ENVIRONMENTAL TIMES

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New Regulations for Barite

Recently, there has been an increase in client inquiries regarding new regulations in Barite levels. "Barite is highly insoluble, and as such is expected to be largely unavailable. Accordingly, barite can be managed safely in the environment at higher concentrations than would be appropriate for soluble barium

compounds. However, while barium analysis is routinely carried out on environmental soil samples, there is no commercial analytical method presently available to analyze specifically for barite." (Alberta Environment, 2004)

AGAT Laboratories continues to stay updated on current issues in Environmental Chemistry. It is our hope that future issues can be brought to light and discussed within this publication.

Newly adapted regulations put forth by Alberta Environment focus on barium levels in samples provided to laboratories. In the past, exceedences in barium levels indicated by routine metals testing may have resulted in reclamation activity. However, if it can be proven that the barium exceedences are due to the presence of Barite, there is the potential for lesser actions to be taken. In order to determine if Barium contamination is a result of the presence of Barite, samples are further analyzed for extractable barium. In order to perform a test for extractable barium, AGAT Laboratories performs a Calcium Chloride extraction and later analyses the extract using an ICP-OES. This is the method suggested by Alberta Environment in their soil quality guidelines for Barite as "it was determined that extractable barium was likely to be the best measurement of available barium" (Alberta Environment, 2004).

For the most current total barium guidelines established by CCME, please refer to the summary table, which can be viewed at http://www.ccme.ca/assets/pdf/e1_062.pdf. Likewise, the guidelines for total barium established by Alberta Environment can be viewed at http://www3.gov.ab.ca/env/protenf/publications/AlbertaTierICriteria.pdf. The Alberta Environment guideline for extractable Barium is 260 mg/kg for natural areas, agricultural and residential land, and 440 mg/kg for commercial and industrial land use. Should the extractable Barium levels be below these guidelines, the site is classified as a 'Barite site' and thus, reformed guidelines should be used. A complete list of the reformed guidelines is available in a 2004 report prepared by Axiom Environmental Inc, which is listed below.

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Reference material for this article can be found at the following:

Axiom Environmental Inc., 2004. Technical Appendices for Barite Guidelines. Prepared for Alberta Environment and Canadian Association of Petroleum Producers. Alberta Environment Report on Soil Quality Guidelines for Barite.
Http://www.gov.ab.ca/env/info/infocentre/publist.cfm

AGAT Labs Acquires New Home

AGAT Laboratories will soon have a very different look to it. The company recently revealed the acquisition of a fourth facility in Calgary. This 50,000 square foot facility located at 2910 12th Street NE will bring the total square footage occupied by AGAT to nearly 200,000 square feet of space. The lab is currently scheduled for an April grand opening, with renovations already underway. In order to gain a clear perspective on AGAT's vision in regards to Environmental Chemistry, discussions were held with Executive Vice President Marcus Maguire and Manager of Business Development for Western Canada Ed Joussaume.

The company will continue to invest in personnel and technological advances

When asked about the new direction AGAT's environmental division was taking, Maguire had the following reply: "Historically, AGAT has been known primarily as an Oil and Gas laboratory. Although we've housed a state of the art environmental lab for many years it hasn't been the face and identity of AGAT. This is beginning to change. AGAT has begun to be recognized in Alberta, and now across Canada with the new lab in Toronto to be a major force in Environmental analysis. The company will continue to invest in personnel and technological advances until we reach a spot of industry leadership, much the way we've done with Oil and Gas analysis." The new Environmental facility in Calgary is going to be "the most sophisticated commercial environmental lab in Western Canada", according Joussaume. He went on to add that the new building will be supplied with all new, state-of-the-art equipment that will increase AGAT's capacity, accuracy and improve upon turn around times. "The efficiencies of scale that will be introduced by the upgraded lab facility allows for better overall work, which will then allow us to pass on those savings to customers".

One major concern with an event such as this is that current services may suffer. Not so says Maguire: "We will not be 'moving' locations in a conventional sense. Rather, we will be purchasing so much new equipment so as to guarantee a fully functional lab, capable of handling 150% of current capacity without moving a single test tube". Joussaume pointed to AGAT's recent hire of Igor Volochtchik as a major coup with excellent timing, as Igor has already overseen the construction of two other Calgary based laboratories. In addition, Joussaume points out that the new lab will be "fully operational, beta tested and QC tested prior to any transfer of staff. In fact, the current lab will serve as a back up to the new lab" for a transitional period prior to moving the existing equipment over as well. This will be to ensure that no current services are hindered when the new lab opens, so clients can rest assured that they would still receive the high-quality service they are accustomed to at AGAT without interruption.

The new environmental laboratory offers up many opportunities for clients and AGAT staff alike. Joussaume is looking forward to forming new relationships with new clients, as well as new staff that will be joining the team. He feels that the new facility will increase the morale of staff and have a "positive impact on the workplace culture at AGAT". Maguire adds, "with the growth that AGAT has experienced in recent years, coupled with a brand new facility, I think our employees are becoming more and more aware of the great opportunities that are around the corner". The increases in drive, determination, and enthusiasm in AGAT staff will have an equally strong impact on the service provided to customers.

As a final note, both Marcus and Ed were asked how they personally felt about the upcoming AGAT Megalab. Joussaume replied he is "extremely excited about the challenges and opportunities the new lab presents. And more than anything else, I am excited for our people". Maguire stated simply, "this is an easy one..... better service, top quality results... a raised bar in the Environmental Analysis industry".

AGAT Announces New Head of R&D

Igor views his move to AGAT as being a fantastic opportunity for himself and the laboratory

AGAT Laboratories is pleased to announce the appointment of Igor Volochtchik, Ph.D to the position of Research and Development Manager. Igor brings a wealth of technical expertise and knowledge to the environmental team that he has gained in over twenty years of experience as an environmental practitioner. He attained his Ph.D in Analytical Chemistry from Moscow State University in 1987 where he then entered the Russian Academy of Science as a Senior Research Chemist. He also worked as Senior Scientific Consultant for Chevron Overseas at the world's largest oil and gas plant in the Tenzig area of Kazakhstan. His scientific support provided strategic direction for a high output petrochemical laboratory. Upon his arrival in Canada his work experience spanned various laboratories in Calgary, including the Centre for Toxicology at Foothills Hospital and most recently Senior Organics Chemist at PSC Analytics. He is a certified CEAEL and SCC Assessor and proficient in many quality control techniques, method development and validations and has advanced working knowledge of analytical lab equipment.

Igor views his move to AGAT as being a fantastic opportunity for himself and the laboratory. Igor's primary short-term focus will be at streamlining and implementing efficiencies within the environmental labs here in Calgary. As efficiency in the lab increases, Igor foresees the capacity of the lab increasing along with further improvements to standard turnaround times. In order to achieve these objectives, Igor has been working closely with existing staff and management. Furthermore, he believes that effective communication and careful delegation of responsibilities will be the key to ongoing improvements at AGAT, as it will free his time to be spent on new developments.

Once the move to our new facility on 12th street is complete, Igor will take on a senior scientific role in research and development. Igor's breadth of knowledge also spans the medical testing field and will assist in implementing and expanding the new markets once acquisition of medical lab is complete. AGAT Laboratories is very excited about the opportunities and advancements that Igor will be bringing to the lab.