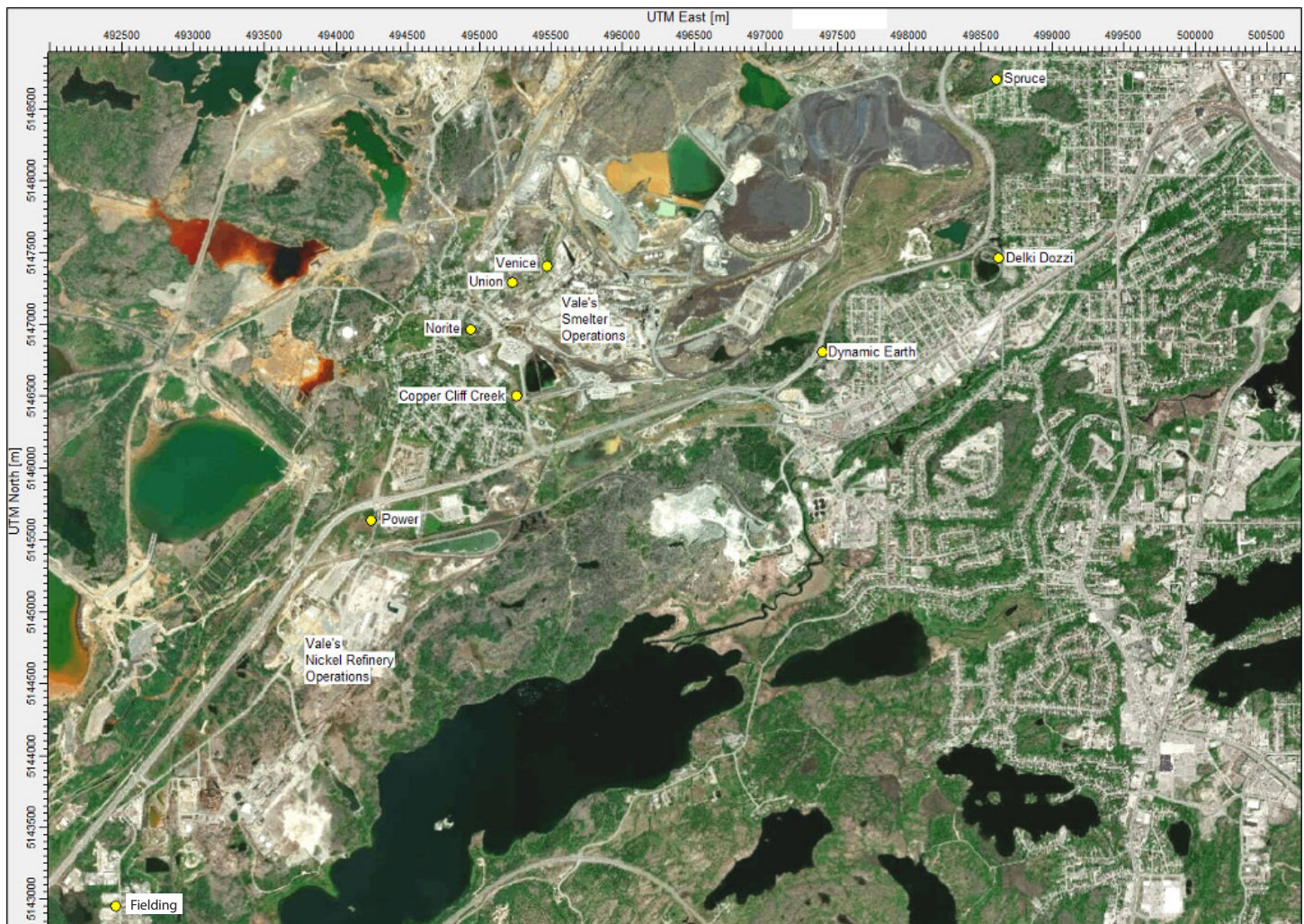


Vale maintains and operates a network of 9 particulate monitoring stations around its Copper Cliff Smelter and Nickel Refinery operations. According to the measurements, nickel concentrations in the community have progressively decreased, both in magnitude and in frequency of elevated values over the last 10 years.

In 2019, there were no exceedances of the Ontario Regulation 419/05 24hr nickel Ultimate Risk Threshold (URT) of $2 \mu\text{g}/\text{m}^3$ or of the Smelter's existing annual nickel site specific standard (SSS) of $1 \mu\text{g}/\text{m}^3$ - though 3 of the monitors did measure above the Ontario Regulation 419/05 annual nickel standard of $0.04 \mu\text{g}/\text{m}^3$.



Vale's Particulate Monitoring Network

