

Water Treatment at Xstrata Nickel Sudbury Incorporating Tertiary Wetlands Treatment

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Overview

- **Historical perspective**
- **Emission reductions**
- **Smelter water treatment system incorporating wetlands**
- **Slag management**
- **Tailings management Onaping**

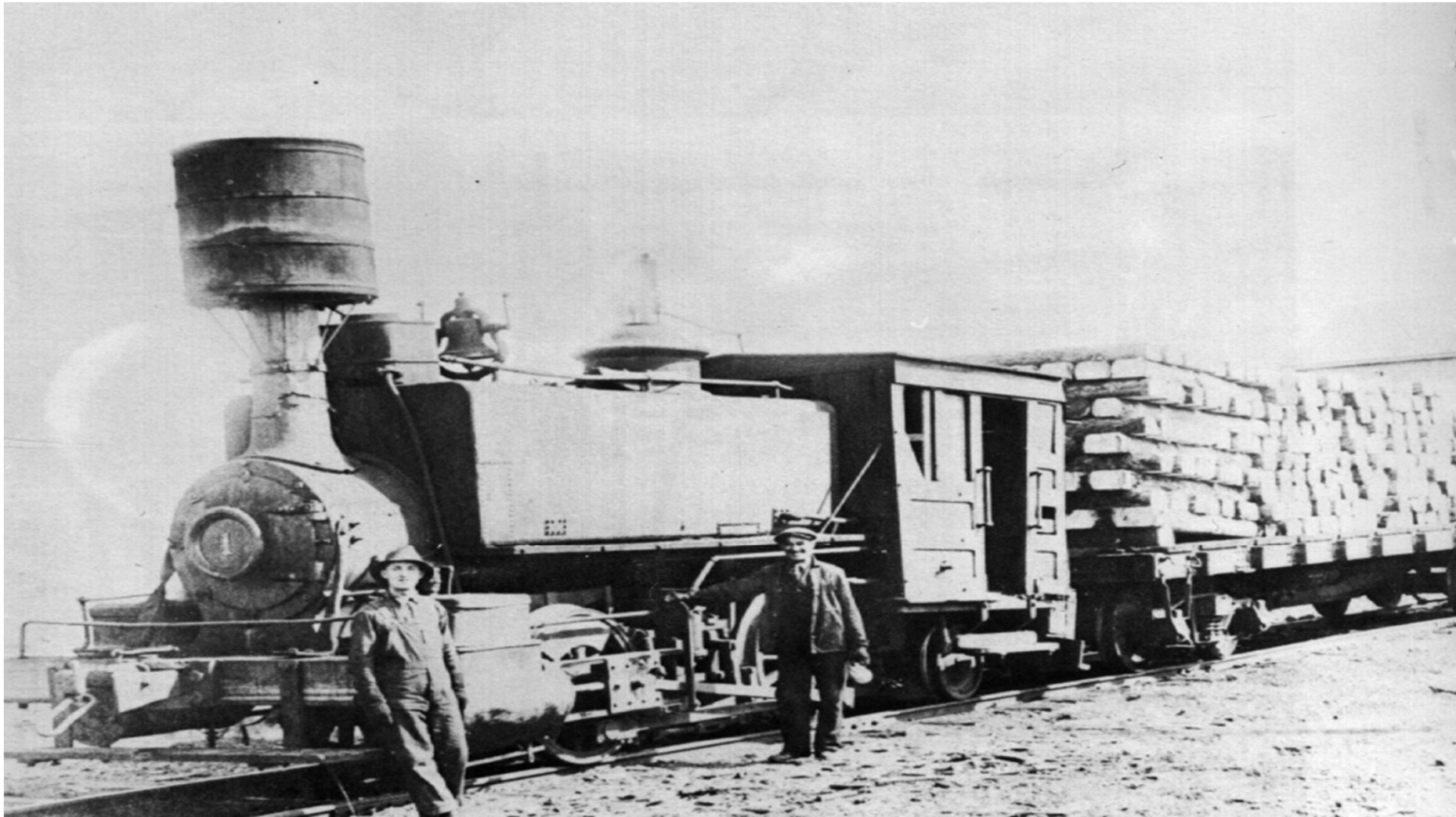
Sudbury downtown c. 1900



Early Lumbering c. 1870



Arrival of the Railway 1883



Open Hearth Roasting



O'Donnell Roast Yards c. 1920



O'Donnell Roast Yards . 1990



Longyear Drill Rig Falconbridge Area c. 1917

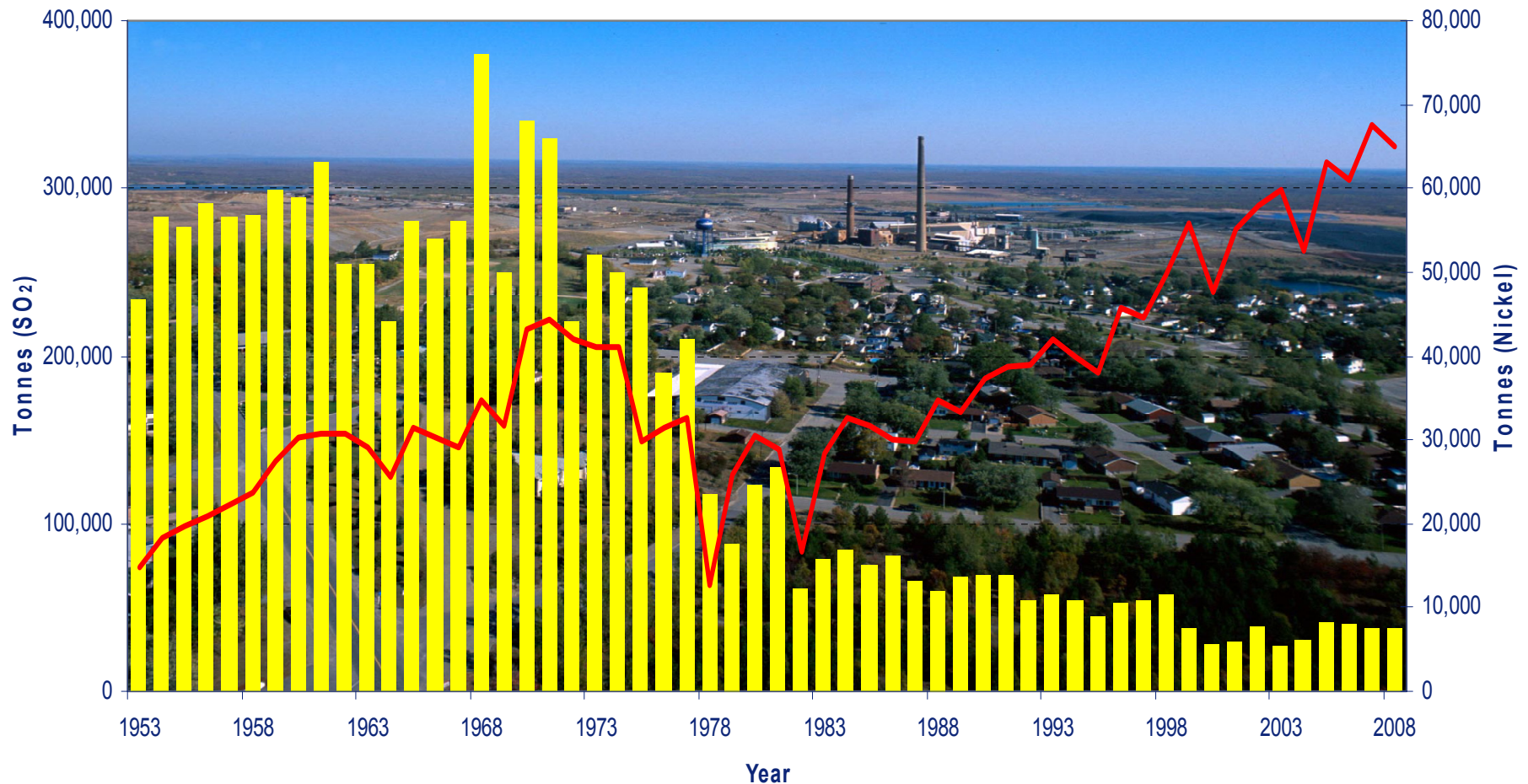


Natural Revegetation with Sulphur emission reductions



Smelter Emissions vs. Production

Xstrata Nickel Sudbury Operations Sulphur Dioxide Emissions





Smelter Conservation Area 1978



Smelter Conservation Area 1982



Slag Area Rehabilitation



Slag Area Rehabilitation



Slag Area Rehabilitation



Slag Area Rehabilitation 2007

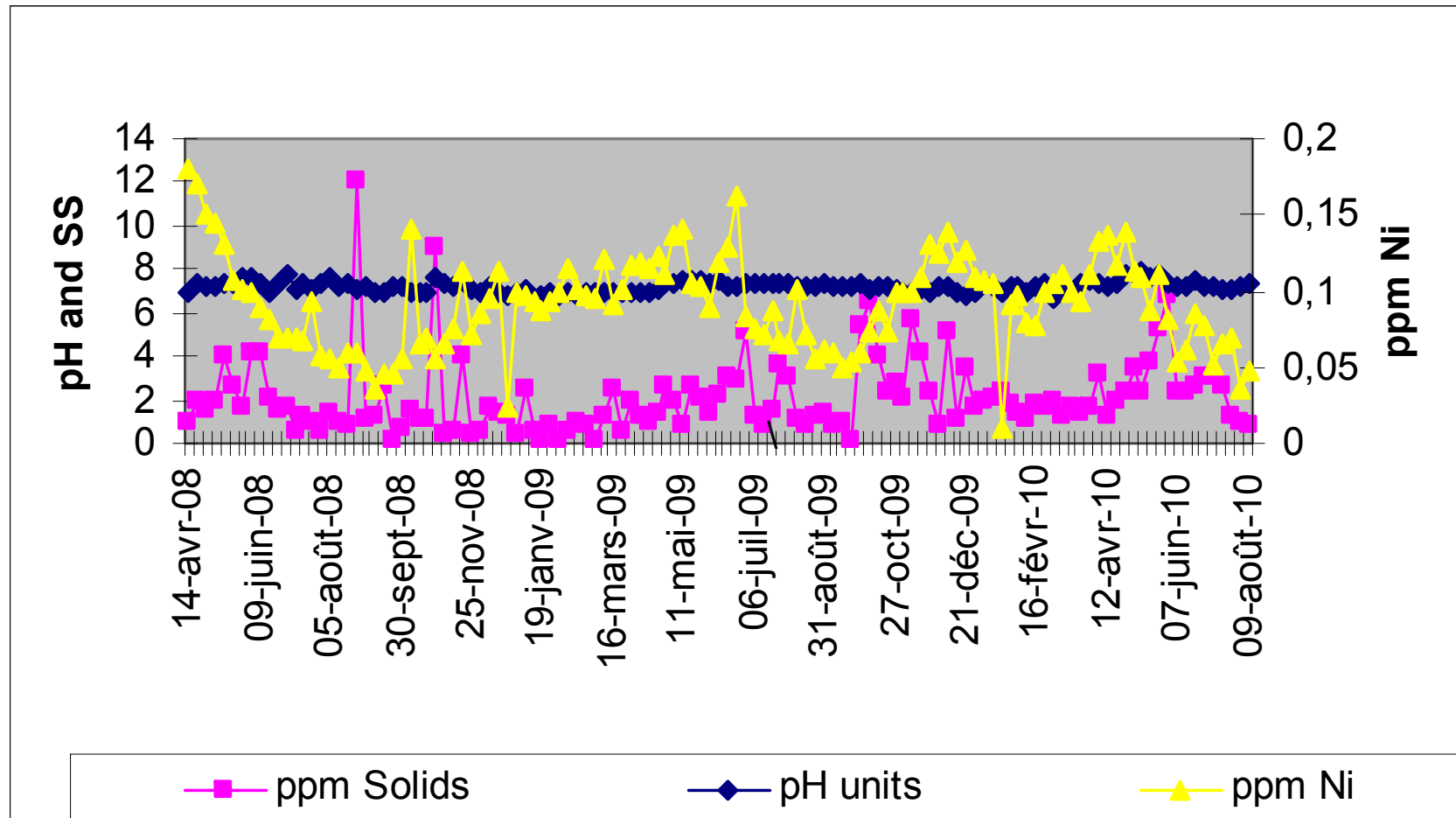


Final Effluent (April 2008-August 2010)

pH (Limit = 6.0 to 9.5)

Nickel (Limits: Daily=1 ppm, monthly=.5 ppm)

Solids (Limits: Daily=30 ppm, monthly=15 ppm)



Tailings Management

Slimes Utilization & Subaqueous Deposition



Biofuels Plot on Strathcona Tailings

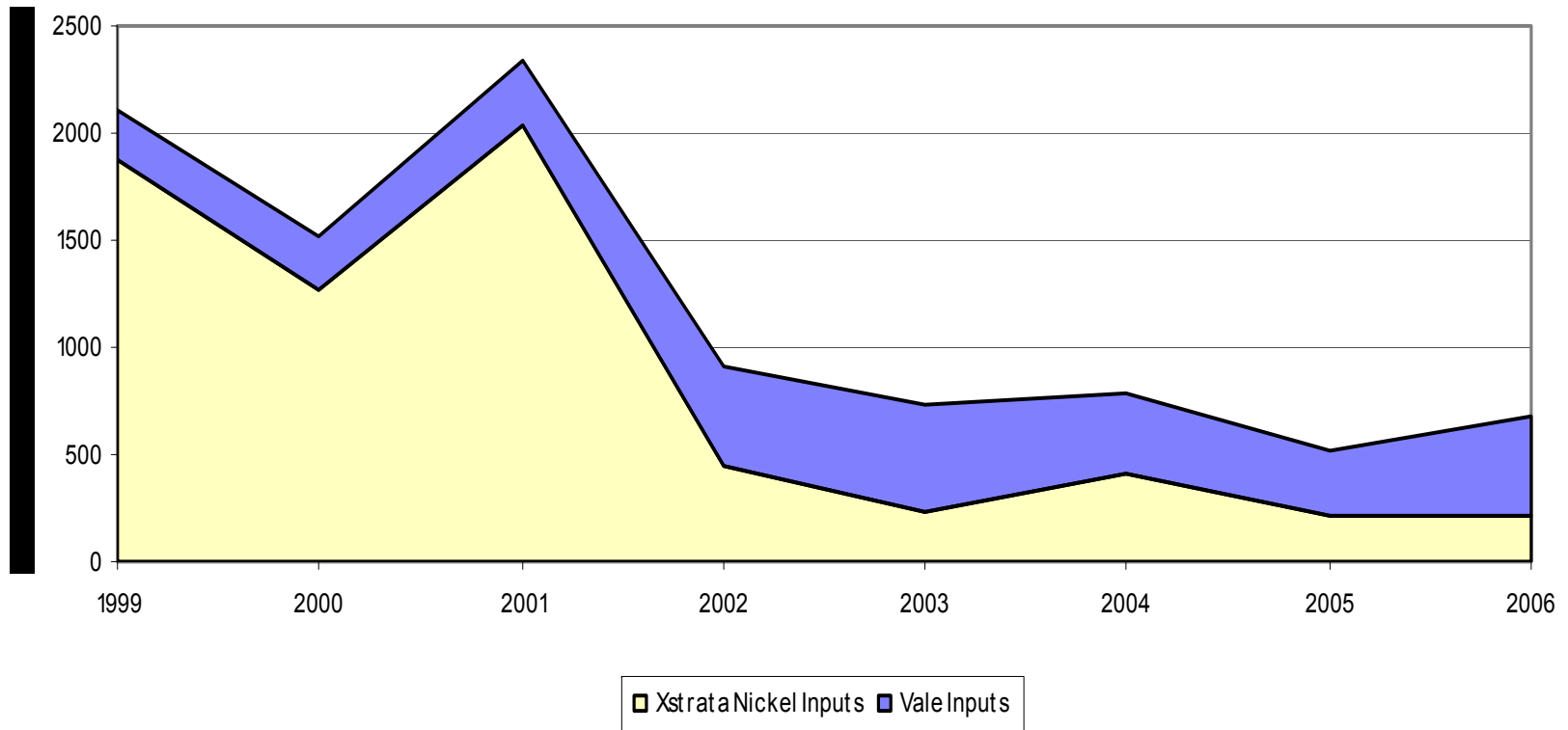


Biofuels 2010 Plot



Positive Outcomes

Estimated Soluble Metal Acidity Loadings at STTS
(estimated acid load)



Thank you.

Questions?