RPIC Real Property Institute of Canada | IBIC Institut des biens immobiliers du Canada

Federal Contaminated Sites National Hybrid Workshop / Atelier National Hybride sur les Sites Contaminés Fédéraux

Tuesday, Nov 28: Frontenac Foyer **07:00 PM - 10:00 PM**

Welcome Reception

Réception de bienvenue

Frontenac Foyer

Wednesday, Nov 29: Frontenac Foyer **08:00 AM - 04:45 PM**

Check In/Registration

Enregistrement/Inscription

Frontenac Foyer

Wednesday, Nov 29: Frontenac Foyer & Ballroom **08:00 AM - 09:00 AM**

Breakfast

Petit déjeuner

Frontenac Foyer & Ballroom

Wednesday, Nov 29: Frontenac Ballroom **09:00 AM - 10:15 AM**

Opening Remarks & Opening Keynote: Dark Days At Noon: The Future of Fire in a Warming World

Discours d'ouverture Des jours sombres à midi : l'avenir du feu dans un monde qui se réchauffe

Frontenac Ballroom

Claudia Beauchemin
Manager National Centre of Expertise - Contaminated Sites, Public Services and Procurement Canada

Craig Wells
VP Business Development, Parsons

Edward Struzik
Fellow, Queen's Institute for Energy and Environmental Policy, School of Policy Studies

Canada's 2023 wildfire season was the most destructive ever recorded, with more than 6,100 fires torching a staggering 17,577,396 hectares. The area burned was larger than the size of New Brunswick, Nova Scotia and Prince Edward Island combined, and more than double the 1995 record. Unlike previous years, this year's fires were widespread, burning forests from the Pacific to the Atlantic and from the United States border to the Yukon and Northwest Territories. Unlike any other year, there were more than a thousand fires still burning in mid-October when the fire season is typically over.Approximately 12 per cent of the …

Wednesday, Nov 29: Foyer & Pier 6 **09:00 AM - 04:45 PM**

Poster Sessions

Présentations d' affiches

Foyer & Pier 6

We encourage you to check out our poster sessions located in the Foyer & Pier 6 and virtually through the mobile app!--Nous vous encourageons à visiter nos présentations d'affichage situées dans le Foyer et le Quai 6 et virtuellement grâce à l'application mobile!

Wednesday, Nov 29: Pier 9 **09:00 AM - 04:45 PM**

Demo Corner

Coin démo

Pier 9

Check out our Demo Corner in Pier 9! To learn more, click here. --Venez découvrir notre coin démo sur le quai 9 ! Pour en savoir plus, cliquez ici.

Wednesday, Nov 29: Frontenac Foyer & Queens Quay **10:15 AM - 10:45 AM**

Break & Exhibit Hall

Pause et salle d'exposition

Frontenac Foyer & Queens Quay

Wednesday, Nov 29: Harbour A **10:45 AM - 11:15 AM**

Inuit Engagement: A case study of the Coral Harbour Project

La mobilisation Inuit : Une étude de cas du projet Coral Harbour

Harbour A | Indigenous Perspectives

Charlotte Lamontagne
Director, Contaminated Sites Program, Nunavut, RCAAN - CIRNAC

Historically a Canadian military staging area, the Coral Harbour site has been left with significant contamination. A central tenet of our project has been meaningful engagement with the affected Inuit community of Coral Harbour. Recognizing the importance of Inuit knowledge and local expertise, we have opened channels for dialogue. This approach has not only strengthened relationships but also offered critical insights into contamination challenges beyond the initial project scope. Through this engagement, additional contaminated sites, identified directly by community members, have come to our attention. We have honoured the trust shown in us by responding proactively, expanding the Coral Harbour …

Wednesday, Nov 29: Pier 2/3 **10:45 AM - 11:15 AM**

Novel In-situ Microbial Treatment of Metals in Mine Impacted Water – Silver King Mine, United Keno Hill Mines (UKHM), Yukon

Nouveau traitement microbien in situ des métaux dans les eaux d'exhaure - Mine Silver King, United Keno Hill Mines (UKHM), Yukon

Pier 2/3 | Remediation

Andrew Gault
Director of Geosciences, Ensero Solutions

Justin Pigage
Senior Project Engineer, CIRNAC

The historical United Keno Hill Mines (UKHM) site within the Traditional Territory of the First Nation of Na-Cho Nyäk Dun (FNNND) in central Yukon received a Water Licence in April 2023, the final regulatory document required for site reclamation to proceed. Part of the reclamation plan involves in-situ microbial treatment of metals in two flooded mine workings, a semi-passive process that provides a low cost, low maintenance alternative to active treatment. The treatment involves the addition of organic carbon (e.g., sugars, alcohol) to stimulate naturally occurring sulphide-producing microbes present in flooded workings. The sulphide generated by these bacteria reacts with …

Wednesday, Nov 29: Pier 4 **10:45 AM - 11:15 AM**

Remediating the Faro Mine Site - One of the Largest Contaminated Sites in Canada - Where we've been and Where we're Going

Assainissement du site minier de Faro - L'un des plus grands sites contaminés du Canada - Où nous en sommes et où nous allons

Pier 4 Northern

Alain Therriault
Manager, Policy & Governance Faro Mine Remediation Project, CIRNAC

Geoff Karcher
Director, Faro Mine Remediation Project, CIRNAC

This presentation sets the context for the Faro Mine Remediation Project. It will include a high-level virtual site tour while also providing an update on the overall advancement of remediation planning, highlighting opportunities, challenges, and lessons learned to date as well as considering the challenges anticipated as we move toward implementing the proposed remediation plan.--Cette présentation définit le contexte du projet d'assainissement de la mine de Faro. Elle comprendra une visite virtuelle de haut niveau du site tout en faisant le point sur l'avancement général de la planification de l'assainissement, en soulignant les opportunités, les défis et les leçons tirées …

Wednesday, Nov 29: Pier 5 **10:45 AM - 11:15 AM**

Lessons Learned from a National Defence Site in Alberta: Investigating PFAS at a Former Fire Fighting Training Area

Leçons tirées d'un site de la défense nationale en Alberta : enquête sur les SPFA dans une ancienne aire d'entraînement à la lutte contre l'incendie

Pier 5 PFAS

Kate Lindfield
Senior Geologist, SLR Consulting (Canada) Ltd.

Rebecca Derk
Senior Project Manager, DND

Fire-fighting training areas (FFTAs) exist at military bases, civilian airports and at many other sites where petroleum products are stored and used in bulk. The deployment of PFAS-containing Aqueous Film Forming Foam at Canadian military bases during emergency response events and routine training exercises is expected to have started in the early 1970s. Due to the repeated nature of training exercises over time and volumes of AFFF used/stored in these areas, the highest PFAS concentrations on a site are often encountered at FFTAs. Our site, a National Defence Site in Alberta, has three FFTAs, the largest of which was operated …

Wednesday, Nov 29: Pier 7/8 **10:45 AM - 11:15 AM**

Getting back to the Beach – A Beach Use Human Health Risk Assessment at Plumper Bay, Victoria, BC.

Retour à la plage - Évaluation des risques pour la santé humaine liés à l'utilisation de la plage à Plumper Bay, Victoria, BC

Pier 7/8 Risk Assessment

Joline Widmeyer
Environmental Toxicologist, SLR Consulting

Sam Reimer
Technical Director, Risk Assessment, SLR Consulting (Canada) Ltd.

Scott Irwin
Coordinator, Environmental Services, Defence Construction Canada

In May 2016 a barge carrying fuel tanks ruptured and released approximately 30,000 L of diesel into Plumper Bay, located in Esquimalt Harbour, Victoria, BC. The spill resulted in a water and shoreline closure of the beach by the First Nations Health Authority (FNHA) and a fishing closure by Fisheries and Oceans Canada (DFO). Esquimalt Harbour has also been subject to long-time legacy contamination associated with industrial and commercial marine operations and has been under a DFO shellfish/finfish closure since 2009. Plumper Bay includes the Esquimalt and Songhees Nations waterlot which is administered by Department of National Defence (DND). SLR …

Wednesday, Nov 29: Harbour A **11:25 AM - 11:55 AM**

Reconciliation Through Socio-Economic Opportunities with Giant Mine Remediation Project

Réconciliation par le biais d'opportunités socio-économiques grâce au projet d'assainissement de la mine Giant

Harbour A Indigenous Perspectives

Andrei Torianski
Economic Development Manager, Giant Mine Remediation Project - CIRNAC

Isabelle Bilous
Procurement Team Leader, Public Services and Procurement Canada

Giant Mine Remediation Project recognizes the potential impact of the project's remediation activities on the regional economy and labour supply. This session focuses on the project's key socio-economic activities and the importance of a collaborative-approach needed to promote capacity-building and to maximize opportunities stemming from remediation activities in the North.--Le projet d'assainissement de la mine Giant reconnaît l'impact potentiel des activités d'assainissement du projet sur l'économie régionale et l'offre de main-d'œuvre. Cette session se concentre sur les principales activités socio-économiques du projet et sur l'importance d'une approche collaborative nécessaire pour promouvoir le renforcement des capacités et maximiser les opportunités découlant …

Wednesday, Nov 29: Pier 2/3 **11:25 AM - 11:55 AM**

Field of Dreams - 10 Years Post-Remediation in Species-at-Risk Habitat

Un champ de rêves - 10 ans après l'assainissement d'un habitat d'espèces en péril

Pier 2/3 Remediation

Kalina Noel
Senior Ecologist, SLR Consulting (Canada) Ltd.

Between 2013 and 2014, Correctional Service Canada (CSC) undertook remediation of a refuse site adjacent to Mountain Institution in British Columbia. Deposition of household and farm refuse in a low-lying wetland by the previous owner, as well as deposition of refuse, demolition debris and other materials from a variety of off-site activities, resulted in the contamination of soil, sediment, groundwater and surface water. The former wetland and associated watercourses were identified as critical habitat for Oregon Spotted Frog (Rana pretiosa, listed as Endangered in Schedule 1 SARA), necessitating permitting under Section 73 of the Species at Risk Act in order …

Wednesday, Nov 29: Pier 4 **11:25 AM - 11:55 AM**

Overcoming the Engineering Challenges on the Giant Mine Remediation Project

Relever les défis d'ingénerie du projet d'assainissement de la mine Giant

Pier 4 Northern

Brad Thompson
Regional Project Advisor - Major Projects, PSPC

Chris MacInnis
Director - Giant Mine Remediation Project, CIRNAC, Northern Contaminated Sites Branch

This presentation will provide an overview of the technical challenges which needed to be addressed as part of the GMRP and the innovative solutions that were designed to meet the remediation objectives.--Cette présentation donnera un aperçu des défis d'ingénerie qui ont dû être relevés dans le cadre du projet d'assainissement de la mine Giant et des solutions innovantes qui ont été conçues pour atteindre les objectifs d'assainissement.

Wednesday, Nov 29: Pier 5 **11:25 AM - 11:55 AM**

The Influence of PFAS Regulations on Waste Disposal

L'influence des règlements sur les SPFA sur l'élimination des déchets

Pier 5 PFAS

AnnieLu Dewitt
Director Filtration and PFAS Lead, Clean Harbors

Jennifer Benaman
Principal, Anchor QEA

Per- and polyfluoroalkyl substances (PFAS) continue to draw increasing regulatory attention. Initially, the focus was on drinking water because it was recognized as the largest and most readily addressable human health exposure pathway. As PFAS research expands, more attention is being given to other pathways, including alternative human health exposure routes and ecological risk. This growing attention is sparking more regulations on multiple fronts in addition to drinking water. In November 2022, the U.S. Environmental Protection Agency (EPA) announced a draft rule to list two types of PFAS— perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS)—as Comprehensive Environmental Response, Compensation, and …

Wednesday, Nov 29: Pier 7/8 **11:25 AM - 11:55 AM**

Human Health Risk Assessment for Acute Effects from Arsenic, Giant Mine Remediation Project, Northwest Territories

Évaluation des risques pour la santé humaine des effets aigus de l'arsenic, projet d'assainissement de la mine Giant, Territoires du Nord-Ouest

Pier 7/8 Risk Assessment

Christine Plourde
Lead Engineer/ Human Health Risk Assessor, WSP E&I Canada Limited

Emma McKennirey
Sr. Engineer, GMRP, CIRNAC

An acute human health risk assessment (HHRA) for post closure arsenic conditions at the Giant Mine Remediation Project (GMRP) in Yellowknife, Northwest Territories (NWT) was conducted by WSP E&I Canada on behalf of Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) and its co-proponent, the Government of Northwest Territories (GNWT). The Giant Mine (the Site) is located in Yellowknife, NWT, about five kilometers (5 km) north of the city center. The mine produced gold from 1948 until 1999, and gold ore for offsite processing from 2000 until 2004. The gold in the ore is associated with an arsenic-bearing mineral known …

Wednesday, Nov 29: Frontenac Foyer, Ballroom & Queens Quay **11:55 AM - 01:10 PM**

Lunch & Exhibit Hall

Déjeuner et salle d'exposition

Frontenac Foyer, Ballroom & Queens Quay

Wednesday, Nov 29: Harbour A **01:10 PM - 01:40 PM**

Reconciliation Through Remediation

La réconciliation par l’assainissement

Harbour A Indigenous Perspectives

Jordan Cummer
Community Engagement Officer|Faro Mine Remediation Project, CIRNAC

The valley in which the Faro Mine Remediation Project sits constituted an important meeting place and hunting ground for the Kaska people. The development, operation and closure of the Faro Mine has had lasting negative impacts on the traditional territory, communities and lives of Kaska people. Canada acknowledges these lasting impacts and is committed to reconciliation by working in partnership to ensure the integration of indigenous perspectives, goals and vision into the project and in assisting the Kaska people in re-establishing a cultural presence in the area. This presentation will focus on some of the engagement pathways the project team …

Wednesday, Nov 29: Pier 2/3 **01:10 PM - 01:40 PM**

Bioremediation Feasibility Study at Rogers Pass Historic Site in Glacier National Park, BC

Étude de faisabilité de la biorestauration sur le site historique Rogers Pass dans le parc national Glacier, Colombie-Britannique

Pier 2/3 Remediation

Brent O'Rae
Environmental Program Officer, Parks Canada Agency

Katelyn Zinz
Environmental Scientist, WSP Canada Inc.

The Rogers Pass Site, located along the Trans Canada Highway (TCH1) in Glacier National Park, BC was historically owned and operated by the Canadian Pacific Railway (CPR) circa 1880s to 1919. During CPR ownership, a rail station and rail yard occupied the Site. The Parks Canada Agency (PCA) purchased the Site in 1919 at which time the CPR rail yard had been abandoned and the remaining structures had burned down or were removed. Circa 1964, the Site was developed to include a Parks Canada visitor center and other visitor services, like the commercially operated Glacier Park Lodge and a gas …

Wednesday, Nov 29: Pier 4 **01:10 PM - 01:40 PM**

Rayrock Uranium Mine Remedial Design

Conception de l'assainissement de la mine d'uranium de Rayrock

Pier 4 Northern

Andrew Richardson
Project Officer, CIRNAC

Joel Nolin
AVP, Environment - Remediation, AECOM

Rayrock is a remote, former underground uranium mine located approximately 145 km northwest of Yellowknife, NWT. Operating for only a few short years (1957-1959) mining activities have left a lifelong legacy of impairment. The mine was located along the southwestern shore of Mill Lake, a water body perched along the slope of a bedrock fault. A Human Health and Ecological Risk Assessment of the site identified that high uranium concentrations in the Mill Lake sediments could be affecting the benthic community and exceeded toxicity benchmarks for terrestrial receptors that may consume large amounts of sediments. Based on these findings, Crown-Indigenous …

Wednesday, Nov 29: Pier 5 **01:10 PM - 01:40 PM**

Tackling PFAS Today: A Contractor’s Perspective

S'attaquer aux SPFA aujourd'hui : Le point de vue d'un entrepreneur

Pier 5 PFAS

Ben Sweet
Director of Environmental Technologies, QM Environmental

The active remediation and management of environmental liabilities is a complex process involving legal, regulatory, technical, and logistical challenges. Addressing these challenges requires the support of a multidisciplinary team to navigate the nuance and deliver project success. Nowhere is this complexity greater than in the management of the emerging challenges associated with Per- and Polyfluoroalkyl Substances (PFAS). Per- and Polyfluoroalkyl Substances (PFAS) represent a significant threat to the environment and human health. The growing understanding of the risks associated with these compounds is leading to continuous developments in regulatory and legal action across many jurisdictions. Despite the uncertainty, the need …

Wednesday, Nov 29: Pier 7/8 **01:10 PM - 01:40 PM**

Site-Specific Human Health Risk Assessment Based on Indigenous Traditional Knowledge and Traditional Uses

Évaluation des risques pour la santé humaine spécifique au site sur la base des connaissances traditionnelles autochtones et des utilisations traditionnelles

Pier 7/8 Risk Assessment

Ariel Blanc
Managing Scientist, Anchor QEA

Ongoing indigenous engagement has played a critical role in conducting an accurate human health risk assessment for Victoria Harbour on Vancouver Island. The harbour is located within the traditional lands of the Esquimalt and Songhees Nations and has been an important source of marine resources for the communities since time immemorial. Engagement with Esquimalt and Songhees Nations knowledgeable individuals identified the traditional diet, serving sizes and frequencies, and resource considerations. Sharing of this information ensured the risk assessment focused on components of the traditional diet and used relevant exposure parameters. Eleven individual sea life types or tissues were selected for …

Wednesday, Nov 29: Harbour A **01:50 PM - 02:20 PM**

How Human Health and Ecological Risk Assessment and Indigenous Engagement Altered the Strategy for Remediation on the Pine Point Rail bed Project

Harbour A Indigenous Perspectives

Amy Allan
Project Manager, Crown and Indigenous Relations and Northern Affairs Canada

Andrea Jenney
Senior Engineer, BluMetric Environmental Inc.

Harriet Phillips
Risk Assessment Division Manager, CanNorth Environmental

The Pine Point Rail bed project is an 80 km linear site that stretches from the former town of Pine Point to Hay River, NT. The Railway was decommissioned in the 1990s and all infrastructure was removed. Sediment and Erosion control measures were put in place and the rail bed was left to naturally revegetate. The site is close to Hay River and easy to access, and is used locally as an ATV trail. In 2015 a Screening Level Human Health and Ecological Risk Assessment was completed following Phase I, Phase II, and Phase III Ecological Site Assessments. This report …

Wednesday, Nov 29: Pier 2/3 **01:50 PM - 02:20 PM**

Sustainable Multi-phase Alternative Remediation Action Plan for Contaminated Soil and Groundwater - Department of National Defense Site in Alberta

Plan d'action alternatif d'assainissement durable en plusieurs phases pour les sols et les eaux souterraines contaminés - Site du ministère de la défense nationale en Alberta

Pier 2/3 Remediation

Julie Tingley
Environmental Coordinator, Environmental Services, National Defence

Venessa Kumpula
Project Services Manager - Western Canada, Clean Harbors Canada

Department of National Defence (DND) in conjunction with Defence Construction Canada (DCC) required the services of a contractor with the capability and expertise to conduct in and ex-situ environmental remediation of the drainage ditch and old underground storage tanks (USTs)area at the DND operated Alberta site. Project goals included minimizing ground disturbance, reduced liability transfer, and implementation of climate change considerations into contaminated sites. USTs were removed, however the active facility required viable options for maintaining structural integrity and limiting disturbance to on-going site operations. An anchor slab was left in place due to site structures which prevented the excavation …

Wednesday, Nov 29: Pier 4 **01:50 PM - 02:20 PM**

Maximizing the Value from Historic Abandoned Mines – the United Keno Hill Mines (UKHM) Public Private Partnership

Maximiser la valeur des mines historiques abandonnées - le partenariat public-privé United Keno Hill Mines (UKHM)

Pier 4 Northern

Doug Stiles
Director - Environmental Operations, Hecla Mining Company

Justin Pigage
Senior Project Engineer, CIRNAC

Located in central Yukon, in the Traditional Territory of the First Nation of Na-Cho Nyäk Dun (FNNND), the historic UKHM site is one of the highest-grade lead and silver mining districts in North America characterized by narrow vein, high-grade silver, lead, and zinc deposits. From 1914 to 1989 the district produced about 6.6 million kg of silver from 4.8 million tonnes of ore grading approximately 1,370 g/tonne silver, 6.6% lead, and 4.1% zinc. While historic mining operations produced a significant amount of valuable metal, much was left behind: both abandoned legacy mining operations and valuable future mineral resource. Recognizing both …

Wednesday, Nov 29: Pier 5 **01:50 PM - 02:20 PM**

Treating PFAS: Current In-Situ Remediation Approaches

Traitement des SPFA : approches actuelles d'assainissement in situ

Pier 5 PFAS

Kevin French
Vice President, Vertex Environmental Inc.

Per- and polyfluoroalkyl substances (PFAS) are the latest emerging contaminants to challenge our industry, and as our understanding of this "forever chemical" evolves, new standards are being set. For example, Health Canada and Ontario have introduced drinking water standards for selected PFAS compounds and, more recently, in January 2023, Alberta released soil and groundwater remediation standards for two of the most studied PFAS compounds: perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). While new standards are being published, unfortunately there is no consensus as to the most effective PFAS remediation approach. There will be a strong focus on PFAS remediation in …

Wednesday, Nov 29: Pier 7/8 **01:50 PM - 02:20 PM**

Application of a Class-Based Risk Assessment for Mercury Contamination at Hydrometric Stations

Application d'une évaluation des risques par classe pour la contamination par le mercure dans les stations hydrométriques

Pier 7/8 Risk Assessment

Erin Hartman
Water Resources Engineer, Environment and Climate Change Canada

Mark Konecny
Contaminated Sites Officer, ECCC

The National Hydrological Service at Environment and Climate Change Canada currently operates over 2,200 stations across the country, furthermore, there are approximately 5,600 historical inactive stations across Canada. Many stations have been in operation since the early 1900s and legacy contamination using mercury-filled manometers has been identified in soils surrounding many historic and operational sites. A significant effort was undertaken in the late 1990s to assess and remediate sites with mercury impacts. Unfortunately, after multiple remedial attempts, many sites still have mercury-impacted soils remaining. Given the large number of sites requiring management and consistent similarities between the sites, ECCC and …

Wednesday, Nov 29: Frontenac Foyer & Queens Quay **02:20 PM - 02:50 PM**

Break & Exhibit Hall

Frontenac Foyer & Queens Quay

Wednesday, Nov 29: Harbour A **02:50 PM - 03:20 PM**

Meaningful Engagement: Case study of a water treatment plant at an abandoned open pit lead-zinc mine in the Yukon Territory

Une mobilisation significative : Étude de cas d'une usine de traitement des eaux dans une mine de plomb-zinc à ciel ouvert abandonnée dans le Territoire du Yukon

Harbour A | Indigenous Perspectives

Michelle Hughes
Senior Engineer, CIRNAC

The Ross River Dena Council, Liard First Nation and the Selkirk First Nation have been recognized as affected First Nation by the Faro Mine Site. For the project to succeed, true partnership is important with Ross River Dena Council, and technical representatives from all affected First Nations. This presentation will highlight how through meaningful consultation, their ongoing input is being incorporated through each stage of Permanent Water Treatment Plant (PWTP) - planning, design, pilot testing, construction and operation in order to foster a true sense of ownership once constructed. The final vision is that Kaska people will assume a leadership …

Wednesday, Nov 29: Pier 2/3 **02:50 PM - 03:20 PM**

Redonner l'accès au fleuve Saint-Laurent à la communauté

Restoring community access to the St. Lawrence River

Pier 2/3 | Remediation

Fabien Pitre
Géologue/Associé, Stantec Consulting Ltd.

Le site de la Marina de la Pointe-Picard a été développé par le Ministère de la défense nationale (MDN) suite à la seconde guerre mondiale afin d'offrir un accès au fleuve pour les vétérans ainsi pour la formation des cadets. Le site présente une contamination des sols liée à des opérations de ravitaillement d'embarcations motorisées qui a été réhabilitée en 2020. De plus, des sédiments contaminés ont été retrouvés à proximité du site. Au Québec, la gestion des sédiments contaminés est défini dans les divers documents du Plan Saint-Laurent. Ces documents sont la résultante d'accords entre le Gouvernement du Canada …

Wednesday, Nov 29: Pier 4 **02:50 PM - 03:20 PM**

Ft Reliance, NT - Challenges Associated with an Abandoned Weather Station Remediation

Fort Reliance, NT - Défis associés à l'assainissement d'une station météorologique abandonnée

Pier 4 | Northern

Claudia Simonato
Senior Environmental Specialist, Public Services & Procurement Canada

Nick Oke
Sr Vice President, Environment & Water Practice, Tetra Tech Canada

FORT RELIANCE, NT. CHALLENGES ASSOCIATED WITH AN ABANDONED WEATHER STATION REMEDIATION Nick Oke, M.Sc., P.Chem. - Tetra Tech Canada Inc. Claudia Simonato, B.Sc. - Public Services & Procurement Canada Deniz Baykal, M.Eng - Environment & Climate Change Canada Mark Konecny, B.Sc. - Environment & Climate Change Canada Conference: Real Property Institute of Canada (RPIC) Federal Contaminated Sites National Workshop Location: Toronto, ON Dates: November 29/30, 2023 Along the eastern shoreline of Great Slave Lake, only a small automated weather station operated by Environment and Climate Change Canada remains in operation at the remote Fort Reliance Weather Station. However, the property …

Wednesday, Nov 29: Pier 5 **02:50 PM - 03:20 PM**

Using Groundwater Plume Analytics® Tools to study PFAS plumes' behavior, support risk based remedial approaches and act as a beacon for climate change

Pier 5 PFAS

Joe Ricker
Senior Technical Principal, WSP USA Inc.

Stefano Marconetto
Sr. Principal and Emerging Contaminants Practice Lead, WSP

Evaluating fate and transport of PFAS plumes is a relatively new endeavor since many remediation sites have very limited historical datasets for PFAS. Monitored natural attenuation (MNA) plays a critical role in the remediation of many contaminants in groundwater, and research is now indicating that MNA can become a major component of many PFAS remedial strategies. The MNA of PFAS can be a viable alternative, as either a standalone or combined remedy, if the concepts of plume stability and receptor protection are implemented. As part of the Groundwater Plume Analytics® tools, the Ricker Method® for plume stability analysis is a …

Wednesday, Nov 29: Pier 7/8 **02:50 PM - 03:20 PM**

Bear Creek Compound: A Unique Look Into History, Contamination and Risk Assessment in the Yukon Territory

Le complexe de Bear Creek : Un regard unique sur l'histoire, la contamination et l'évaluation des risques dans le territoire du Yukon

Pier 7/8 Risk Assessment

Zachary Luck
Project Manager, AtkinsRéalis

The Bear Creek Compound was first developed as a mining camp in 1905 on Tr'ondëk Hwëch'in First Nation traditional land in response to the Klondike Gold Rush of 1896. Although many of those original buildings are no longer present, the museum maintains much of the infrastructure from the early period of the facility and provides a historical insight into the activities that supported the large dredges: the amalgamation of mercury and gold in the on-board sluices and subsequent refining in the Compound's gold rooms; the on-site (due to its remote location) fabrication and machining of dredge machinery and parts; the …

Wednesday, Nov 29: Frontenac Ballroom **03:30 PM - 04:30 PM**

FCSAP & NAMRP Update and Outlook

Mise à jour et perspective du PASCF et PREMAN

Frontenac Ballroom

Caroline Beland-Pelletier
Environmental Consultant/Consultante en environnement, CBP

Jeff Mackey
Director Policy & Program Management, CIRNAC

Jeffrey Yakimchuk
Policy Analyst - Federal Contaminated Sites Action Plan Secretariat, ECCC

Suzanne LaPerrière
Regional Manager, Contaminated Sites Management, PSPC

The panelists will provide an update on both the FCSAP and NAMRP programs and the outlook for the next 5 years and what priorities their respective programs will be focusing on. With participation from PSPC, who will provide their perspective as service provider for both programs.--Les panélistes feront le point sur les programmes PASCF et PREMAN, puis vous présenteront les perspectives pour les 5 prochaines années ainsi que les priorités sur lesquelles leurs programmes respectifs se concentreront. Avec la participation de SPAC, qui offrira son point de vue en tant que fournisseur de services pour les deux programmes.

Wednesday, Nov 29: Frontenac Ballroom **06:30 PM - 10:00 PM**

Awards Dinner

Dîner de remise des prix

Frontenac Ballroom

Thursday, Nov 30: Frontenac Foyer **08:00 AM - 05:00 PM**

Check-In/Registration

Enregistrement/Inscription

Frontenac Foyer

Thursday, Nov 30: Frontenac Foyer & Ballroom **08:00 AM - 09:00 AM**

Breakfast

Petit déjeuner

Frontenac Foyer & Ballroom

Thursday, Nov 30: Frontenac Ballroom **09:00 AM - 10:15 AM**

Opening Remarks & Indigenous Contaminated Sites Practitioners – the future of our field, of reconciliation, and restoration of Federal Contaminated Sites

Experts en sites contaminés autochtones – L'avenir de notre champ d'expertise, de la réconciliation et de la réhabilitation des sites contaminés fédéraux

Frontenac Ballroom

Claudia Beauchemin
Manager National Centre of Expertise - Contaminated Sites, Public Services and Procurement Canada

Craig Wells
VP Business Development, Parsons

Deana Sappier
Assistant Health Director, Neqotkuk Health Programs & Services

Sam Damm
Claw Environmental Services

Steve Hannington
Team Lead, Environmental Services, Stantec

Walter Mainville
Environmental Technician, Couchiching First Nation

The panelists will be sharing their experiences as Indigenous contaminated sites practitioners, what challenges they have faced, the lessons they have learned and the importance of being involved in contaminated sites work in their communities. They will also be sharing their thoughts on the future of Indigenous involvement in contaminated sites projects.--Les panélistes partageront leurs expériences en tant que personnes autochtones experts en sites contaminés, les défis auxquels ils ont été confrontés, les leçons qu'ils ont apprises et l'importance de s'impliquer dans le travail sur les sites contaminés dans leurs communautés. Ils partageront également leurs réflexions sur l'avenir de la …

Thursday, Nov 30: Foyer & Pier 6 **09:00 AM - 05:00 PM**

Poster Sessions

Présentations d' affiches

Foyer & Pier 6

Thursday, Nov 30: Pier 9 **09:00 AM - 04:45 PM**

Demo Corner

Coin démo

Pier 9

Check out our Demo Corner in Pier 9! To learn more, click here.--Venez découvrir notre coin démo sur le quai 9 ! Pour en savoir plus, cliquez ici.

Thursday, Nov 30: Frontenac Foyer & Queens Quay **10:15 AM - 10:45 AM**

Break & Exhibit Hall

Frontenac Foyer & Queens Quay

Thursday, Nov 30: Harbour A **10:45 AM - 11:15 AM**

Going off the Rails – Assessment and Remediation of Rail Lands in Canada - A Path Towards Reconciliation and Environmental Responsibility

Sortir des rails – L'évaluation et l'assainissement des terrains ferroviaires qui sont hors service au Canada - Une voie vers la réconciliation et la responsabilité environnementale

Harbour A | Indigenous Perspectives

Siobhan Sutherland
Manager, Contaminated Sites On-Reserve Program, Indigenous Services Canada

Stewart Brown
Team Lead, PGL

First Nations in Canada are advocating for the return of over 345 historic railway takings on reserve. As part of a National Rail strategy, Canada is looking to partner with former operators of these rail lines to assess and remediate these lands in support of returning lands to reserve. In addition to Federal Contaminated Sites Action Plan goals, remediation of these abandoned rail lines will support Canada's mandate for reconciliation with Indigenous people, fiduciary responsibilities, and legal obligations. Historically, railway use has resulted in varying degrees of contamination on railway lands and adjacent reserve lands resulting from treated railway ties …

Thursday, Nov 30: Pier 2/3 **10:45 AM - 11:15 AM**

In-Situ Permeable Reactive Barrier Remediation Optimization using High Resolution Site Characterization Tools – A Case Study

Optimisation de l'assainissement par barrière réactive perméable in situ à l'aide d'outils de caractérisation de site à haute résolution - Une étude de cas

Pier 2/3 | Remediation

Patrick O'Neill
Project Manager, Vertex Environmental Inc.

Off-site liability and risk mitigation from subsurface impacts have become a key focus of the environmental industry. A common remedial technology to address off-site liability and risk mitigation involves the installation of a Permeable Reactive Barriers (PRBs). This resurgence in PRB popularity can be traced back to improvements in remedial amendments, technologies, sustainability and major improvements towards efficient, detailed Site characterization. Historic PRB installations largely relied on site wide information or information collected sporadically along the alignment to make design decisions and installation details. Relying on limited information to design and install a robust PRB may lead to unintentional "holes" …

Thursday, Nov 30: Pier 4 **10:45 AM - 11:15 AM**

Incorporating Climate Change Adaptations into the Remedial Action Plan at BAF-3 Long Range Radar, Brevoort Island, Nunavut

Intégration des adaptations au changement climatique dans le plan d'assainissement du radar à longue portée BAF-3, île de Brevoort, Nunavut

Pier 4 Northern

Jennifer Rocard
Climate Risk Engineer, Stantec Consulting Ltd.

Ryan Breivik
Senior Engineer, Public Services and Procurement Canada, ESCSM, Western Region

Stantec was retained by Public Services and Procurement Canada (PSPC) and Department of National Defence (DND) to complete a Climate Change Risk Assessment (CCRA) at the BAF-3 Long Range Radar Contaminated Site, located on Brevoort Island, Nunavut, in 2022/2023 in accordance with the Federal Contaminated Sites Action Plan (FCSAP), Integrating Climate Change Adaptation Considerations into Federal Contaminated Sites Management guidance document. The incorporation of climate change adaptation considerations in Remedial Action Plans (RAP) is an essential step towards resilient management of contaminated sites. The CCRA approach was consistent with the Public Infrastructure Engineering Vulnerability Committee (PIEVC) High Level Screening Guide …

Thursday, Nov 30: Pier 5 **10:45 AM - 11:15 AM**

Use of Total Organic Fluorine as an Indicator Tool for the Estimation of PFAS in Groundwater

Utilisation du fluor organique total comme indicateur pour l'estimation des SPFA dans les eaux souterraines

Pier 5 PFAS

Indra Kalinovich
Partner, Dillon Consulting Limited

Stephanie Penner
Geoscientist, Dillon Consulting Limited

Recent studies have assessed the use of laboratory analysis of Total Organic Fluorine (TOF) as a selective substitute for the EPA Method 1633 analysis of PFAS in non-potable groundwater. As an analytical test, TOF is considered cost-effective with an improved analytical turnaround time compared to the full suite of PFAS, making it ideal for monitoring and verification purposes during remediation and long-term monitoring. A statistical analysis of TOF and PFAS using scatter plots and linear regressions can be used as a means to assess the suitability of TOF as a monitoring ‘trigger’ or ‘threshold’ parameter relative to federal criteria to …

Thursday, Nov 30: Pier 7/8 **10:45 AM - 11:15 AM**

Preliminary Regional Risk Assessment for Contamination Related to the BC 2021 Atmospheric River Event

Évaluation préliminaire des risques régionaux de contamination liés à l'épisode de rivière atmosphérique à CB en 2021

Pier 7/8 Risk Assessment

Tara Siemens Kennedy
Senior Risk Assessor and Toxicologist, Atkins Realis

In November 2021, “atmospheric river” events occurred in southwestern British Columbia causing widespread flooding and damage in many communities, including Merritt, Princeton, and the Sumas Prairie (the Study Areas). As part of the provincial emergency response, the BC Ministry of Environment and Climate Change Strategy retained AtkinsRéalis (fromerly SNC-Lavalin) to develop preliminary conceptual site models for each Study Area. The CSMs identified potential sources of contamination, contaminants, transport mechanisms, receptors, and exposure pathways. The preliminary CSMs formed the basis of Preliminary Regional Risk Assessments (PRRAs) that were conducted for each Study Area to assess the potential for flood-caused contamination to …

Thursday, Nov 30: Harbour A **11:25 AM - 11:55 AM**

Combining Indigenous Knowledge with Science – A Case Study Demonstrating the Importance of First Nation Engagement and Collaboration on Federal Contaminated Sites

Combiner les connaissances traditionnelles et la science - Une étude de cas démontrant l'importance de la consultation des Premières nations et de la collaboration sur les sites contaminés fédéraux

Harbour A Indigenous Perspectives

Kathryn Matheson
Team Lead - Risk Assessment and Toxicology, SLR Consulting (Canada) Ltd.

Lisa Tomlinson
Technical Discipline Manager, Land Quality Eastern Canada, SLR Consulting

The purpose of this presentation is to share a case study where input from the First Nation community was a critical component to conducting a successful environmental investigation to support a Human Health and Ecological Risk Assessment (HHERA). This presentation will showcase the valuable insights gained from this project and highlight the advantages of incorporating Indigenous knowledge and First Nation engagement to help reduce uncertainty in the HHERA.–L'objectif de cette présentation est de partager une étude de cas où la contribution de la communauté autochtone a été un élément essentiel pour mener une investigation environnementale visant à soutenir une évaluation …

Thursday, Nov 30: Pier 2/3 **11:25 AM - 11:55 AM**

20 years of Experience using Persulfate in remediating Soil and Groundwater – Evolutions, Do's and Don'ts

20 ans d'expérience dans l'utilisation du persulfate pour l'assainissement des sols et des eaux souterraines - Évolutions, choses à faire et à ne pas faire

Pier 2/3 Remediation

Jean Paré
Vice-President - Sales & Marketing, Chemco Inc.

This presentation revisits 20 years of learning and optimizing the use of persulfate for the chemical oxidation of organic contamination in both soil and GW. We will cover the different evolution that the technology has gone through to make it more effective and applicable in a broader range of application. In the first part of the presentation, we will revise how to select the proper activation mechanism and touch how to apply the persulfate in Na and high SAR (Sodium Adsorption Ratio) aquifer. The presentation will then cover evolution of the technology and its use in • Combining In situ …

Thursday, Nov 30: Pier 4 **11:25 AM - 11:55 AM**

Evaluation of Climate Change Effects on Contamination at Multiple DFO Sites across BC

Évaluation des effets du changement climatique sur la contamination dans plusieurs sites du MPO en Colombie-Britannique

Pier 4 Northern

Adrienne Ducharme
Environmental Scientist, WSP Canada Inc.

Jari Eikenaar
Senior Environmental Scientist, WSP Canada

According to the International Panel on Climate Change (IPCC), human activity is changing the Earth's climate in unprecedented ways, with some of the changes now inevitable and irreversible. Within the next two decades, temperatures are likely to rise by more than 1.5°C above pre-industrial levels. The effects of this increase are already being felt across the globe, with extreme weather conditions leading to some catastrophic events. In British Columbia (BC), we are currently experiencing one of the worst wildfire seasons on record, and there is a high risk of a province-wide drought in 2023. As contaminated sites practitioners and professionals, …

Thursday, Nov 30: Pier 5 **11:25 AM - 11:55 AM**

Pushing the Boundaries on Quantitative PFAS Analysis by LC-MS/MS

Repousser les limites de l'analyse quantitative des SPFA par LC-MS/MS

Pier 5 PFAS

Sanja Risticevic
LC-MS Manager, ALS

There are hundreds of chemicals that can be classed as PFAS (Per and poly-fluorinated Alkyl Substances). The current list of compounds typically analyzed by accredited laboratories is obtained from EPA Draft 1633 with 40 targets of interest. US EPA continues to discuss the ongoing PFAS Action Plan to address these long-lasting 'forever chemicals'. In order to continue obtaining a deeper knowledge of PFAS compounds and their fate, analytical laboratories need to continue to pursue the full scope of analytes when interpretating data including the ability to model the site for predicting environmental endpoints. As a result, ALS offers an extended …

Thursday, Nov 30: Pier 7/8 **11:25 AM - 11:55 AM**

An Iterative Method of Estimating Background Concentrations in Groundwater to Support Decision-Making at Contaminated Sites

Une méthode itérative d'estimation des teneurs de fond dans les eaux souterraines pour aider à la prise de décision pour des sites contaminés

Pier 7/8 Risk Assessment

William Cullochdasson
Senior Project Geosientist, AtkinsRealis Canada Inc

A method was developed for estimating background concentrations for metals in groundwater, under specific assumptions, that was adapted from an iterative Q-Q Plot method for background assessment in soil. The method allowed for the estimation of a background threshold value (BTV) in groundwater for concentrations exceeding the adjacent Provincial standard to allow for project decision-making.--En utilisant des hypothèses spécifiques, une méthode a été développée pour estimer les teneurs de fond pour les métaux dans les eaux souterraines, , qui est adaptée à partir d'une méthode itérative de tracé Q-Q pour l'évaluation de la teneur de fond dans les sols. Cette …

Thursday, Nov 30: Frontenac Foyer, Ballroom & Queens Quay **11:55 AM - 01:10 PM**

Lunch & Exhibit Hall

Frontenac Foyer, Ballroom & Queens Quay

Thursday, Nov 30: Harbour A **01:10 PM - 01:40 PM**

A Regional Approach to Remediation and Reconciliation

Une approche régionale de l'assainissement et de la réconciliation

Harbour A Indigenous Perspectives

Mike Bodman
Manager, Base Safety & Environment, Department of National Defence

The southern portion of Vancouver Island is part of the traditional lands of the Esquimalt and Songhees Nations, whose members trace their ancestry to the Coast Salish lək̓ʷəŋən (Lekwungen) people. Marine resources are central to the Esquimalt and Songhees Nations' ways of life and remain important for food, social, cultural, and ceremonial reasons. This area also includes two Class 1 sites (Victoria and Esquimalt Harbours) along with multiple other smaller contaminated sites and a large number of ongoing sources of pollution. Through conducting engagement to understand the Nation's traditional knowledge and traditional use (TKTU) for inclusion in the two harbour's …

Thursday, Nov 30: Pier 2/3 **01:10 PM - 01:40 PM**

Utilization of Ultra Violet Optical Screening Tool in Development of High Resolution Conceptual Site Models for Two NAPL Release Sites

Utilisation d'un outil de criblage optique ultraviolet pour le développement de modèles conceptuels de sites à haute résolution pour trois sites de rejet de LPNA

Pier 2/3 Remediation

Dean Morrow
Senior Environmental Scientist - Contaminated Sites, Environmental Sciences Group, Royal Military College

Successful remediation and risk management of Non-Aqueous Phase Liquid (NAPL) contaminated sites requires detailed understanding of subsurface NAPL architecture and distribution. High Resolution Site Characterization (HRSC) tools allow for the collection of scale appropriate data for the heterogeneities of subsurface systems that control NAPL distribution, transport and fate. Traditional methods of subsurface investigation at NAPL sites often miss this scale of understanding, resulting in oversights or misrepresentation of NAPL plume structures within Conceptual Site Models (CSMs). The Ultra Violet Optical Screening Tool (UVOST) utilizes Laser Induced Fluorescence (LIF) to provide a method for real-time, in situ field screening of residual …

Thursday, Nov 30: Pier 4 **01:10 PM - 01:40 PM**

Resilient Remediation and Restoration of Rainy Lake Shoreline for Couchiching First Nation's Sustainable Future

Assainissement et restauration résilients des rives du lac Rainy pour l'avenir durable de la Première Nation de Couchiching

Pier 4 Northern

Kerri Hurley
Sr. Environment Officer, Ontario Region, Indigenous Services Canada

Sheila Barter
Environmental Geoscientist, WSP Canada Inc.

In partnership with the Federal Government and Couchiching First Nation (CFN) a large contaminated site was assessed and a multi-year remediation initiated in 2023. The site occupies 55 ha of Couchiching First Nation lands along the shores of Rainy Lake and has been historically used for several industrial activities for almost a century. The site has experienced increased flooding in the last decades with a peak reached in Spring 2022. The remediation and restoration design was conducted with direct input from CFN and incorporated critical elements to maximize resiliency and nature-based concepts. The presentation will provide an overview of the …

Thursday, Nov 30: Pier 5 **01:10 PM - 01:40 PM**

Electro-oxidation of PFAS in Parks Canada Groundwater using Boron-Doped Diamond Electrodes: Laboratory Testing and Cost Estimate of Full-Scale System

Electro-oxydation des SPFA dans les eaux souterraines de Parcs Canada à l'aide d'électrodes en diamant dopées au bore : Essais en laboratoire et estimation du coût d'un système à grande échelle

Pier 5 PFAS

Brent O'Rae
Environmental Program Officer, Parks Canada Agency

Giovanna Llamosas
chemical engineer, WSP

Valerie Léveillé
Senior chemical engineer in waters treatment, WSP

This paper will present Parks Canada challenges related to PFAS impacted ground water and a novel approach to address this challenge using boron-doped-diamond (BDD) electrodes electro-oxidation (EO) to destroy PFAS in groundwater. The BDD EO system treatment performance and cost estimate for its capital expenditure and operating costs for one Parks Canada site will be presented.–Cet article présente les défis de Parcs Canada concernant les eaux souterraines contaminées par les SPFA et une nouvelle approche pour relever ce défi en utilisant des électrodes en diamant dopées au bore (DDB) pour l'électro-oxydation (EO) afin de détruire les SPFA dans les eaux …

Thursday, Nov 30: Pier 7/8 **01:10 PM - 01:40 PM**

Aquatic Contaminated Sites in a Multi-stressor Environment - Habitat Impact, Benign Alteration or Habitat Creation?

Sites aquatiques contaminés dans un environnement à facteurs de stress multiples - Impact sur l'habitat, altération bénigne ou création d'habitat ?

Pier 7/8 Risk Assessment

Eric Chiang
Biologist, FCSAP Expert Support, Fisheries and Oceans Canada

Steve Macdonald
Scientist Emeritus, Fisheries and Oceans Canada

Aquatic contaminated sites exist in a complex environment with a multitude of physical, chemical, biological and ecological factors. While some factors can be considered as stressors to receptors on site, some can also be considered potentially beneficial. These factors often interact both spatially and temporally, creating a complicated picture. As a result, assessing and managing aquatic contaminated sites can be challenging in this multi-stressor environmental context. Canada has approximately 1155 small craft harbour (SCH) facilities that provide safe and secure moorage for both the fishing and recreational industries. The presence of a SCH, with structures such as docks, breakwaters, wharfs …

Thursday, Nov 30: Harbour A **01:50 PM - 02:20 PM**

“Two-eyed Seeing” in Language – Indigenous Engagement

La "vision à deux yeux" dans la langue – Mobilisation autochtone

Harbour A | Indigenous Perspectives

JoAnne Bisson
Senior Environmental Technician, CLAW Environmental Services Inc.

Mary Johnson
Senior Associate, Senior Project Manager, Stantec

Two-eyed seeing recognizes the strength of Indigenous ways of knowing/learning/teaching and the strength of western ways of knowing/learning/teaching and uses both experiences together toward a common goal. This presentation discusses examples of where a commitment to this approach as part of Indigenous Engagement was essential for successful completion of various environmental and infrastructure projects undertaken with various Nations. More specifically, the discussion focuses on language (e.g., written, spoken, imagery, etc.) and the impact that certain choices and/or selections had on the eventual success of these initiatives. Direct examples include: i) How a single, seemingly insignificant sentence changed the course of …

Thursday, Nov 30: Pier 2/3 **01:50 PM - 02:20 PM**

Environmental Soil Mixing Applications for Brownfield Remediation

Applications environnementales de mélange de sols

Pier 2/3 | Remediation

Curtis Weaver
Project Technician, Canada Geo-Solutions Inc

Soil mixing techniques have been utilized in North America dating back decades. Soon after being re-introduced in the US for geotechnical applications, soil mixing began being utilized in the US for solidification / stabilization of wastes environmental applications before seeing a rapid expansion of use for environmental applications. While soil mixing techniques are widely used for environmental remediation in the US today, it is still not commonly applied in Canada. This presentation will provide an overview of what soil mixing is and how it can be applied for environmental applications including; in-situ solidification/stabilization (ISS), in-situ chemical oxidation (ISCO), in-situ chemical …

Thursday, Nov 30: Pier 4 **01:50 PM - 02:20 PM**

Incorporating Contaminated Sites into Climate Change Risk Assessment

Intégration des sites contaminés dans l'évaluation des risques liés au changement climatique

Pier 4 | Northern

Kelly MacDougall
Group Lead-Environmental Services NS, NL and ON, CBCL Limited

Tara M Hanlon
Climate Resilience Engineer, CBCL Limited

Anthropogenic climate change and its natural and socio-economic impacts are worsening as global average temperatures continue to rise. While it has become embedded in everyday engineering practice to consider potential climate-related impacts to built and existing infrastructure, changes in climate will also create challenges for maintaining and remediating existing contaminated sites. CBCL has recently been incorporating impacts and risks to contaminated sites into their climate change risk assessments at several federal government properties. This work has included assessing the impacts to existing contaminants of concern, including impacts on contaminant migration, site receptors, and human and ecological health. Identified impacts have …

Thursday, Nov 30: Pier 5 **01:50 PM - 02:20 PM**

PFAS Remediation and Sustainability Considerations in the new regulatory world

Assainissement durable des SPFA et considérations relatives aux GES dans le nouveau monde réglementaire

Pier 5 PFAS

Sumon Chatterjee
Sr Environmental Engineer, ARCADIS

PFAS comprise a diverse class of emerging contaminants, which are defined as 'forever chemicals' and not amenable to conventional chemical treatment, and this greatly complicates in situ remediation of soil and groundwater. While the recent Health Canada proposed advisory for sum of 30 ng/L for total PFAS in drinking water, PFAS groundwater plumes will require a form of active management. PFAS source zones in soil are primarily limited to soil excavation with incineration and/or stabilization. The first part of this presentation will discuss upcoming and recent PFAS guidance, drinking water advisories and proposed objectives. There is a growing emphasis to …

Thursday, Nov 30: Pier 7/8 **01:50 PM - 02:20 PM**

Using a Reference-Based Approach to Address Regional Contamination at Federal Contaminated Sites

Utilisation d'une approche fondée sur des références pour identifier la contamination régionale sur les sites contaminés fédéraux

Pier 7/8 Risk Assessment

Victoria Restivo
Environmental Scientist, Risk Assessment & Toxicology, SLR Consulting (Canada) Ltd.

Regional contaminants such as dioxins/furans and methylmercury that are atmospherically distributed, have been documented in air, water, sediment, and biota tissue across Canada, including in the far north. Completing environmental investigations and risk assessments of these contaminants poses unique challenges due to the potential contribution of both on-site contaminating activities and regional non-point sources such as atmospheric deposition. The purpose of this presentation is to discuss the application of the FCSAP reference-based approach to support the characterization and risk assessment of regionally elevated contaminants on federal contaminated sites. A case study will be presented, showing the utilization of a background …

Thursday, Nov 30: Harbour A **02:30 PM - 03:00 PM**

Consultations autochtones 2.0 pour le projet de Transports Canada de démolition de quai et réhabilitation sédiments à Portneuf

Indigenous consultations 2.0 for the Transport Canada project of wharf demolition and sediment remediation in Portneuf

Harbour A Indigenous Perspectives

Pascale Couroux-Smith
Regional Senior Environmental Supervisor • Environment Affairs, Transport Canada

Transports Canada procédera à la démolition de son quai à Portneuf ainsi qu'à la réhabilitation des sédiments contaminés trouvés au pourtour de celui-ci. Ce projet de nature environnementale et financé par le Plan d'action des sites contaminés fédéraux, vise à éliminer la source de la contamination, le quai de bois créosoté, et les sédiments contaminés en hydrocarbures aromatiques polycycliques générés par la structure. L'analyse du besoin de consulter les communautés autochtones a permis de définir que quatre Premières Nations devaient être consultées pour ce projet. Compte tenu de l'entrée en vigueur de nouvelle Loi sur la Déclaration des Nations unies …

Thursday, Nov 30: Pier 2/3 **02:30 PM - 03:00 PM**

Market Survey and Business Case Evaluation of Waste Management Options – A Federal Perspective

Étude de marché et évaluation de la rentabilité des options de gestion des déchets - Une perspective fédérale

Pier 2/3 Remediation

James Mair
Senior Associate, Environmental Services, Stantec Consulting Ltd.

Jonathon Risigner
Environment Officer, DND

Over the past 100 years, the sediments and soils of Canadian Forces Base Esquimalt and Esquimalt Harbour have become contaminated with debris and various insoluble chemicals because of industrial activities and fill placement in the upland areas, ship repair and naval activities, and ongoing discharges to the harbour. DND routinely conducts projects that involve the excavation and disposal of dredged sediments and excavated soils that may be impacted with metals, petroleum hydrocarbons, salt, and other emerging contaminants. This includes the movement of soil / sediment for new construction projects, redevelopment projects, dredging, jetty upgrades/construction, and ongoing remediation programs. The project …

Thursday, Nov 30: Pier 4 **02:30 PM - 03:00 PM**

Climate-driven remediation of liquid mining wastes

Rémediation des rejets miniers liquides basée sur le climat canadien

Pier 4 Northern

Georgios Kolliopoulos
Professor, Université Laval

Metals are becoming the new oil that will power our carbon-free future. However, their extraction and recovery is often associated with the generation of large volumes of solid and liquid wastes (i.e., effluents). These often pose a threat on the social acceptability of new mining projects. The focus of this presentation will be on novel technologies that are capable to recover clean water from these challenging effluents using clean and efficient technologies that are driven by the cold Canadian climate, where mining typically takes place. If employed correctly, these technologies will allow the recovery of clean water from effluents of …

Thursday, Nov 30: Pier 5 **02:30 PM - 03:00 PM**

Bench Scale and Pilot Testing for Treatment of PFAS-Impacted Leachate and Groundwater on an AFFF-Impacted Site

Banc d'essais et essais pilotes pour le traitement des lixiviats et des eaux souterraines contaminés par les SPFA sur un site contaminé par l'AFFF

Pier 5 PFAS

Justine Abraham
Environmental Site Assessor, Stantec Consulting Ltd.

Tom Macneil
Business Center Practice Leader, Environmental Services, Stantec Ltd.

Per- and poly-fluoroalkyl substances (PFAS) have been used in aqueous film-forming foams (AFFF) since the 1960s. The extensive use of AFFF in fire-fighting applications has contributed to the widespread presence of PFAS in the environment, including in soil, groundwater, surface water, and sediment. The ubiquity, persistence, suspected toxicity, and mobility of PFAS has led to increased regulatory scrutiny and greater focus on remediation of PFAS impacted sites. PFAS remediation presents challenges resulting from their chemical and thermal stability, as well as the high mobility of some PFAS in the environment. Stantec Consulting Ltd. (Stantec) was retained by Public Works and …

Thursday, Nov 30: Pier 7/8 **02:30 PM - 03:00 PM**

Ecological Risk Assessment for Contaminated Sites: Updated FCSAP Guidance

Évaluation du risque écotoxicologique pour les sites contaminés : Mise à jour des orientations du PASCF

Pier 7/8 Risk Assessment

Lindsey Wilson
Contaminated Sites Regional Coordinator, Environment and Climate Change Canada

Environment and Climate Change Canada (ECCC) is currently updating the guidance document: Ecological Risk Assessment for Contaminated Sites, which was originally published by the Federal Contaminated Sites Action Plan (FCSAP) in 2012. This technical guidance document is intended to provide support to site managers and Ecological Risk Assessment (ERA) practitioners when conducting ERAs for federal sites. The technical guidance document clarifies and updates the federal ERA guidance and framework to more accurately represent best practices identified by site managers, federal Expert Support departments, and consultants. This presentation will provide an overview of existing ERA guidance for federal contaminated sites and …

Thursday, Nov 30: Frontenac Foyer & Queens Quay **03:00 PM - 03:30 PM**

Break & Exhibit Hall

Frontenac Foyer & Queens Quay

Thursday, Nov 30: Frontenac Ballroom **03:30 PM - 04:45 PM**

The Future of Sustainable Contaminated Sites Management in the Context of a Changing Climate & Closing Remarks

L’avenir de la gestion durable des sites contaminés dans le contexte d’un climat changeant

Frontenac Ballroom

Bruce Tunnicliffee
President, Vertex Environmental Inc.

Clare Livingstone
Accountant, Wilfrid Laurier University & Deloitte

Claudia Beauchemin
Manager National Centre of Expertise - Contaminated Sites, Public Services and Procurement Canada

Craig Wells
VP Business Development, Parsons

Nicolas Sbarrato
Senior Advisor - Climate Risk and Resilience, WSP Canada Inc.

Scott Thompson
Manager, Regional Operations - Risk Assessment, PSPC

Steve Livingstone
President, Geocentric Environmental Inc

The panelists will be discussing the evolution of sustainable remediation and risk management approaches on contaminated sites and how it is impacting / being impacted by climate change. In an effort to eliminate liability on contaminated sites and reduce the cost of remediation or long term risk management, are we sacrificing sustainability? A look at the tools needed to effectively evaluate the potential impacts of climate change and discuss sustainable approaches to remediation in the context of a changing climate.--Les panélistes discuteront de l'évolution des approches de réhabilitation durable et de gestion des risques sur les sites contaminés et de …