and Distribution Electrical infrastructure. This position will also bring a specific skillset around wetland and watercourse management. This is a key competency required within the company and will act as an internal subject matter expert to provide guidance and planning advice to the Environment and Land Planning team. This includes assisting other groups and departments in Transmission and Distribution, Decommissioning, Line mitigation and Capital Maintenance projects.

## **RESPONSIBILITIES**

- Provide technical and regulatory support for projects in the planning and permitting stage including obtaining regulatory approvals.
- Keep abreast of regulatory developments, trends and changes and provide information to ATCO through regular communications.
- Represent ATCO Electric on key Provincial and Industry working groups pertinent to water management.
- Stay current in Government and industry standards and changes and ensure corporate compliance.
- Represent the Environment Department on a project team and identify environmental risks to the scope, schedule and estimates to Transmission and Distribution projects.
- Prepare Detailed Execution Plans and Estimates for the Environment & Land Department.
- Complete desktop and field level assessments of sensitive environmental features governed under the Water Act.
- Prepare and submit Water Act applications.
- Manage consultants and contractors to ensure environmental studies and reporting is completed on time and on budget in support of meeting regulatory requirements and company policy.
- Provide information searches, resources and advice on environmental matters.
- Assist in environmental activities such as orientation, training, audits, incident reporting, and liaison with regulatory agencies.
- Work with the Environmental Governance team on developing, revising, and implementing the Environmental Management System (EMS). Working with other departments, you will create documents including standards and procedures. Facilitate meetings and provide presentations in large or small group settings.
- Provide suggested edits to other departments on documents that discuss or involve environmental issues.
- Develop, edit and manage overarching environment policies and practices for wetland mitigation and vegetation management.
- Provide field support as required

## **QUALIFICATIONS**

- Professional Biologist or Professional Agrologist
- Qualified Aquatic Environmental Specialist or eligible to become one
- Meet the standard of an authenticating professional under the Wetland Professional Practice Standard
- 5-10 years of experience in wetland assessments and completing water act applications
- Working knowledge of vegetation assessment and identification
- Knowledge of planning, land-use and environmental principles.
- The ability to review and understand project work scope, execution strategies, construction activities and environmental impacts associated with Transmission and Distribution electrical utility development
- Experience in map and air photo interpretation, GIS software and systems, government land titles systems, and the use of these tools for data and report purposes.
- Working knowledge of SPIN II, AbaData, Oracle, SLIM, and SWMS
- Proven knowledge of and experience with relevant legislation at Municipal, Provincial, and Federal levels

- Training in leadership, project management, and incident investigation an asset.
- Working knowledge of ISO14001 an asset
- Excellent decision making, time management, organizational, and planning skills
- Highly effective communication, interpersonal and negotiation skills with the ability to establish excellent working relationships
- A valid Class 5 Operator's License issued by the Alberta Government.
- Ability to be on-call for 3-4 weeks a year for environmental incidents.

**How to Apply Details:**

Interested candidates should submit their resume through [www.atco.com/careers/](http://www.atco.com/careers/), quoting Requisition ID REQ 4636 on or before September 26, 2018.

We would like to thank everyone for their application; however, only those being considered for an interview will be contacted.

Final candidates will be required to undergo a Security Clearance Check.

Collection, use and retention of personal information will be in accordance with ATCO Group privacy policies and practices. By submitting your resume and personal information to the ATCO Group of Companies, and/or participating in a personal interview, you acknowledge and consent to the collection, use and disclosure of your personal information by the ATCO Group of Companies to determine your eligibility.

