

**REMEDICATION OF A FORMER TANK FARM
SAVIKTOK POINT, NWT**

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Saviktok Point Tank Farm



Tuktoyaktuk



Tuktoyaktuk General View



Site Characteristics

- No source of electrical power
- Sea access only
- Remote location
- Limited availability of equipment, materials and manpower
- Hydrocarbon contamination – 25,000 m³
- Biological treatment was preferred solution



Keys of Biological Treatment

- O_2 is required to maximise the degradation of contaminants
- Heat is required to sustain microbial activity
- Nitrogen and Phosphorous
- Neutral pH, loose structure and moisture content



Treatment Technologies



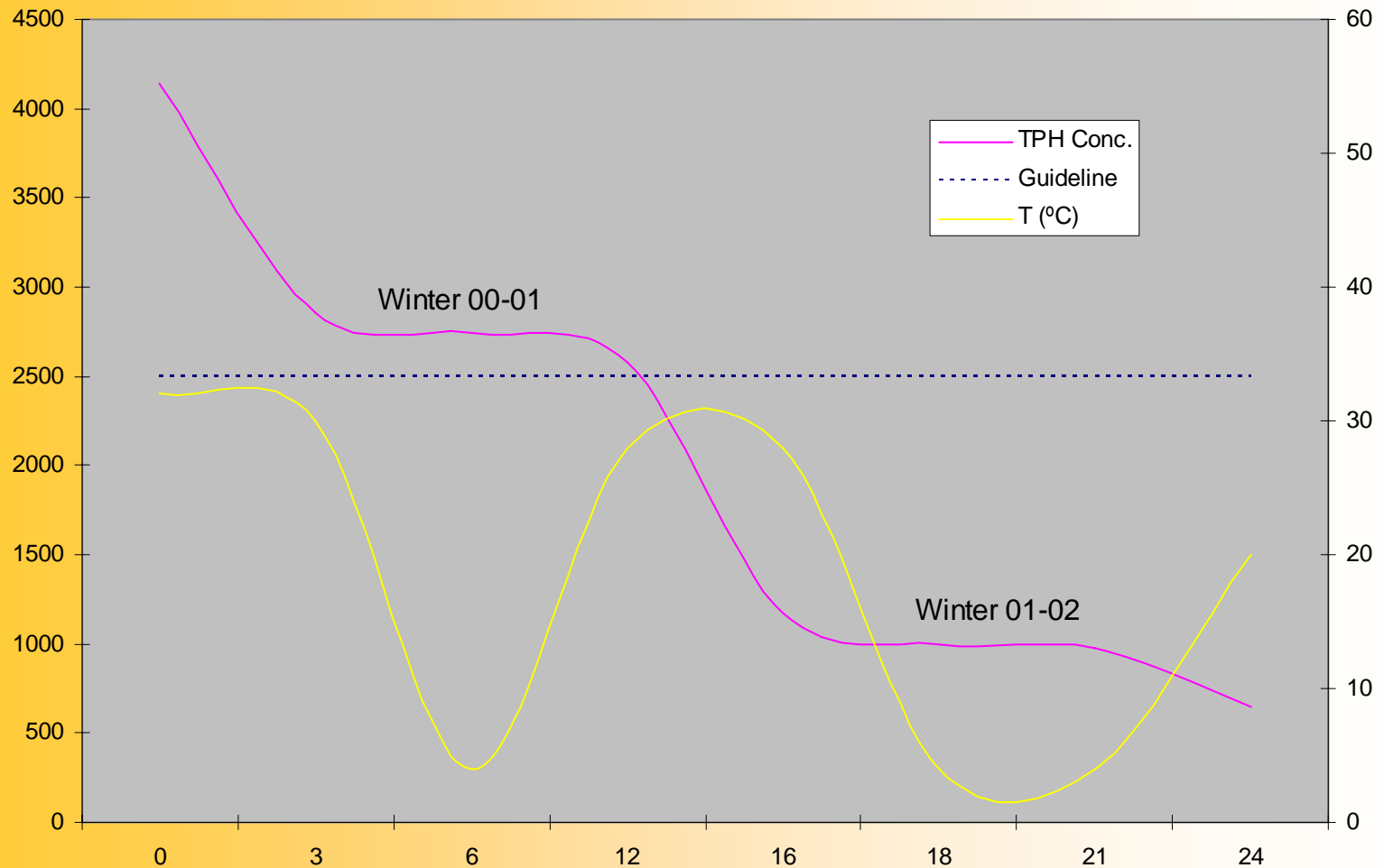
Bench Scale Trials



Wind Turbines



Saviktok Point Bioremediation Efficiency



Results

- 17,000 m³ treated to NWT Industrial Standard (2,500 mg/kg)
- 85% Average reduction of concentrations
4,136 mg/kg to 649 mg/kg
- Three seasons of treatment
- Average temperatures of 30 °C during treatment
- Soils were recycled as landfill cover material



Other examples



Other Applications



Other Applications



Other Applications



Saviktok Point Benefits



- Minimization of soil handling
- Utilization of a wind-powered aeration system
- Adapted design of the biological treatment to site-specific conditions
- Maximum use of local resources

