Use of the Sample Management App to Simplify Environmental Data Collection and Reporting

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While much of the world is moving towards the digital facilitation of routine tasks, many workflows in the environmental consulting industry remain rooted in paper-based, largely manual methods. PIR-a Corp. was formed in 2016 to simplify and realize efficiencies in environmental workflows through collaboration and building software solutions. On an aggregate basis, automating part of the reporting process has potential to significantly reduce costs and speed both project and closure timelines.

The Sample Management App (SMA) was created by PIR-a as a software platform to collect georeferenced data in the field and combine these data with laboratory analysis results to produce automated, timely, accurate and standardized reports. The first step in its creation was to collaborate with regulators, oil and gas producers, environmental consultants and laboratories to determine industry needs.

Once we had a clear idea about the SMA functionality, the software platform was designed. It is a progressive web application that stores data in a graph database to leverage the flexibility of the graph structure. It is “offline-first” so that work can be carried out without relying on internet in the field. The reporting output consists of a set of maps, borehole logs and data tables that link the field and laboratory data together; compared to criteria for each site.

A live demonstration of the SMA platform will be given in this presentation.

Two modules of the SMA are currently available; the SMA-P2, written to support Phase 2 Environmental Site Assessments, and the SMA-REM, which works in conjunction with remediation workflows. Both modules have been field tested over the past year and are well suited for Area Based Closure, where multiple sites are being assessed and reported on simultaneously.

Using the SMA provides PIR-a’s industry partners with a rapid, cost-effective way to collect, analyze and communicate environmental information. The SMA frees up environmental subject matter experts to focus on high-value tasks- such as appropriate guideline applications- by automating lower value work in the reporting process. PIR-a looks forward to leveraging its approach to technology into more areas of our industry through the ability to link an even wider net of data collection modules to other innovative approaches, such as those presented in this session and others, as well as to initiatives such as AER’s One-Stop data submission format.

James Freeman

James Freeman is a founder and the Director of Vision for PIR-a Corp. He has enjoyed a multi-decade career in the environmental consulting business, much of it in western Canada. James formed Groundwater Solutions Ltd. in 1991, and in 1998 merged the company with 3D Reclamation to form Matrix Solutions Inc. He served as a founder, Principal and on the Matrix Board of Directors from its inception until 2016. James is passionate about bringing increased efficiencies to the environmental industry through multi-stakeholder collaboration and technology usage.