Weekly NEWS

An Information Service for Alberta's Environment Industry — *The Week Ending January 11th, 2019*

Inside this Issue:

The ESAA Weekly News is published weekly by:

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Comments & submissions are welcome!

Please submit your announcement via e-mail to:
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EnviroTech 2019

April 23-25, 2019
Hyatt Regency Calgary

Call for Abstracts – Deadline Friday

ESAA invites you to submit technical abstracts for the 2nd Annual *EnviroTech 2019*. Abstracts are encouraged in, but not limited to, the following areas:

Water
- modelling, monitoring, quality, hydraulic fracturing, emerging contaminants, oilsands issues, saline, contamination, industrial re-use, wastewater treatment, risk management, groundwater, surface water, water wells, wetlands, produced water

Climate Change
- adaptation, alternative energy, carbon credits, energy efficiency, energy from waste, GHG monitoring and sampling, regulatory, sustainability, impacts of climate change, CleanTech

Air
- monitoring, modelling, sampling, quality, regulatory, noise management

Waste
- landfill design, landfill closure, hazardous waste management, emerging contaminants, resource recovery, regulatory

Testing
- laboratory testing and sampling, field testing and sampling, monitoring, analysis

Decommissioning
- management, safety, hidden dangers, technology

Indigenous
- engagement, stewardship

Other
- topics from areas not listed will also be considered

Abstracts should be no longer that 500 words (not including bio), should include a presenter biography and be submitted as a *Word Document* by no later than midnight on Friday, January 11th, 2019.

For full details, visit: http://www.esaa.org/envirotech/agenda/call-for-abstracts/

Sponsorship / Exhibitor Opportunities: Sponsorship and Exhibitor information is now available. Contact Lorrine Hamdon, lorrine@tl2.ca for more information.

Early Bird Registration: Early Bird Registration is now open. Register before January 31st, 2018 and **save 20%**. Register Now

ESAA is excited to announce the next ESAA group adventure ….

Beluga Whales
Only 25 spots available
July 5-6th, 2019
Churchill, Manitoba

ESAA has once again partnered with Calgary company **Classic Canadian Tours**. Enjoy a natural experience cruising among hundreds of free swimming beluga whales.

Beluga whales descend upon Churchill every summer and this two day tour is the perfect way to enjoy this amazing experience.

On day one, our charter flight departs at 6 AM from Calgary. After the flight you will venture out onto the Churchill River and experience the belugas, the historic Prince of Wales Fort and the beauty of Canada's north. That evening enjoy the midnight sun and the hospitality of the Lazy Bear Lodge.

On day two, the town of Churchill and the tundra is yours to explore. A guided cultural and heritage tour takes you to historic Cape Merry where the Churchill River spills into the bay. Short hikes can be taken along the coastline. That evening our charter returns to Calgary.

Trip Includes:

- Roundtrip chartered jet to Churchill from Calgary
- Inflight meals
- One night accommodation at the Lazy Bear Lodge
- Dinner & breakfast
- 3 hour beluga & Fort Prince of Wales
- Guided cultural and heritage tour
- Shuttle service to/from Churchill airport
- Luggage handling
- Special guest naturalist, Brian Keating

Full details, booking deadlines, early bird deadlines and pricing available online at:
www.esaa.org/beluga/

ALBERTA: REMEDIATION REGULATION IMPLEMENTATION

The Remediation Certificate Amendment Regulation (Remediation Regulation) will come into effect on January 1, 2019. This regulation sets out requirements for reporting new information and remedial measures with respect to substance releases.

The Remediation Regulation will be available on the Queen's Printer on or shortly after January 1, 2019: http://www.qp.alberta.ca/

In 2019, Alberta Environment and Parks will be accepting applications for Limited and Site-based Remediation Certificates and Tier 2 compliance letters. For more information on the Remediation Certificate Program and the application forms and guides, please refer to the following site:

http://aep.alberta.ca/land/programs-and-services/reclamation-and-remediation/contaminant-management/remediation/part-four-regulatory-closure.aspx

The *Environmental Protection and Enhancement Act* (EPEA) continues to require all substance releases that may cause, is causing, or has caused an adverse effect be remediated or managed in accordance with applicable legislation. EPEA also requires that any release of a substance into the environment that may cause, is causing or has caused an adverse effect be reported, as is further described in the Release Reporting Regulation.

More information about Alberta Environment and Parks' administration of the Remediation Regulation will be developed and released over the course of 2019, and will be made available at the following site: http://aep.alberta.ca/land/programs-and-services/reclamation-and-remediation/contaminant-management/remediation/part-four-regulatory-closure.aspx

Learn more about the regulatory amendments at the following free information sessions:

- January 30, Edmonton at McKay Avenue School, 10425 99 Avenue from 10:00am – noon
- February 5, Calgary at McDougall Centre, 455 6 St SW from 10:00am – noon
- February 6, Grande Prairie at the Coca-Cola Centre, 6 Knowledge Way from 9:30-11:30am

For more information on the information sessions, please refer to TalkAEP at:
https://talkaep.alberta.ca/RemediationGuide

Please register as space is limited by emailing Darice Stefanyshyn at darice.stefanyshyn@gov.ab.ca

All questions concerning the Remediation Regulation can be submitted to Land.Management@gov.ab.ca

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Environmental charges for Calgary company

The Alberta government has laid two charges against Agrium Inc. under the Environmental Protection and Enhancement Act related to offences that occurred on or about Jan. 30, 2017 at the Agrium Carseland Nitrogen Operations near Carseland.

Incident details

The charges are:

- Releasing or permitting the release into the environment of a substance in an amount, concentration or level or at a rate of release that causes or may cause a significant adverse effect, contrary to section 109(2) of the *Environmental Protection and Enhancement Act*.
- Failing to report a release to the Director as soon as that person knows or ought to know of the release, contrary to section 110(1) of the Environmental Protection and Enhancement Act.

The first court appearance is set for Jan. 24, 2019, at the Calgary Courts Centre.

Alberta Pesticide operator fined for environmental breach

A Westlock-area man has been convicted on one count of violating the Environmental Protection and Enhancement Act.

Bobby Hnatko has been fined $1,000, including a victim fine surcharge, for providing false or misleading information in relation to an investigation into incidents that occurred on July 18, 2016. Three other charges under the act against Hnatko and his company were withdrawn.

Hnatko is also prohibited from applying, with limited exception, any pesticide, as defined by the Environmental Protection and Enhancement Act, by aircraft for one year. He is also prohibited from owning, holding shares in or acting as director, officer, employee or agent of any corporation or other entity that applies pesticides by aircraft for one year.

Alberta Environment and Parks focuses on education, prevention and enforcement to ensure all Albertans enjoy a clean and healthy environment. The ministry enforces environmental regulations when individuals or companies fail to comply with legislation.

Syncrude pleads guilty to great blue heron deaths

Syncrude has been ordered to pay $2.75 million in federal and provincial penalties for the deaths of 31 great blue herons found at the Mildred Lake oil sands mine north of Fort McMurray in August 2015.

The company pleaded guilty in provincial court to one charge under Alberta's *Environmental Protection and Enhancement Act* (*EPEA*) and were assessed a provincial penalty of $975 000. The AER had laid the charges against Syncrude under *EPEA* in August 2017.

The birds died because they became oiled in an abandoned sump. The sump was built to collect process-affected water containing residual bitumen from a storage site at the mine. Syncrude has since taken the sump out of service, which AER staff have confirmed was done in compliance with requirements.

The provincial penalty of $975 000 under *EPEA* includes a fine of $25 000. The remaining amount will be directed through creative sentencing projects that will support biodiversity, habitat, and migratory pathways for birds and other wildlife in Alberta. To identify these projects, the AER will accept requests for proposal through the Government of Alberta's purchasing connection website.

The court order and agreed statements of facts, which include more information about the incident and penalties, are available on the AER's Compliance Dashboard.

For information on charges under the federal *Migratory Birds Convention Act*, contact Environment and Climate Change Canada.

CANADIAN FEDERAL GOVERNMENT PROPOSING NEW REGULATIONS ON CROSS-BORDER MOVEMENT OF HAZARDOUS WASTE

(Source: HazMat Magazine) Environment Canada and Climate Change (ECCC), which is the Canadian equivalent of the U.S. Environmental Protection Agency, recently released draft regulations to control the cross-border movement of hazardous waste and hazardous recyclable material. The regulations, if eventually promulgated, would repeal and replace the Export and Import Regulations, the Interprovincial Movement Regulations, and the PCB Waste Export Regulations. Although the proposed Regulations would maintain the core permitting and movement tracking requirements of the former regulations, the regulatory provisions would be amended to ensure greater clarity and consistency of the regulatory requirements.

Electronic Tracking System The proposed Regulations would provide flexibility for the electronic movement tracking system by no longer prescribing the specific form required for tracking shipments of hazardous waste and hazardous recyclable material. Instead, the proposed Regulations would require specific information to be included in a movement document (that can be generated electronically) and would allow movement document information to be passed on to different parties in parallel to facilitate the tracking rather than prescribing the handover of copies from one party to another.

Furthermore, given that movement documents would be able to be managed electronically, the proposed Regulations would no longer require that the movement document and permit physically accompany the shipment. The proposed Regulations would instead require parties to immediately produce the movement document and the permit upon request. Similar simplifications would be included in the provisions related to the movement document for interprovincial movements of hazardous waste and hazardous recyclable material.

The proposed Regulations would clarify the responsibility of a receiving (importing) facility to pass on information regarding the origin of the hazardous waste and hazardous recyclable material being transferred to a subsequent authorized facility for final disposal or recycling. Clarifications would also be made to the provisions for the return and rerouting of shipments to better align those requirements with current practice and ensure that confirmation of disposal from the alternative facility is also required in order to properly complete the tracking of those shipments.

Definitions of hazardous waste and hazardous recyclable material With respect to interprovincial movements, under the proposed regulations, the definitions of hazardous waste and hazardous recyclable material would be aligned with those of international movements. In addition, proposed changes to those definitions would ensure a more consistent application of regulatory provisions for all types of transboundary movements and would better align definitions with other jurisdictions and international agreements. Some of these proposed changes are listed below.

Toxicity characteristic leaching procedure The proposed Regulations would reference the toxicity characteristic leaching procedure (TCLP), in its entirety. This procedure is a standard test method used to evaluate the mobility of a number of contaminants that may be found in waste and recyclable material and, therefore, their potential for release. While making reference to the TCLP, the Export and Import Regulations exclude a step requiring that the size of particles in a sample be reduced to fit into the testing apparatus. In order to ensure that the method is used consistently, hazardous waste and hazardous recyclable material undergoing testing would need to be shredded to meet the TCLP's specific particle size requirement.

Electrical and electronic equipment Electrical and electronic equipment (EEE) is not currently listed as hazardous under the Export and Import Regulations and must meet other criteria to fall under the definitions of hazardous waste or hazardous recyclable material, which can be difficult to ascertain. The proposed Regulations would clearly designate "circuit boards and display devices and any equipment that contains them" as hazardous waste or hazardous recyclable material to be controlled when destined for specific disposal or recycling operations. The proposed Regulations would maintain the exclusion currently under the Export and Import Regulations for this type of hazardous waste and hazardous recyclable material moving within OECD countries (including moving between provinces and territories in Canada).

Mercury The proposed Regulations would remove the small quantity exclusion for hazardous waste and hazardous recyclable material containing mercury. Any waste or material containing any amount of mercury that meets the definitions of hazardous waste or hazardous recyclable material would be subject to the regulatory provisions for both international and interprovincial movements.

Batteries Batteries are not currently listed as hazardous under the Export and Import Regulations and must meet other criteria to fall under the definitions of hazardous waste or hazardous recyclable material. Some types of batteries are clearly covered by the definitions; however, for some other types it is not clear. The proposed Regulations would clarify that all types of batteries (i.e. rechargeable and non-rechargeable) being shipped internationally or interprovincially for disposal or recycling are included in the definitions of hazardous waste and hazardous recyclable material.

Waste and recyclable material generated on ships The proposed Regulations would add a new exclusion to clarify that waste or recyclable material generated from the normal operations of a ship is not captured by the definitions of hazardous waste and hazardous recyclable material. This exclusion would further harmonize the proposed Regulations with the Basel Convention (which excludes this waste) and the *Canada Shipping Act, 2001* where this waste is already covered.

Residual quantities The proposed Regulations would add a new exclusion for waste or recyclable material that is to be transported in a container after the contents of that container have been removed to the maximum extent feasible and before the container is either refilled or cleaned of its residual content. This exclusion would clarify that such waste or recyclable material is not captured by the definitions of hazardous waste and hazardous recyclable material.

Recycling operation R14 Over the years, ECCC has received numerous questions regarding recycling operation R14 found in Schedule 2 of the Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations. Section 2 R14 reads as follows : "Recovery or regeneration of a substance or use or re-use of a recyclable material, other than by any of operations R1 to R10". This recycling operation is not included in the Basel Convention or the OECD Decision. ECCC is proposing to delete this part of operation R14 to remove uncertainty about its application. This change may result in some recyclable material no longer being captured and defined as hazardous. For example, a used material that is to be used directly in another process that is not listed as a recycling operation would no longer be captured.

This change would further align regulatory provisions with international guidelines under the Basel Convention.

Proposed changes regarding waste containing PCBs The regulatory provisions for the export of waste containing PCBs would be streamlined and integrated into those for hazardous waste and hazardous recyclable material. This would include removing the partial prohibition on exports of waste containing PCBs in a concentration equal to or greater than 50 mg/kg to allow controlled exports beyond the United States. Therefore, waste and recyclable material containing PCBs in a concentration equal to or greater than 50 mg/kg would be able to be exported provided a permit is obtained and all of the conditions of the proposed Regulations are met.

Proposed changes to improve the permitting process The proposed Regulations would no longer require the name of the insurance company and the policy number for the exporter, the importer and carriers with the notification (i.e. permit application). In addition, copies of the contracts would no longer need to be provided with the notification. In both cases, the applicant would be required to provide a statement to the effect that valid insurance policies and contracts are in place and to keep proof of insurance coverage and copies of contracts at their place of business in Canada for five years.

The proposed Regulations would require a new notification for any changes in information, other than correcting clerical errors, on a permit.

The proposed Regulations would increase the maximum duration of a permit from 12 months to 3 years, consistent with international agreements, for the movement of hazardous recyclable material directed to pre-consented facilities within OECD countries.

The proposed Regulations would set out conditions under which a permit may be refused, suspended or revoked.

Impacts on Business – Costs and Operations According to the consultation documents prepared by ECCC, the proposed Regulations, if promulgated, would affect 295 companies, 281 of which would be considered small businesses. For these small businesses, the proposed Regulations are expected to result in incremental compliance and administrative costs of $296,000 in average annualized costs, that is, $1,070 per small business.

If the proposed Regulations are implemented, it would result in an clarifications to the definitions of hazardous waste and would ensure a more consistent application of regulatory provisions. In addition, the proposed Regulations would help minimize environmental impacts outside Canada by ensuring that exported hazardous waste and hazardous recyclable material reach the intended disposal or recycling facilities. The present value of compliance and administrative costs of the proposed Regulations would be $2.5 million in 2017 Canadian dollars, discounted at 3% to 2018 over a 10-year period between 2021 and 2030.

The proposed Regulations would impose incremental administrative costs on industry attributable to the completion of additional movement documents for interprovincial movements of hazardous waste and hazardous recyclable material. Provincial and territorial authorities that are using a tracking system would achieve small savings if they decided not to request movement document information. The present value of administrative costs of the proposed Regulations are expected to be $460,000 in 2017 Canadian dollars, discounted at 3% to 2018, over a 10-year period between 2021 and 2030.

Public Consultation Public comments to the proposed Regulations are being accepted by ECCC until up to mid-February. Any person may file with the Minister of the Environment comments with respect to the proposed Regulations or a notice of objection requesting that a board of review be established under section 333 of the *Canadian Environmental Protection Act, 1999* and stating the reasons for the objection. All comments and notices must cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be sent by mail to Nathalie Perron, Director, Waste Reduction and Management Division, Environmental Protection Branch, Department of the Environment, 351 Saint-Joseph Blvd., Gatineau, Quebec K1A 0H3 (fax: 819-938-4553; email: ec.mt-tm.ec@canada.ca).

CLEAN-UP OF POTENTIAL CFL STADIUM SITE FOR HALIFAX SCHOONERS

(Source: HazMat Magzine) Shannon Park is located in Dartmouth, Nova Scotia, across the bay from Halifax. It is the the site of a former military housing complex. Environmental studies show that the site is contaminated with approximately 24,000 tonnes of soil containing arsenic and hydrocarbons.

The site has been empty since 2003. In 2014, it was purchased by Canada Lands Company, a federal crown corporation. In 2017, all buildings on the site were demolished.

In November 2018, the federal government issued tender documents for remediation of the site with the goal of it being cleaned up by the spring of 2019.

In December, it was announced that Dexter Construction Company Ltd. was recently awarded a contract to excavate, transport, and dispose of the contaminated soil from the Shannon Park site. They are also required to backfill the excavated area with clean fill as part of the contract. The value of contract is $900,933.

Dexter Construction, located in nearby Bedford, is the largest civil contractor in Nova Scotia with over 40 years of experience in infrastructure, mining, and the environment. Dexter Construction Company Limited is a subsidiary of Municipal Enterprises Limited and is the construction arm of the Municipal Group of Companies.

Previous environmental projects that Dexter Construction has been involved with include the Halifax Regional Municipality landfill development and the Halifax Harbour sewage treatment system construction.

With respect to the site being the home to a new stadium for the Halifax Schooners of the Canadian Football League, there is much to be done including the football team purchasing the land, raising $200 million to build the stadium, and getting approval for construction.

RESEARCH PROJECT - BRANDON UNIVERSITY – SURVEY PARTICIPATION REQUESTED

Brandon University's Rural Development Institute is looking for testimonies from Small and Medium Enterprise owners or representatives about their hiring motivations. The goal of this survey is to inform policy-making to foster the recruitment of newcomers and facilitate their integration in Canada. If your business has less than 500 employees and has hired newcomers within the last five years, you are encouraged to fill out the survey. Contact information and additional project details can be found at the following link [Insert PDF Doc].

Click here to complete the survey:

Survey link: **https://www.brandonu.ca/rdi/employerssurveyab/**

Upcoming Events

AGAT Laboratories

ENVIRONMENTAL FORENSICS SYMPOSIUM

Calgary, Alberta
Environmental Stream
January 24th, 2019, 7:30 a.m. - 3:05 p.m.
Fairmont Palliser, 133 - 9th Avenue SW

SYMPOSIUM OVERVIEW

AGAT Laboratories' **Environmental Forensics Symposium** offers the opportunity for industry professionals to join together to learn and discuss relevant topics in the Energy, Environmental, Industrial and Health and Safety Sectors. Additionally, it offers an opportunity to present their unique challenges and questions to our industry leaders from a variety of backgrounds such as governmental, laboratory, energy and environmental consulting professions.

FULL DAY Symposium registration opens at 7:30 AM on January 24th and will include a number of presentations, breakfast, lunch and networking breaks throughout the day. Registration deadline is January 22nd, and delegate passes are $125.00 (includes GST).

WHO SHOULD ATTEND

This event is highly recommended for all industry professionals who have an interest in environmental, energy, and health and safety. This includes, engineers, producers, operators, environmental managers, environmental consulting firms, property developers, governmental/regulatory bodies, engineering firms and more.

January 24th - Calgary

- **Recent Trends in Environmental Prosectuions,** Brad Gilmour, Partner, Bennett Jones LLP
- **New AEP and AER Regulatory Requirements When Using the BIC Scale for Site Closures in Alberta,** Francine Kelly-Hooper, Ph.D., Environmental Contaminant Scientist, Stantec, and Gordon Dinwoodie, P.Ag., Reclamation Policy Specialist, Alberta Environment and Parks
- **Two-Dimensional Gas Chromatography Analytical Methods for Environmental Sampling Canada,** Matthew Endsin, M.Sc., Forensic Science, AGAT Laboratories
- **Environmental Forensics of Persistent Organic Pollutants: Source & Age Dating,** Gwen O'Sullivan, Ph.D., Associate Professor, Mount Royal University
- **Applications of Conventional and Comprehensive Two-Dimensional Gas Chromatography in Oil Spill Forensics,** Jagos R. Radovic., Owner/Manager, Avantise Consulting
- **A Review of Oil Spill Forensics with Personal Experiences,** Merv Fingas, Ph.D., Scientist, Spill Science
- **Environmental Forensics Case Studies Using Reliable Chemistry and Big Data,** Court Sandau, PhD, P.Chem, Principal, Chemistry Matters
- **Ask The Expert: Open round Table Discussion with Panel**

CLICK HERE TO REGISTER

JOIN ECO CANADA FOR AN EVENING OF NETWORKING WITH FELLOW ENVIRONMENTAL PROFESSIONALS IN EDMONTON ON WEDNESDAY, JANUARY 23.

As part of ECO Canada's 2019 roadshow, we are offering an opportunity for environmental professionals in the area to connect! Come meet your peers and visit us to see how we can help you on your environmental career journey.

Who should attend:

- Environmental professionals, Certified EP, EPt and EP Auditors, ECO+ members, Consultants, Government, Academics, Environmental students, Not-for-profit organizations

Agenda

- 4:30pm - Registration opens, networking opportunity
- 5:30pm - Formal program begins
- 6:15pm - Networking opportunity
- 7:00pm - Brewery tour (see notes below)

Food will be served when the doors open. Cash bar will be available. Limited space is available, registration is required to attend this event. Business casual attire recommended. By attending this event, you will qualify for 2 professional development credits towards your EP/EPt certification.

Brewery Tour

As a fun addition to this event, we will be offering you an opportunity to explore the Yellowhead Brewery through a guided tour! The tour is optional but included with the ticket price. Please indicate on your registration details if you will be attending this portion.
For more information visit: https://www.eventbrite.ca/e/environmental-professionals-networking-event-edmonton-2019-tickets-53834293822 Special 10% discount for ESAA Members – Use Code: ECOESAA10.

2019 Alberta Soil Science Workshop

Calgary (at the Delta Calgary South – 135 Southland Drive SE) from February 19-21st , 2019.
Registration is $350 (for students it is $300) and people can register for the event on our ASSW website: http://soilsworkshop.ab.ca/

Foundational Course in Contaminated Sites - Discounted Rate

24th Annual Contaminated and Hazardous Waste Site Management Course
Toronto, Ontario, Canada June 3-7, 2019.

We would like to offer ESAA and its members a discounted rate for our foundational course in the contaminated site course taken by professionals who manage, regulate, investigate, remediate, or are impacted by contaminated sites. Over the last 23 years, we have provided a strong foundation for Canadians and professionals worldwide.

For the full five days, the discounted rate of $1,469 (+HST) would be applicable until February 28th, 2019. I would be happy to further discuss any questions that may arise. More information can also be found on our website www.contaminatedsite.com.

Subsoil Salinity Tool (SST) Version 3.0 Upcoming Course March 5 – 8, 2019

Full 3.5 day certification course:
The Alberta Environment and Parks (AEP) Subsoil Salinity Tool (SST) Version 3.0 is a software tool used to generate Tier 2A and 2B Subsoil Remediation Guidelines (SRGs) for chloride, SAR and sodium. This 3.5 day course includes three days of instruction on theory and case studies, with the exam on the morning of the fourth day morning (four-hour comprehensive exam). Students achieving a passing mark (80%) will obtain AEP certification and a certificate number registered at AEP for submitting SST derived SRGs. The course will include instruction on the newest Version 3.0 including the subsoil SAR/sodium module, along with some comparisons to Version 2.5.3 to provide context for the various updates/upgrades in Version 3.0. Successful completion of the course including passing the exam will result in an SST certificate applicable to Version 3.0 as well as Version 2.5.3. Cost for the full certification course is $1200 + GST.

Calgary: **March 5 – 8, 2019**
Location in Calgary TBD

For further information, please email SSTHelp@eqm.ca or contact Equilibrium Environmental at 403-286-7706 or visit www.eqm.ca for future course dates and a copy of the registration forms.

SMART Remediation Seminar Series 2019
CALL FOR SPEAKERS - ALBERTA
(Calgary & Edmonton)

We are very pleased to announce the upcoming SMART Calgary and SMART Edmonton seminars in March 2019!

SMART Remediation invites you to submit an abstract to present at our 2019 Alberta 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

Abstracts should be no more than 500 words and include a presentation description and presenter biography. Also please include your preferred speaking location (Calgary, Edmonton or both locations). If you are interested in submitting an abstract or have any questions, please contact Bruce Tunnicliffe. Please submit your abstract/presentation to info@smartremediation.com by January 22, 2019.

Calgary - March 19, 2019 / Edmonton - March 20, 2019
For more information, please visit www.smartremediation.com

WINTER 2019 Course Calendar
ALL courses are available as 'open studies' with no prerequisites and no program admission required.

Applied Soil Chemistry* (39 hours) January 21-25
https://www.ualberta.ca/extension/continuing-education/courses/EXERM-4282
Instructor: *Salim Abboud*

This course will introduce students to the soil principal reactive chemical constituents and their processes. Topics will include an introduction to the soil solid and liquid components (chemical composition, mineralogy, organic matter and soil solution); and description of important soil chemical processes and their relevance to environmental and agricultural applications (mineral stability and weathering, oxidation-reduction, surface adsorption and exchange, colloidal behaviour and soil acidity and salinity).

Ecosystems & Environmental Management (24 hours) January 26-February 3
https://www.ualberta.ca/extension/continuing-education/courses/EXERM-4250
Instructor: *Fariha Abedin*
Ecosystems provide resources and services essential to our survival, and our actions have varied and significant impact on them. This course will include the study of ecology and environmental management, incorporating the fundamental components of ecosystems and how they interact. Students will learn about the components of ecosystems: biotic and abiotic, ecosystem development and functions, ecosystem cycles, and the foundations of population, community, and disturbance ecology. This information will be utilized to examine questions around land use, environmental management, economic impact, and the roles environmental ethics play in answering them.

Applied Vegetative Reclamation* (39 hours) February 4-8
https://www.ualberta.ca/extension/continuing-education/courses/EXERM-4265
Instructor: *Ann Smreciu*
This course will cover methods for establishing native plant communities on disturbed lands to fulfill reclamation goals and address such concerns as erosion, wildlife habitat, first nations cultural values and recreational desires. Topics will include planning, site preparation, plant species selection, establishment methods, maintenance, monitoring and criteria for success. Plant identification of native plants and invasive species will be introduced. Plant material acquisition, seed and propagule harvest and storage, and propagation methods will be discussed in some detail.

Applied Soil Physics* (39 hours) ***Calgary Course*** February 11-15
https://www.ualberta.ca/extension/continuing-education/courses/EXERM-4281
Instructor: *David Chanasyk*
This course will introduce students to the basic concepts of applied soil physics, with an emphasis on the quantitative aspects. Basic physical aspects of both the solid and liquid phases of soils as well as how water is held by soils and how it moves through soils, will be covered. The course will examine the link between the soil water regime and processes within the hydrologic cycle, with emphasis on infiltration and the soil physical properties affecting this key hydrologic process. Soil management challenges that involve soil physics and how to manipulate soils to enhance their physical properties will also be examined.

Applied Hydrology* (39 hours) February 22 – March 3
https://www.ualberta.ca/extension/continuing-education/courses/EXERM-4256
Instructor: *Manas Shome*
This course will introduce the practice of surface water hydrology as water plays a role in the development of most human activities. Various land phase hydrologic processes will be described. Methods of development of intensity-duration-frequency curves for rainfall, estimation of rainfall at ungauged locations, stream flow measurement methods, flood frequency analysis, regional frequency analysis for estimating stream flows at ungauged locations and risk assessment in hydrologic design will be discussed. Approximate methods for estimating storm water storage requirements for urban development and various hydrologic and hydraulic modes used in the professional domain will be introduced. Based calculations within various hydrologic procedures as required for addressing surface water hydrology issues will also be covered. Completion of EXERM 4250, EXERM 4252 and EXERM 4307 is strongly recommended.

Environmental Project Management (24 hours) March 14-16
https://www.ualberta.ca/extension/continuing-education/courses/EXERM-4258
Instructor: *David Ho*
Addressing environmental impact is critical for project success. This course covers engineering and technology problem solving techniques including issue identification, situation monitoring, outcome projection, release and escape control, treatment, and prevention methods including source abatement, minimizing risk, and process modification. Concepts such as planning, implementation, and documentation of requirements will also be covered. This course approaches issues uniquely from both civil and regulatory perspectives; beyond the focus of time and cost control within conventional project management. Practical case study examples and scenario acting will reinforce learning.

Environmental Impact Assessments (21 hours) March 21-23
https://www.ualberta.ca/extension/continuing-education/courses/EXERM-4268
Instructor: *Judith Bennett*

This course will present the purpose for an environmental impact assessment, the process from initiation to completion of the EIA, and its place in the application for a major project. Assessment requirements detailed within provincial and federal legislation and regulations will be reviewed. Requirements and processes for completing a cumulative environmental assessment within the EIA will be described. Differences and similarities between assessments for projects falling under Alberta's Environmental Protection and Enhancement Act and the Canadian Environmental Assessment Act will be illustrated. Linkages among these Acts and other legislation in Alberta (Water Act, Public Lands Act) and Canada (Fisheries Act, Navigable Waters Protection Act) will be discussed. Requirements for public and Aboriginal consultation, and the means to gather stakeholder input into the EIA process and outcomes will be outlined. Discussion of the components of the EIA that may lead to approval conditions and requirements, and how to address these in a way that sets the stage for future corporate action and government oversight. Use of the EIA as a tool in the overall environmental management of the project will also be discussed.

*****Course(s) recognized by the **Alberta Institute of Agrologists** as senior level agrology courses related to entrance into the profession, and to augment core knowledge requirements related to a practice area, as well as continuing competence and professional development options.

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Our courses are also recognized by a variety of organizations for professional and continuing education credits including:
- APEGA, ASPB, CAPF, ASET, ECO Canada

Want more information? Please contact us at: **email:** erm@ualberta.ca **Phone:** 780.492.3158 (or) 780.492.5532

Industry Positions Openings

For more information visit ESAA's Job Board under the news section of www.esaa.org

Intermediate Environmental Scientist/ Technologist

Term: Contract
Number of Positions: 1
Application Deadline: January 19, 2019
Job Start Date: Immediate
Job Location: Calgary

RemedX Remediation Services Inc. has been providing environmental consulting and waste management services to the upstream oil and gas industry for over 20 years. We are Alberta based and operate with the highest appreciation for the values of our local communities, industries and environment. Our focus for both our consulting projects and waste

management services is to ensure that we provide quality, cost efficient service in a manner that best achieves our clients needs.

RemedX has an immediate opening for an Intermediate Environmental Scientist/ Technologist in our Calgary office. We are looking for someone with strong field and technical expertise to join our remediation/ reclamation team. The role is primarily field based with office time as necessary to support reporting requirements.

Responsibilities:

- Supervise the completion of remediation and reclamation projects
- Assist in planning and coordination of fieldwork
- Conduct field programs for soil and groundwater sampling
- Prepare and compile technical reports
- Collect and compile data from field for reporting
- Conduct Phase 2 ESAs
- Offer support for a variety of projects, as required

Qualifications/ Experience:

- Degree or technical diploma in an environmental science or related field
- Minimum 2-3 years experience completing similar work
- Have extensive ground disturbance experience
- Knowledge and experience with Alberta Tier 1 Remediation Guidelines
- Strong knowledge of Wellsite Reclamation Criteria for Forested Lands and Cultivated Lands
- Proficiency in computer software and industry related programs
- Solid understanding and experience in the upstream oil and gas sector
- Valid standard industry safety tickets (e.g. H2S Alive, eGSO, ground disturbance, first aid, etc.)
- Experience and certification to operate ATV/UTVs
- Must possess a valid Class 5 drivers license
- Membership with a professional association is an asset

The successful candidate will:

- Provide strong technical skills in the role as site supervisor
- Have experience directing and coordinating heavy equipment contractors
- Have strong problem-solving skills and be adaptable to changing conditions/ resources
- Be comfortable working on site for extended periods, including in remote areas
- Have the ability to travel and work on a completion focused schedule
- Be organized and a strong communicator
- Maintain a focus on quality and meeting client objectives
- Be safety focused
- Able to work effectively and cooperatively as a team member, team leader and independently
- Work closely with project managers and management to help coordinate and complete programs and tasks

Application Details: Please send all resumes to contact@remedx.net. We thank all applicants for their interest, but only candidates selected for an interview will be contacted.

Junior/Intermediate Hydrogeologist

REMED X
REMEDIATION SERVICES INC.

Term: Contract
Number of Positions: 1
Application Deadline: January 19, 2019
Job Start Date: Immediate
Job Location: Calgary

RemedX Remediation Services Inc. (RemedX) is a professional environmental consulting firm, based in Calgary Alberta. Our main areas of expertise are in the soil and groundwater remediation, site reclamation and waste management service sectors, primarily focused on our oil and gas clientele.

RemedX has an immediate opening for a Junior/Intermediate Hydrogeologist in our Calgary office. The position is contract/ maternity leave, with potential for extension or full time employment. The role involves both field work and office work for the execution of monitoring and assessment programs.

The role includes performing the implementation of investigations, monitoring and remedial programs primarily related to contaminant hydrogeology. You will communicate with clients and regulatory bodies, prepare quotations, budgets and work plans and co-manage projects to ensure they are completed on budget and in a timely manner. As part of a small consulting team, you will also provide support and assist with other monitoring and assessment programs as necessary. Participation in field assessments often under difficult terrain and weather conditions could be required. The position requires a combination of office and field work (50/50 split) in a consultancy environment.

Responsibilities

- Compilation and interpretation of site hydrogeological conditions from geological maps, reports, survey plans, air photos as well as collected physical and chemical data;
- Conduct hydrogeological investigations (including contaminated sites), monitoring programs and perform studies for the evaluation of environmental risk assessment for regulatory requirements;
- Complete, analyze and interpret in-situ groundwater tests (e.g. slug and pumping tests);
- Completion of Phase 2 Environmental Site Assessments including monitor well installations;
- Preparation of technical reports, proposals, work plans and budgets;
- Travel to jobsites on a regular basis and possess a valid, non-GDL Class 5 Driver's licence.
- Offer technical support on a variety of other projects

Qualification and Experience Requirements:

- Bachelors' degree in Earth Sciences with specialization in Hydrogeology, or Water Resources, Civil or Geological Engineering;
- Excellent technical report writing skills and very strong communication (written and oral);
- Minimum of 1 year of Canadian experience, preferably within and oil and gas environmental consulting framework;
- Alberta Tier 2 risk assessment training and registration to use the SST Tool is an asset;
- Proficient with MS Office applications, use of groundwater modeling programs (ModFlow, Aquifer Test, Vistas, etc.) and Rockware software would be an asset;
- Good working knowledge of provincial environmental legislation;
- Experience in performing environmental site investigations (Phases I through III) including overseeing site remediation activities is an asset.
- Membership or eligibility with a professional association is an asset

Application Details: Please send all resumes to contact@remedx.net. We thank all applicants for their interest, but only candidates selected for an interview will be contacted.