



• MINING

## Imperial Oil Case Study Ft. McMurray, Canada

HydroFLOW® units enabled reduction of antiscalant dosing to 0.0 ppm during a monitored trial while maintaining heat exchanger performance and reducing operational costs.

**0.0 ppm**

Antiscalant Dosing

**50%**

ROI on Chemical Savings

**7.2 mo**

Return on Investment

**10+ yrs**

Expected Unit Lifespan

### ⇒ BEFORE & AFTER

● BEFORE

- High antiscalant chemical dosing required
- Ongoing chemical costs and monitoring
- Risk of CaCO<sub>3</sub> scaling in exchangers

● AFTER

- ✓ Antiscalant reduced to zero usage
- ✓ Operational cost savings achieved
- ✓ Heat exchangers maintained efficiency

### 🏭 OVERVIEW

Imperial Oil operates the Kearl Lake K2 facility in Canada, processing large volumes of industrial water through heat exchangers. With flow rates around 200,000 m<sup>3</sup>/day, the system relied on chemical treatment to control scaling. The site aimed to improve operational efficiency and reduce chemical dependency using Hydropath technology while maintaining performance of critical equipment.

### ⚠️ CHALLENGE

Continuous chemical dosing was required to prevent scaling, resulting in high costs and ongoing maintenance demands.

- Heavy reliance on antiscalant chemicals
- High operational costs from chemical use
- Continuous monitoring and adjustments required
- Risk of CaCO<sub>3</sub> scaling impacting performance



## SOLUTION

HydroFLOW® Custom 24" units installed on heat exchanger inlet pipes to reduce antiscalant use during a monitored trial.

### UNIT INSTALLED

3x HydroFLOW® Custom 24" Units

### INSTALLATION POINT

Input pipes to heat exchangers

### INSTALL DATE

March 2022

### TRIAL DURATION

12 months monitored trial



### INSTALLATION

HydroFLOW® unit installation



### INSTALLATION

Heat exchanger pipe installation



### INSTALLATION

Installed HydroFLOW® units



## RESULTS

### Zero Chemical Use

Antiscalant reduced from 2.0 ppm to 0.0 ppm during the trial period.

### Cost Savings Achieved

Eliminating chemicals delivered significant operational cost savings.

### Fast ROI

Return on investment achieved in just 7.2 months from chemical savings.

### Maintained Performance

Heat exchanger efficiency maintained throughout chemical reduction.

### Proven Over 12 Months

A full year of testing confirmed consistent performance and results.

### Reduced Chemical Impact

Eliminating chemicals reduced environmental and handling impacts.

### KEY TAKEAWAY

## Summary

HydroFLOW® reduced antiscalant dosing from 2.0 ppm to 0.0 ppm during a 12 month monitored trial while maintaining heat exchanger performance and lowering operating costs.

**0.0 ppm**

CHEMICAL DOSING

**7.2 mo**

ROI ACHIEVED

**50%**

COST SAVINGS ROI

**HYDROPATH**

**Ready to eliminate antiscalant dosing?**

Get a free consultation for your facility.

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