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Hy-Grade Geoscience
Environmental and Earth Science Investigations

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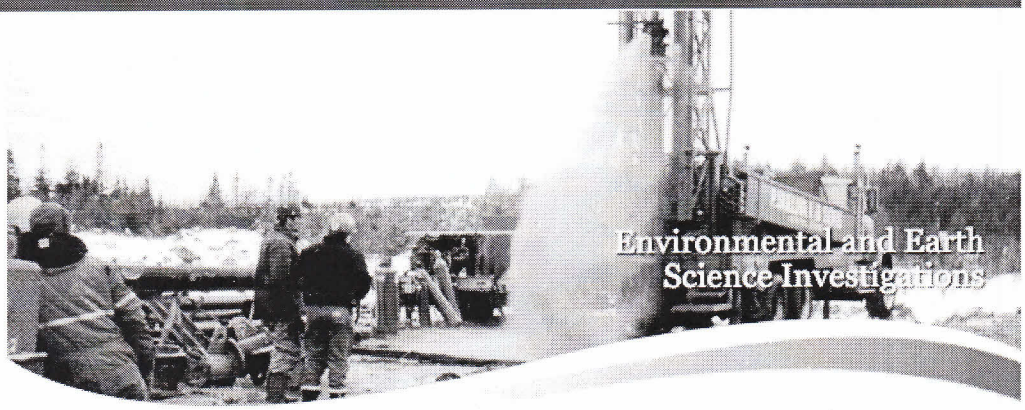
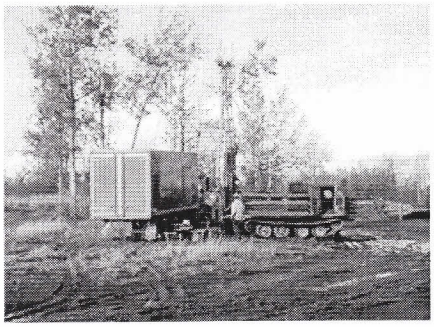


Phase III Environmental Site Assessment (ESA)

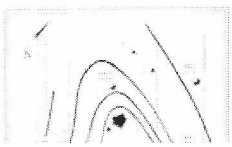
The primary objective of a Phase III ESA is to investigate the nature and extent of adverse environmental impact identified by the Phase II ESA, to determine the potential risk to human health and the environment, and, if required, to develop a Remedial Action Plan (RAP).

Hy-Grade Geoscience personnel are experienced in the requirements of site assessment, innovative remediation and regulatory compliance programs. Careful planning, hands-on site supervision, detailed cost control and on-going communication with clients, contractors and regulators are the keys to timely and successful projects.

The key components of a Phase III ESA are:



- Delineation of identified constituents of concern in soil, sediment, or groundwater. Test pits, boreholes and monitor wells are used to obtain representative samples for detailed laboratory analysis.
- Calculate the volume of impacted soil and/or groundwater.
- Investigation to determine pathways of movement or migration of contaminants through soil and groundwater and the preparation of transport "fate and transport" and "risk assessment" models. These are designed to determine how long it will take and in what concentration a contaminant will reach a receptor.
- Notification of the appropriate regulatory body as required (e.g. Site Notification Report). Early involvement of provincial regulators can facilitate transition into remedial action and hasten closure for a contaminated site.
- Determination of site specific remedial goals (e.g. generic values or site specific values generated through a quantitative risk assessment).
- The volume of impacted material requiring treatment may be reduced by applying a Quantative Human Health and/or Ecological Risk Assessment to establish site-specific clean-up criteria.



- Development of feasible remedial options (including time frame and costs) for consultation and approval by the client and submission of the Remedial Action Plan (Phase IV) to the regulator. The options must include consideration of physical/chemical limitations, construction requirements, environmental as well as health and safety implications, regulatory approval and public perception.

- Phase IV of the ESA process, as defined by the CCME, also includes the preparation of contract and equipment specifications. Phase V of the ESA process is the implementation of the approved Remedial Action Plan (RAP), and Phase VI of the ESA includes reporting of the remedial work, monitoring, compliance testing and preparation of compliance documents (e.g. Certificate of Compliance).

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