



Thursday, April 28, 2016
Stream 5 - Stakeholder and/or Aboriginal Engagement
Location: Level A, Salon Jarry

8:30 am – 8:50 am

A Trial of Sustainable Remediation or Green Remediation in Japan and the Japan-specific Problems

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The objective of the presentation is to discuss the contaminated land situation in Japan and the trials of sustainable remediation or green remediation with stakeholders.

Abstract

Sustainable remediation has received attention due to its importance in the redevelopment of brownfields. It is said there are over 28,000 hectares of brownfield sites in Japan. And in the future, the market of contaminated soil will be expanded by about 1 million tons with Tokyo Olympic Paralympic projects and about 10 million tons with new railway projects in Japan. This is the reason why a few research groups have begun using quantitative tools to determine the approaches for green remediation or sustainable remediation. Tokyo metropolis and AIST developed a quantitative green remediation tool for Japan (GRATJ), which can evaluate 130 environmental inventories in nine impact categories. These environmental inventories can be integrated into a single index by this tool. On the other hand, there was a case study by adopting the concept of SRT with the Japanese inventory for a model site. The methodology of sustainable remediation was considered to be applicable to Japanese sites in this case study.

From this kind of circumstances, our research group has derived the conclusion, which we need the place to ask the stakeholders their views on sustainable remediation in Japan. The first meeting was held in October 2015 was held by bankers, real property appraisers, clients, environmental consultants, civil servants, researcher and constructors. In this presentation, the authors will show the situation of contaminated land in Japan and the opinions shared in the first meeting.

9:00 am – 9:20 am

Regional Sustainable Coal Mines Reclamation Program, Santa Catarina State, Brazil

Olivier Maurer¹, James Alexander Polz², Sander Eskes², Bob Kleinmann¹, Raphael Koch Turri²

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The objective of the presentation is to discuss the Regional Sustainable Coal Mines Reclamation Program, Santa Catarina State, Brazil, and how they are expanding from an existing sustainable project with an approach approved by authorities to a regional scale. This is a follow-up from the 2014 SustRem Conference (Ferrara) presentation on the Vila Funil project.

Abstract

Reclamation of former coalmines has always been a challenging undertaking, especially in the region of Santa Catarina in the South of Brazil where former high-sulfur coalmines now represent degraded land. The traditional approach implemented in the region consists of levelling the ground to restore the original landscape and installing caps and vegetative covers to prevent rain infiltration and stop acid drainage. Such solutions are effective but require very significant investments in earth moving and material (clay, lime, etc.), and long-term maintenance in a region where adverse weather conditions can erode clay and soil cover material. In addition, the construction activities can have negative environmental impacts.

At the 2014 SustRem Conference in Ferrara, we presented a case study of a large former coal mine in the city of Sideropolis, Santa Catarina State, Brazil. Since then, the local authorities have approved the wet cover technical solution and sustainable approach that was recommended by the Companhia Siderurgica Nacional (CSN)/CH2M project team. This new presentation will outline the follow-up actions that are unfolding for the Vila Funil project and also, and more interestingly, how this project is now being extended in a regional approach. We are integrating dozens of other old coalmine sites with similar acid drainage issues that are today treated as single independent projects, into a single program. The program leverages the experience from the Vila Funil project, support from the



local authorities, synergies between independent projects and scale effects to maximize sustainable gains (social, environmental and financial benefits).

The Team's mission is to deliver an integrated program that:

- Restores the environment;
- Is economically viable;
- Optimizes land use;
- Is legally sound, with defensible alternatives;
- Serves as a model for similar land reclamation projects in the region;
- Maximises utilization of existing resources; and,
- Enhances the image/brand of CSN.

The presentation will summarize the Vila Funil solution and engagement with external stakeholders, explain the process that was followed to develop the regional road map, and the technical challenges that remain.

9:30 am – 9:50 am

Implementing Social Sustainability in an Environmental Remediation Project in Northern Saskatchewan

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¹Saskatchewan Research Council

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The object of the presentation is to share the results of the former Lorado uranium mill remediation project's objectives to emphasize social sustainability in procurement and contractual commitments.

Abstract

On behalf of the Province of Saskatchewan, the Saskatchewan Research Council (SRC) is managing the remediation of the former Lorado uranium mill, which operated from 1957 to 1960 during the uranium-mining boom in northern Saskatchewan. SRC's contract with the province requires this Crown Corporation to enable northern communities, including Aboriginal communities, to participate in economic activities related to the project. The social sustainability aspect of the project was accomplished without the guidance of an Aboriginal procurement policy at SRC. This challenged the project team to look at specific social and economic needs of the communities in the region.

The Athabasca communities in Saskatchewan's north are isolated from the provincial road system and are distant from economic opportunities. This remoteness added complexities to the project and to meeting social sustainability objectives.

SRC was able to design a procurement process that would involve the regional communities in a meaningful way. This included issuing a draft of the request for proposals for remediation to community representatives for their input and including a community representative on the proposal evaluation team. Sustainability aspects criteria were assigned a very significant 20% of the total possible evaluation score. Bidders were required to describe their plans for communications with communities, for engaging regional suppliers, and for providing regional employment and training opportunities, as well as describing related risks to the project and their mitigation plans.

This unique approach to the proposal process set the tone for the contract. The successful proponent, PBN Nuna Milestone JV (PNM), worked closely with SRC to ensure the objectives developed in the procurement process were achieved.

During the course of the project, SRC and PNM faced many challenges in implementing and managing the ambitious social sustainability goals. It was through this process that SRC and PNM learned that the two most critical success factors for social sustainability in these remote communities were building strong, trusting relationships and maintaining open communication channels with those communities.

SRC and PNM are pleased to present the challenges and the results of the social sustainability objectives for the Lorado remediation project.