Tailing Reduction Operations

A new tailings management approach

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Tailing Reduction Operations (TRO) – Overview

- TRO a new approach for managing tailings at our oil sands mining operations near Fort McMurray
  - Expected to result in significant improvement in the speed of tailings reclamation
  - Will help meet new regulatory requirements, changing stakeholder expectations

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Tailings

- Like all mines, oil sands mines generate tailings
- Tailings are
  - left over mixture of fine clay, sand, water, residual bitumen
  - produced during extraction process that separates bitumen from the oil sand

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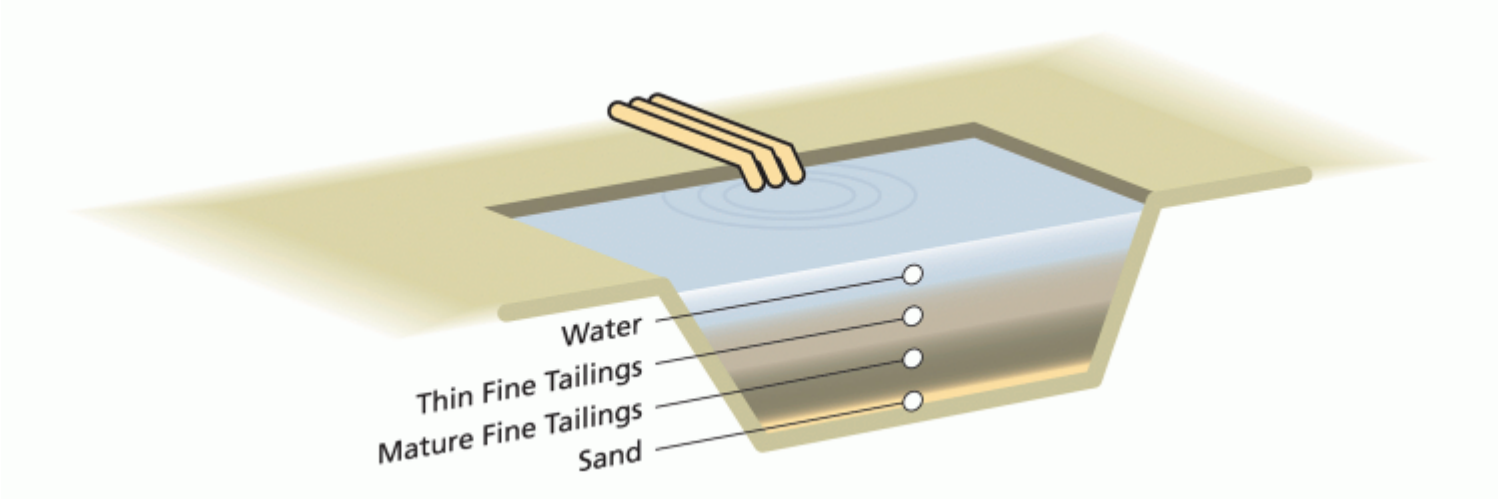
Tailings Handling & Storage

- Tailings are pumped into holding ponds to settle solids from water
  - Heaviest material – mostly sand – settles to bottom
  - Water rises to the top
  - Middle layer – mature fine tailings (MFT) – is made up of fine clay particles suspended in water



The Tailings Challenge

- Some MFT particles settle, but much remains suspended in water
- MFT takes many decades to firm up sufficiently for reclamation
- As a result, Suncor has need more and larger tailings ponds over the years to store MFT

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Suncor's Tailing Ponds

- Nine ponds
  - Covering a total of 31.8 square km
  - Containing about 230 million cubic metres of MFT
- Active ponds
  - Account for nearly 30 percent of the 17,749 hectares of distributed land Suncor is working to reclaim

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Speeding MFT Consolidation

- Consolidating tailings (CT) technology currently used to speed MFT consolidation
- CT process
  - Pioneered by Suncor in the 1990s
  - Adds course sand, gypsum to MFT to accelerate release of water
- Suncor has developed a new and better process to further accelerate MFT consolidation called MFT drying
- MFT drying is a key TRO component

How TRO Works

- TRO involves converting MFT more rapidly into a solid landscape suitable for reclamation
  - MFT is mixed with a polymer flocculent
  - Mixture is deposited in thin layers over sand banks with shallow slopes
  - Resulting product is a dry material that can be reclaimed in place or moved for final reclamation
  - Drying process occurs over a matter of weeks

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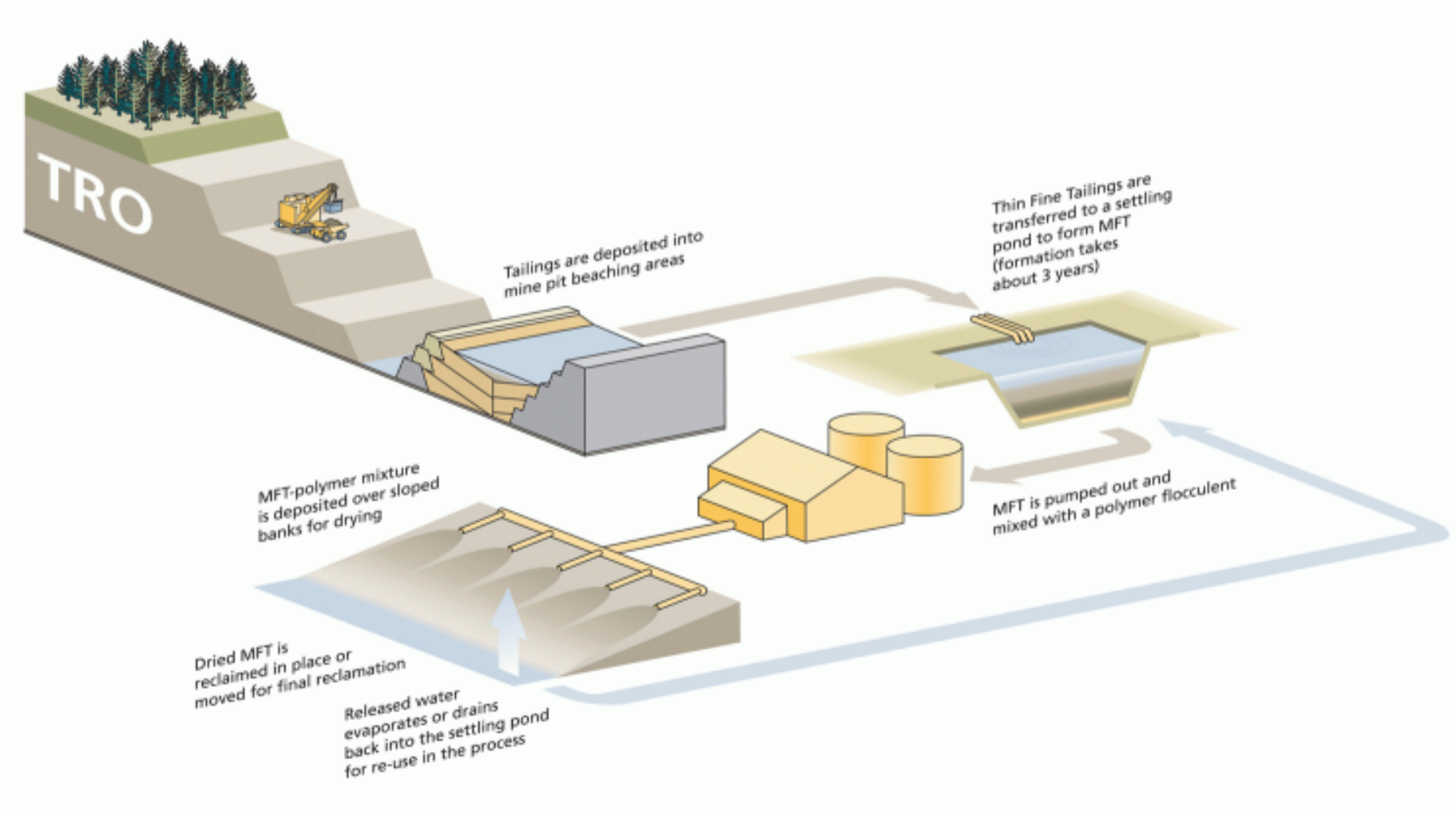
TRO Process Overview



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About The Polymer

- Adheres to clay particles in MFT causing them to bundle together
  - Clay separates from the water
- A class of chemical used in municipal water treatment to settle out solids
  - Safe, as it is inert and does not react with the environment

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Expected TRO Benefits

- Use of TRO to manage tailings:
  - Reduces need to build more tailings ponds
    - MFT will be consumed more quickly as it is generated
  - Accelerates reclamation
    - Allows reclamation of mined areas soon after mining
  - Reduces existing MFT inventory
    - As MFT is consumed independently of plant operations, TRO can be used to reduce MFT inventory held in existing ponds

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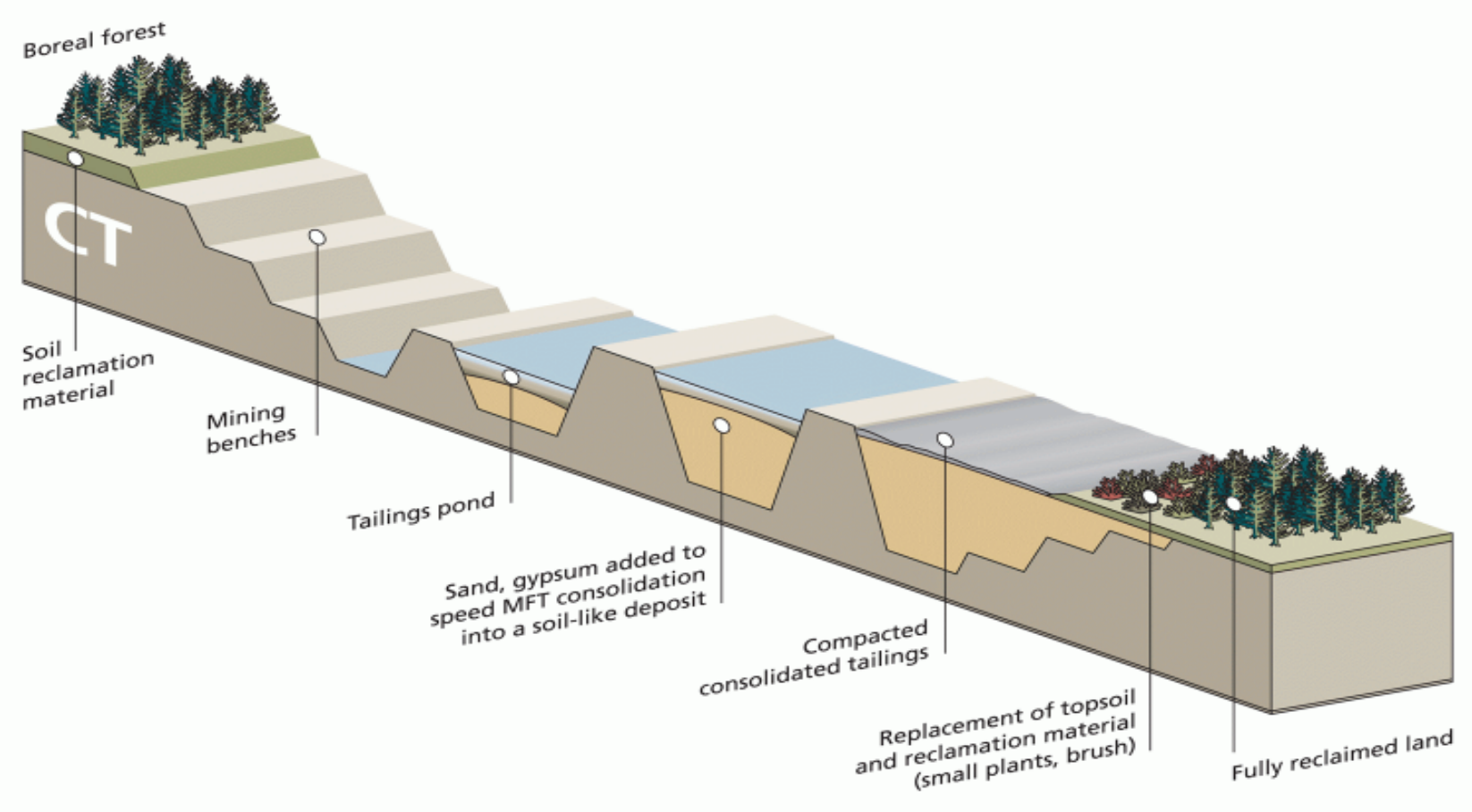
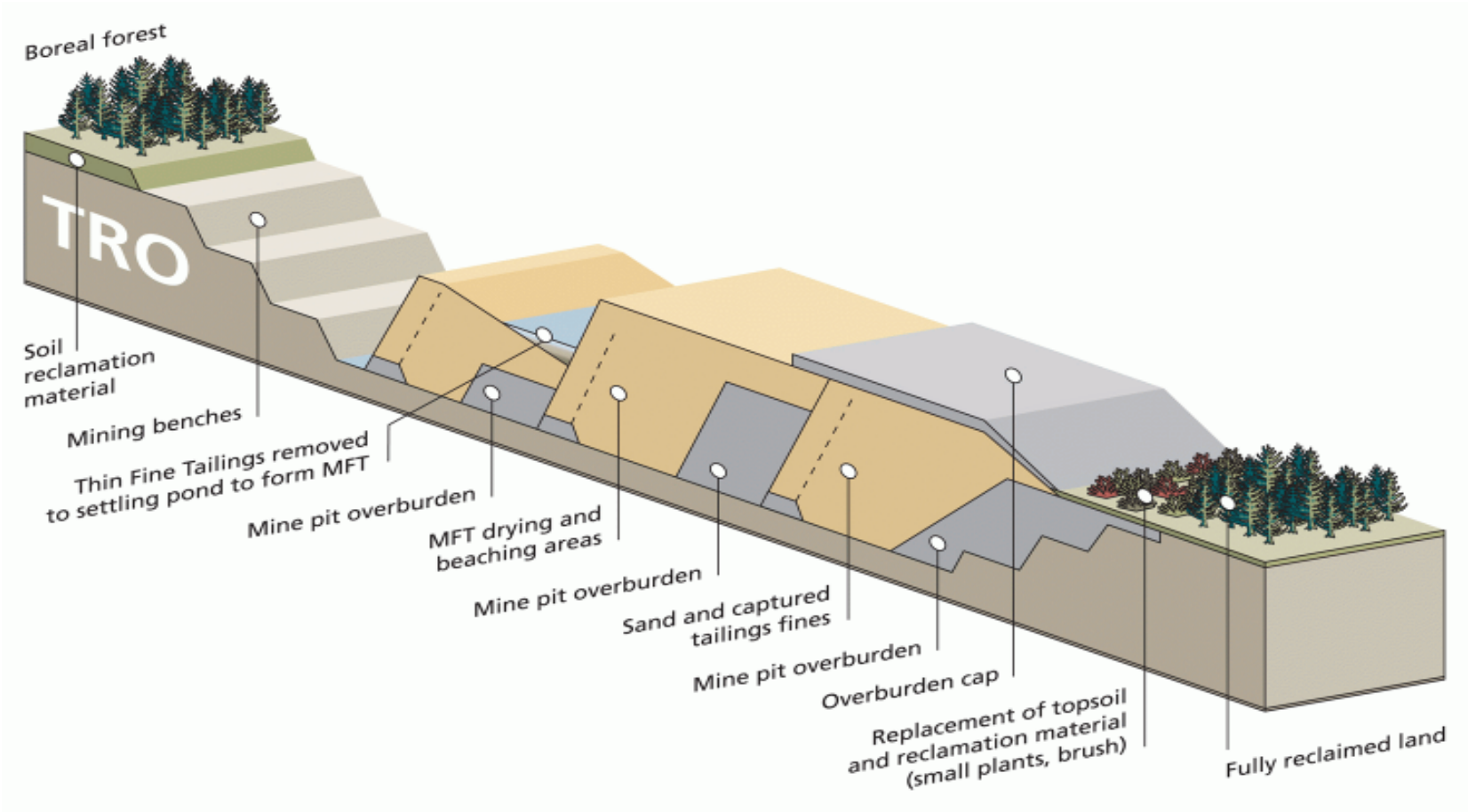
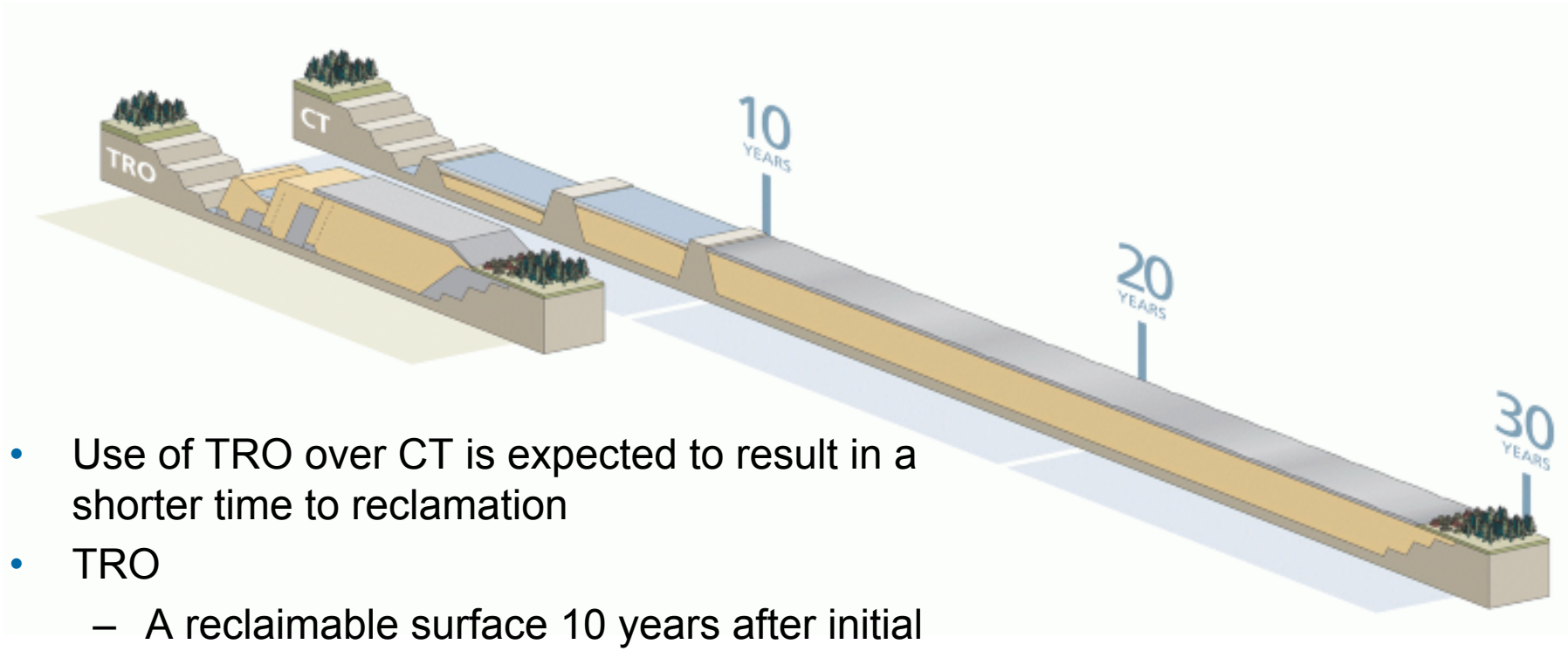
CT: Mining Operation Life-Cycle



TRO: Mining Operation Life-Cycle



TRO Compared to CT: Time To Reclamation



- Use of TRO over CT is expected to result in a shorter time to reclamation
- TRO
  - A reclaimable surface 10 years after initial disturbance
- CT
  - A reclaimable surface 30 years after initial disturbance

TRO Key Dates

- **July 2003**
  - Suncor begins testing MFT drying
- **February 2009**
  - Alberta government introduces regulations that set annual MFT reduction targets, require tailings ponds to be ready for surface reclamation within five years of the ponds being inactive
  - Suncor begins consulting with stakeholders on the company's new tailings management proposal
- **October 2009**
  - Suncor applies to the Energy Resources Conservation Board and Alberta Environment seeking approval to implement TRO at the Millennium and North Steepbank Extension mines
- **November 2009**
  - Suncor allocates approximately $450 million for TRO as part of its 2010 capital spending plans
- **Mid-Year 2010**
  - Commencement of commercial TRO implementation (subject to pending regulatory approvals)

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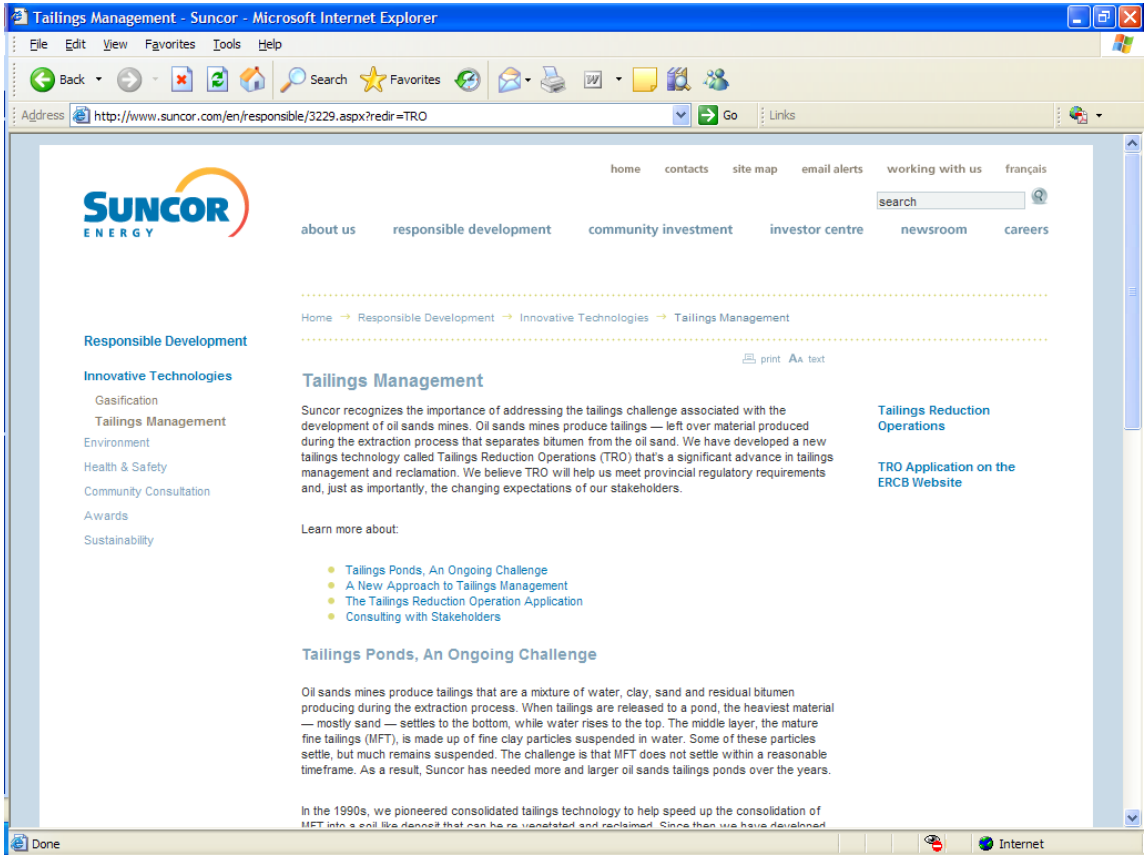
For More Information About TRO

- Visit http://www.suncor.com/tailings



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