



CH2MHILL

Applied Sciences Laboratory

Case Study

Consulting Chemistry Services



ASL Chemists assisting several Oil Sands clients in Northern Alberta, Canada.

ASL staff are working at several Oil Sands sites to develop laboratory methods, procure equipment, train staff, coordinate or manage laboratory activities, perform special treatability studies, or fully staff and operate laboratories.

Remote field laboratory in Galena, Alaska speeds site characterization project.

A field laboratory was mobilized to a remote village in the Alaskan interior to support a site investigation to identify soil contaminants at an abandoned radio relay station. ASL chemists worked 12 hours a day 7 days a week to provide rapid analysis of samples for the field sampling team.

Changes in water chemistries during distribution studied in Abu Dhabi, United Arab Emirates.

ASL chemists turned sleuths were deployed to Abu Dhabi, UAE to help solve a puzzling mystery. Why were water chemistries changing within a lengthy water distribution system?

Huge cargo vessels carrying tons of coal, ore, and limestone are focus of study.

ASL provided analytical support, bioassay services, sample plan development, field sampling services, and data management for this project to characterize the impact of cargo ship cleaning processes on Great Lake Waters.

Patented process removes volatile chemicals from exhaust air, and recycles the captured chemicals for reuse.

CH2M HILL engineers patented a theoretical process that was then proven out at ASL using custom analytical techniques and bench-scale experiments, and demonstrated at a pilot scale system in Ulsan, South Korea.



ASL leads Vapor Intrusion field programs.

ASL scientists have developed sampling protocols, field plans, equipment lists, and have staffed field teams to characterize contaminated soil gas vapors.

Sulfur Hexafluoride tracer gas used to simulate toxic gas releases.

ASL chemists worked with CH2M HILL engineers to validate computer models which predicted the direction and concentrations of toxic gases which could be released during an industrial accident.

Automated Continuous VOC monitoring system developed for semiconductor client.

The self-contained, self-calibrating system was designed to monitor the efficiency of a VOC abatement system. Custom software controls two total hydrocarbon analyzers, performs regular QC checks, and automatically summarizes and charts collected data.



Capturing combustion gases released during the detonation of a 20,000 lb missile is no easy feat.

However, ASL scientists were able to develop custom sampling equipment that withstood the shock waves from these powerful blasts. The gas samples obtained were subsequently analyzed, characterized, and compared to computer models.

Explosives analysis in Air using E-BAM filter media.

ASL has worked with contractors within the CH2M Hill group of companies to conduct two years worth (ongoing) of air monitoring work for the Vieques Naval Training Range. The testing is to ensure no



nearby air exposure to detonated ordinance trace materials or their breakdown products.

Pilot study conducted to evaluate technologies for destroying chemical weapons.

The Assembled Chemical Weapons Assessment (ACWA) program evaluated several technologies for destroying chemical weapons. CH2M HILL partnered with AEA Technology to evaluate one of the technologies. ASL chemists developed test methods, automated data acquisition systems, and staffed on-site laboratories at Aberdeen Proving Grounds in Maryland.

Chemical investigation leads to solution for parts failure.

An industrial client was experiencing failures of rubber o-rings on their production line. ASL chemists conducted an extensive air sampling and treatment study to identify possible contaminants. Several possible treatment



options were subsequently tested. A solution to the problem was developed and implemented, saving the client thousands of dollars in maintenance and lost production costs.

Contacts

For more information on this and other services CH2M HILL's ASL can provide, please contact:

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