

Highland Creek Treatment Plant

PRESENTATION TO NLC

- ◆ Emission Compliance
- ◆ Capital Improvements

3/25/2009



Solids Treatment

- ◆ Anaerobic digestion creates sewage biosolids
- ◆ Thermal reduction in Multiple Hearth Furnaces produces ash and emissions
- ◆ Original installation of two furnaces in 1978
- ◆ Emission point at main stack 75 meters tall



Regulatory Compliance and Reporting

- ◆ Ontario Environmental Protection Act
- ◆ Ontario Regulation 419/05 – Air Pollution – Local Air Quality
- ◆ Certificate of Approval Air
- ◆ Ministry of Environment (MOE) Guideline A8 – Canada Wide Standard for Dioxins and Furans and Mercury
- ◆ National Pollutant Release Inventory (NPRI)



Ontario Regulation 419/05

Air Pollution – Local Air Quality

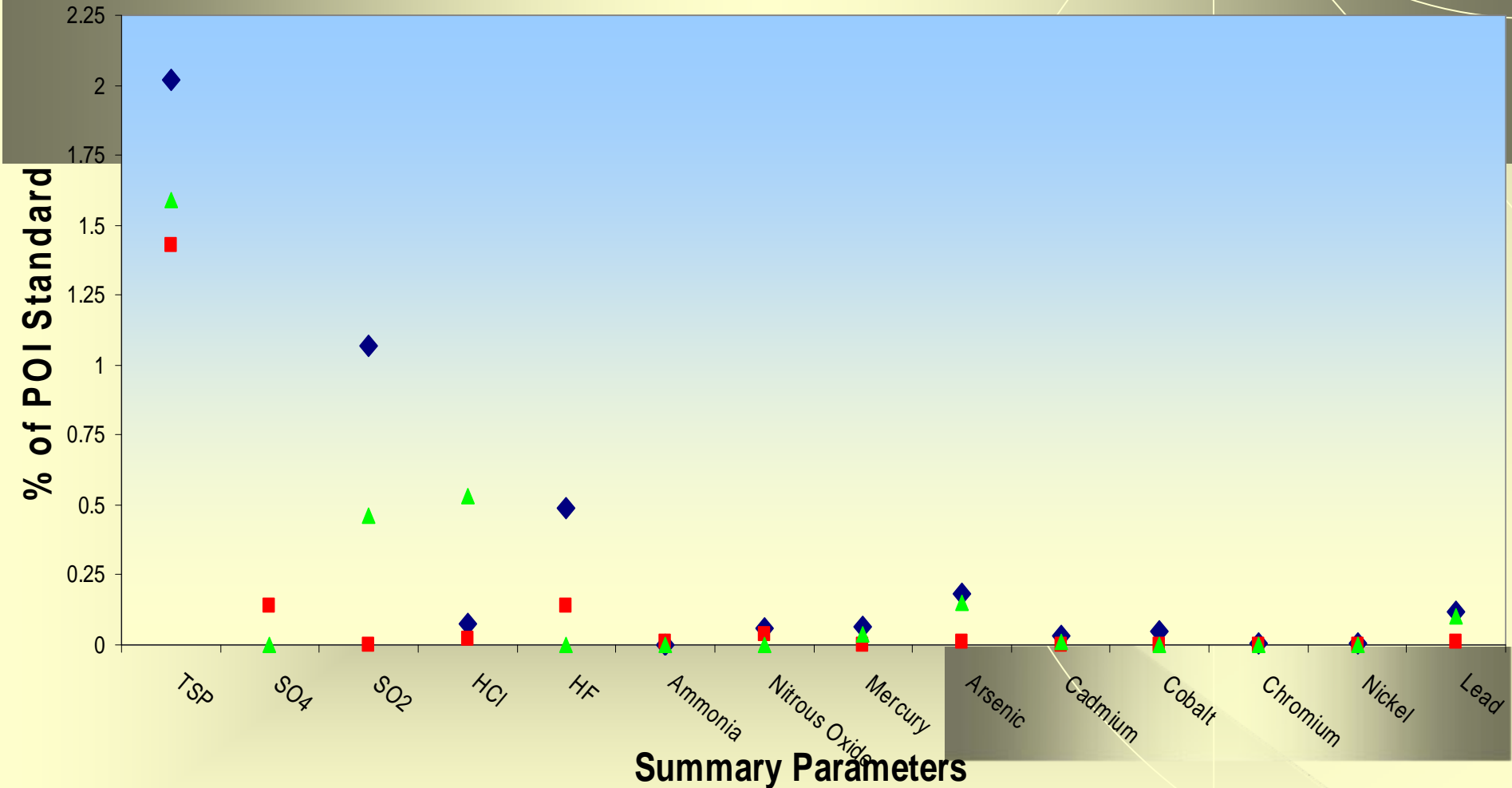
- ◆ Scientifically developed risk based Point of Impingement (POI) Standards for compliance
- ◆ Set at levels to safeguard the natural environment and protect the public
 - ◆ MOE Guideline for the Implementation of Air Standards in Ontario (GIASO) www.ene.gov.on.ca
 - ◆ Required dispersion modeling used to assess compliance
- ◆ What is POI?
 - ◆ Nearest point where contaminants emitted will impose (impinge) on a building or beyond the property line

Summary of POI Compliance for HCTP Main Stack

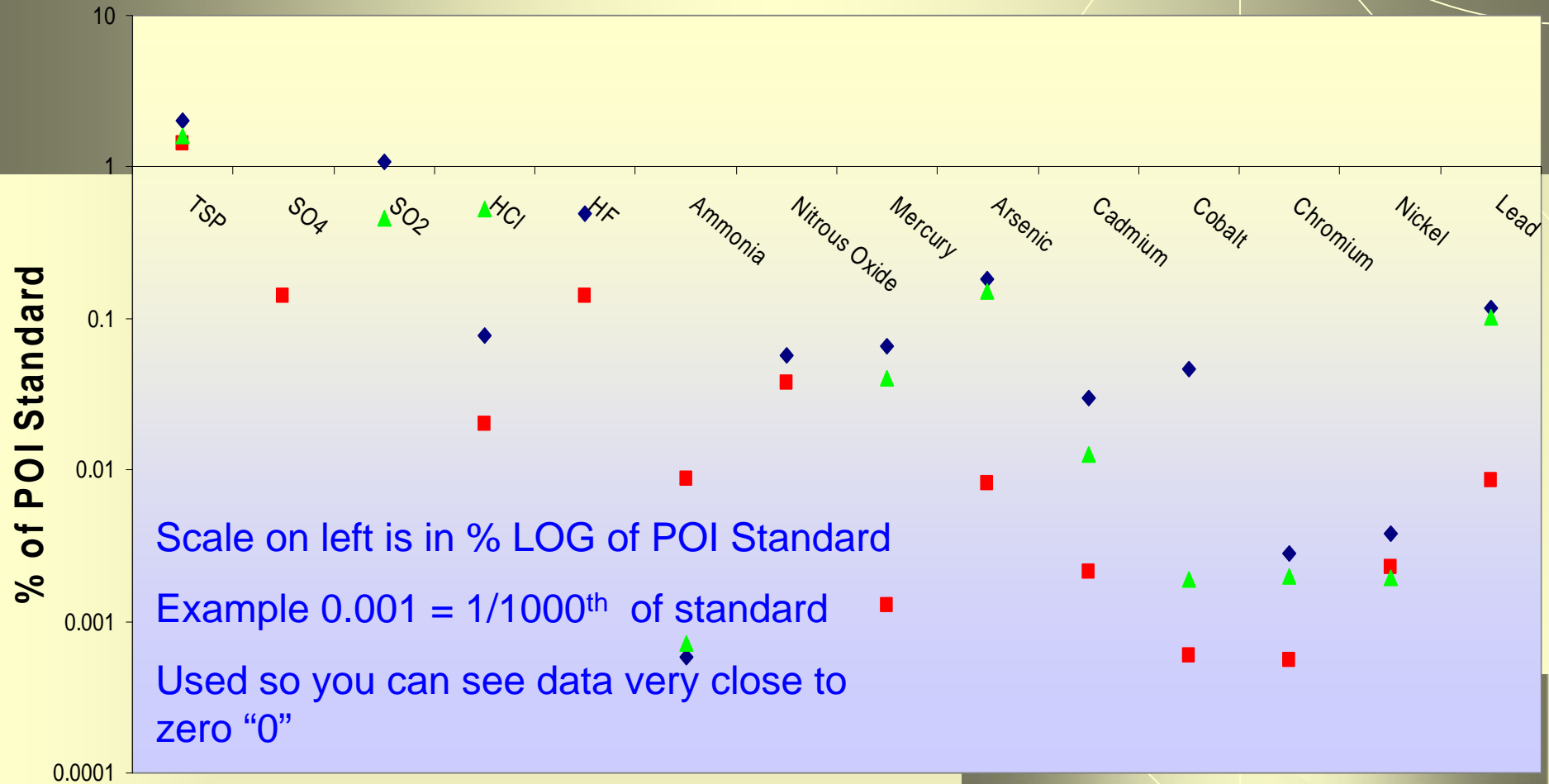
- ◆ Conformance to all regulated standards
- ◆ Highest parameter (Total Suspended Particulates, TSP) is ~1.59% of POI standard limit
- ◆ Source testing completed by outside firm – Ortech Environmental
- ◆ Testing plan pre-approved by MOE
- ◆ 2005, 2006, 2008 POI for summary parameters

% of POI Standard - 2005, 2006, 2008

HCTP Main Stack



% of POI Standard - 2005, 2006, 2008 HCTP Main Stack



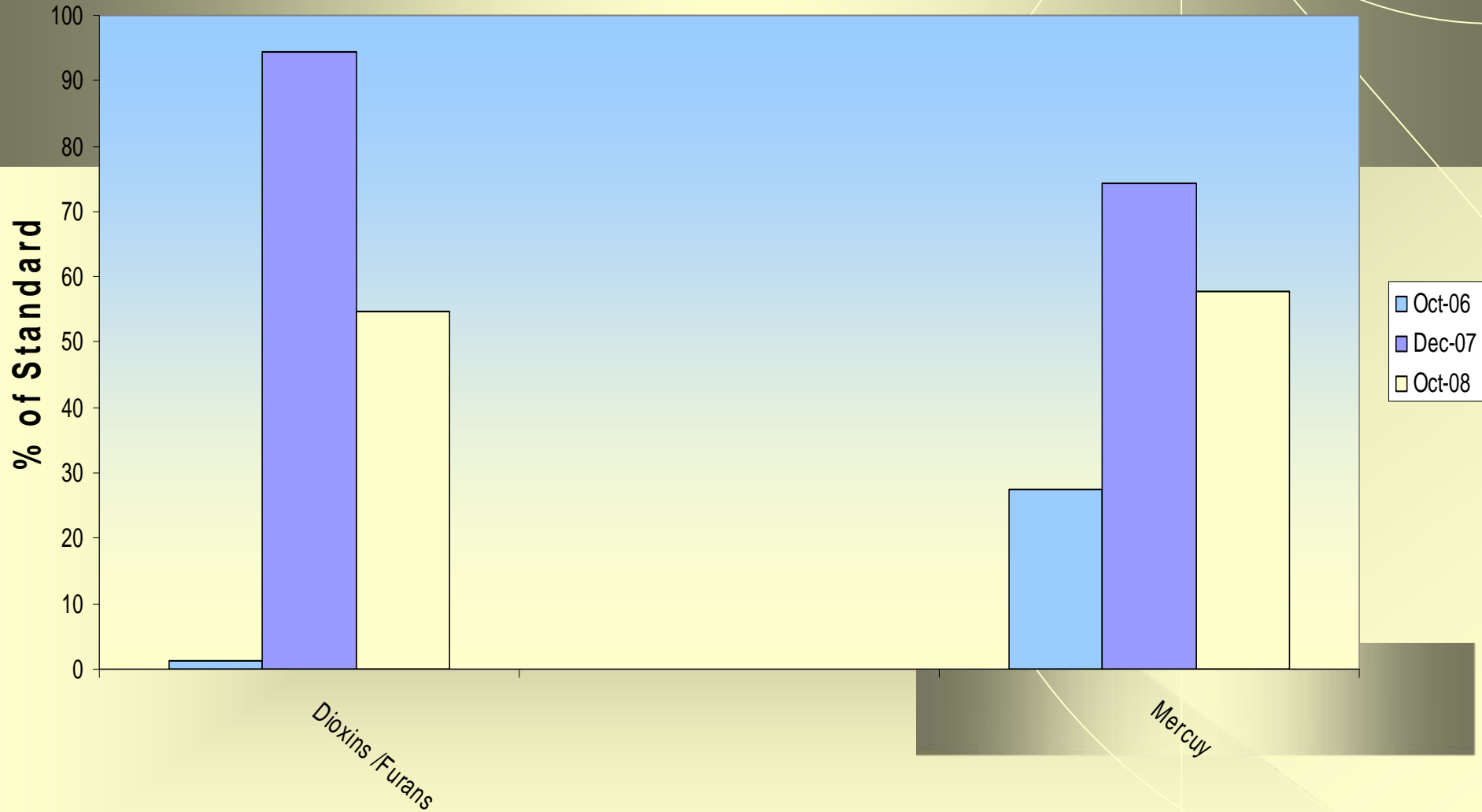
Summary Parameters

Canada Wide Standard (CWS) Dioxins and Furans, Mercury

- ◆ MOE including 9 other provinces have adopted CWS
- ◆ HCTP complied by required date, Nov 31, 2006.
- ◆ These parameters are based on concentration in the stack and not by POI modeling

% of CWS - Instack Concentration of Mercury

HCTP - Main Stack



CWS Dioxins and Furans, Mercury Incinerator Emergency Stub Stacks

- ◆ In 2008 MOE amended HCTP Certificate of Approval to include stub stack emissions for CWS
 - ◆ Stub stacks are used for emergency pressure relief and MOE is notified each time a spill event occurs
- ◆ Testing in October 2008 concludes leakage at each stub stack exceeding criteria (~180% of standard) for dioxins and furans
- ◆ HCTP currently in negotiations with MOE on timeline for bringing stub stack emissions into compliance

Minor & Major Repair Contract Incinerator Emergency Stub Stacks

- ◆ Minor Repair contract includes provision to temporarily address leakage from stub stacks and retesting to occur end of 2009
- ◆ Major Repair contract includes provision to eliminate leakage with the use of a permanent cap

HCTP Capital Projects – Solids Treatment

- ◆ Minor Repair Contract Incinerator #1
 - ◆ Construction Tender \$2.5M
 - ◆ Underway 2009, expected duration 6 months including commissioning
- ◆ Major Repair Contract Incinerator #2 then #1
 - ◆ Design stage underway
 - ◆ Construction estimated to start early 2010 for #2

HCTP Capital Projects

- ◆ Dewatering Upgrades
- ◆ Building Improvements
 - ◆ Design phase underway
- ◆ Waste Activated Sludge Thickening
 - ◆ Design phase underway
- ◆ Odour Control Project
 - ◆ Design phase underway

Questions



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