Kitkatla Remediation Program

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Presentation Agenda

- Kitkatla Village
- Site Information
- Remediation Program
- Trials & Tribulations
- Investigation
- Phase 2 Work
- Outcomes
Working within Aboriginal Communities

- Over 25 remediation projects within aboriginal communities;
- Common underlying themes for project success:
  - Utilizing local work force, specialized trades, equipment;
  - Education and training;
  - Continuity;
  - Logistics; and
  - Ensure outcome satisfies budgetary and local objectives;
Kitkatla Village

- Annual Rainfall = 2550mm (255 days under cloud)
- Rainiest months September – February >250mm/mo
- Transportation – Float plane or Ferry;
- Gitxaala First Nation;
- Total Registered Population – 1766;
- 422 on reserve (23%);
- 95 household dwellings;

BC community wellbeing index score = 61
  – BC First Nation average score = 70
Site Location
• Diesel generating station 1969 – 1990;
• Initial remediation conducted in 1996 (500m3);
• Elevated WT (approx. 1mbg);
• Oily sheen in ditches down gradient;
• Site assessment concluded large plume;
• Risk to human health and the environment;
• Initiated remediation entire plume 15,000m3.
Site Location
Plume
Pre-Remediation
Remediation Program

- Soil and surface/groundwater;
- 11,500 m³ of HC impacted soil;
- Surface and groundwater treatment;
- Excavation depth to bedrock (approx. 6.5 m bg);
- 3 m buffer surrounding church;
- Barging in and out;
- Adequate drainage channels;
Remediation Program
Water Treatment
Remediation Program
Backfill Source

Stewart, BC, Canada

Kitkatla Village
Trials and Tribulations
Investigation for Future Work

- No more odour/oily water, etc.;
- 3,500m³ of HC impacted soil surrounding church;
- Geotechnically unstable to excavate (unknown stability);
- Additional site investigations;
- Physical information for ongoing remediation;
Options for Remediation

• Option 1 – Excavate and support existing structure;

  Advantages
  - Area remains unchanged;
  - Less obstruction;

  Disadvantages
  - Instability of piles;
  - More expensive option

• Option 2 – Move church to new location;

  Advantages
  - New location;
  - Expand Church St. and Cross Rd. Corner;
  - Shorter Timeline;
  - Flexibility of crawls space development.
Base Prep and Foundation Work
Relocation
Thank You!