



# **BP Refinery Kwinana**

## **Environmental Update**

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# Outline



- Release of Public Environment and Sustainability Reports – available on the web
- Discuss trends in some Environmental Aspects
- Describe some of the Refinery's environmental improvements in the last 3 years
- Questions

# Information on BP Refinery (Kwinana)



- Public Environmental Report
  - Produced by every BP Business Unit every 3 years
  - Kwinana has reported on the performance of its significant environmental aspects
  - Covers 2007 to 2009 with historical context
  - Externally verified
  - Available from the web or contact the Environment and Dangerous Goods Department at the Refinery.

# Information on BP Refinery (Kwinana)



- Sustainability Report

- Produced to cover topics of common interest in summary

- How BP in Australia operates
    - Diverse and affordable energy
    - Low-carbon energy
    - Safe and responsible energy
    - People energy
    - Local energy
    - Available from:

<http://www.bp.com/sustainability>

BP in Australia  
Sustainability Report  
2009-2010



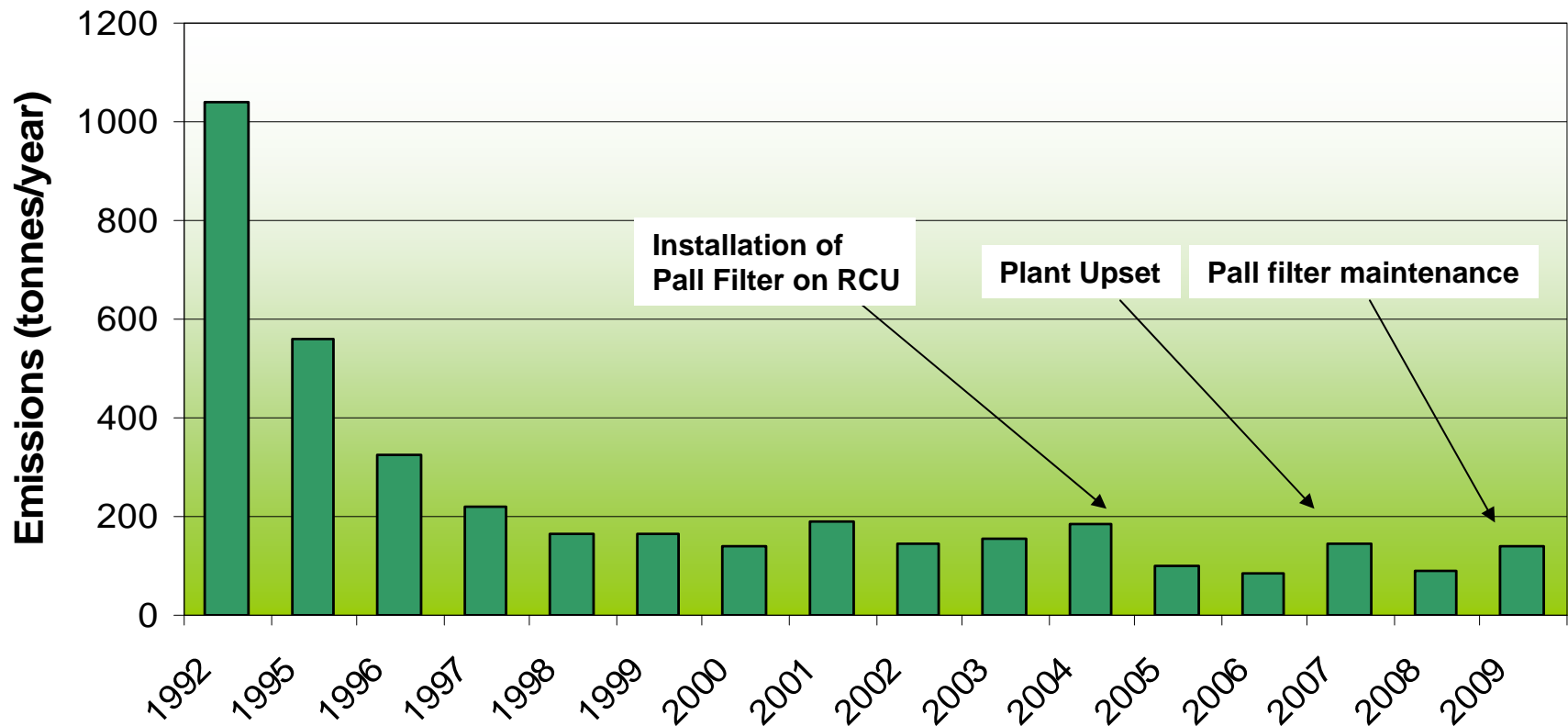
# Kwinana Refinery



# Particulates



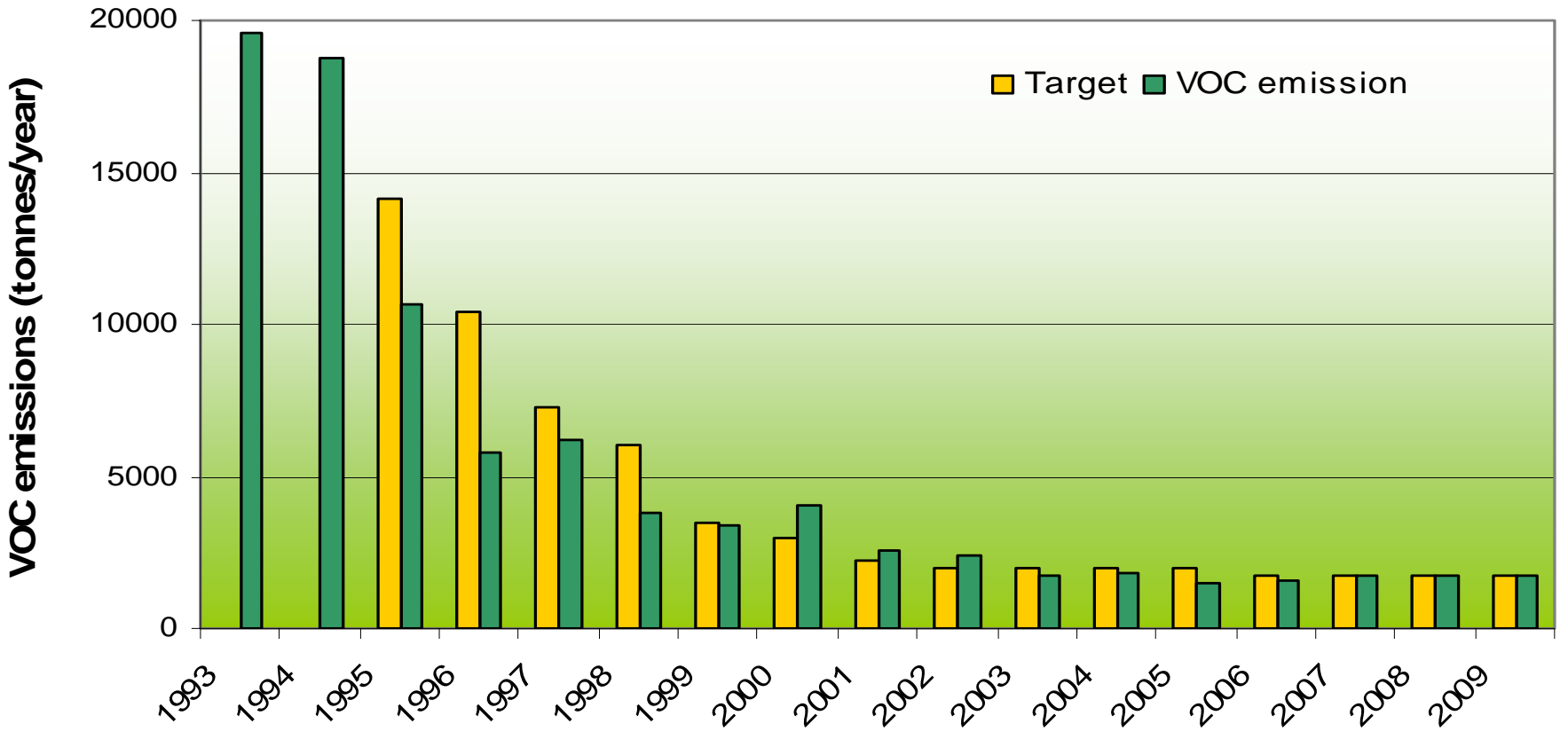
## Particulate Emissions from BP Refinery (Kwinana)





# Volatile Organic Compounds

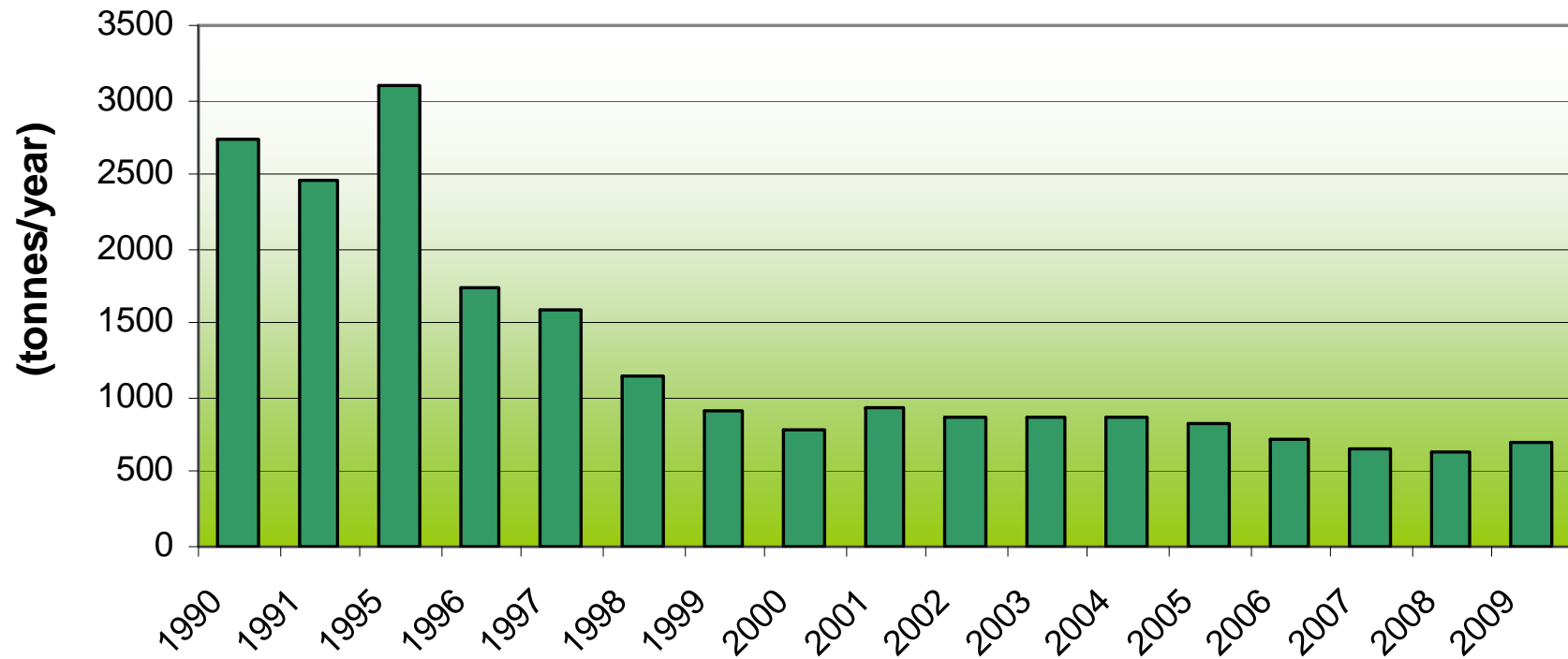
### VOC Emissions by BP Refinery Kwinana



# NOx



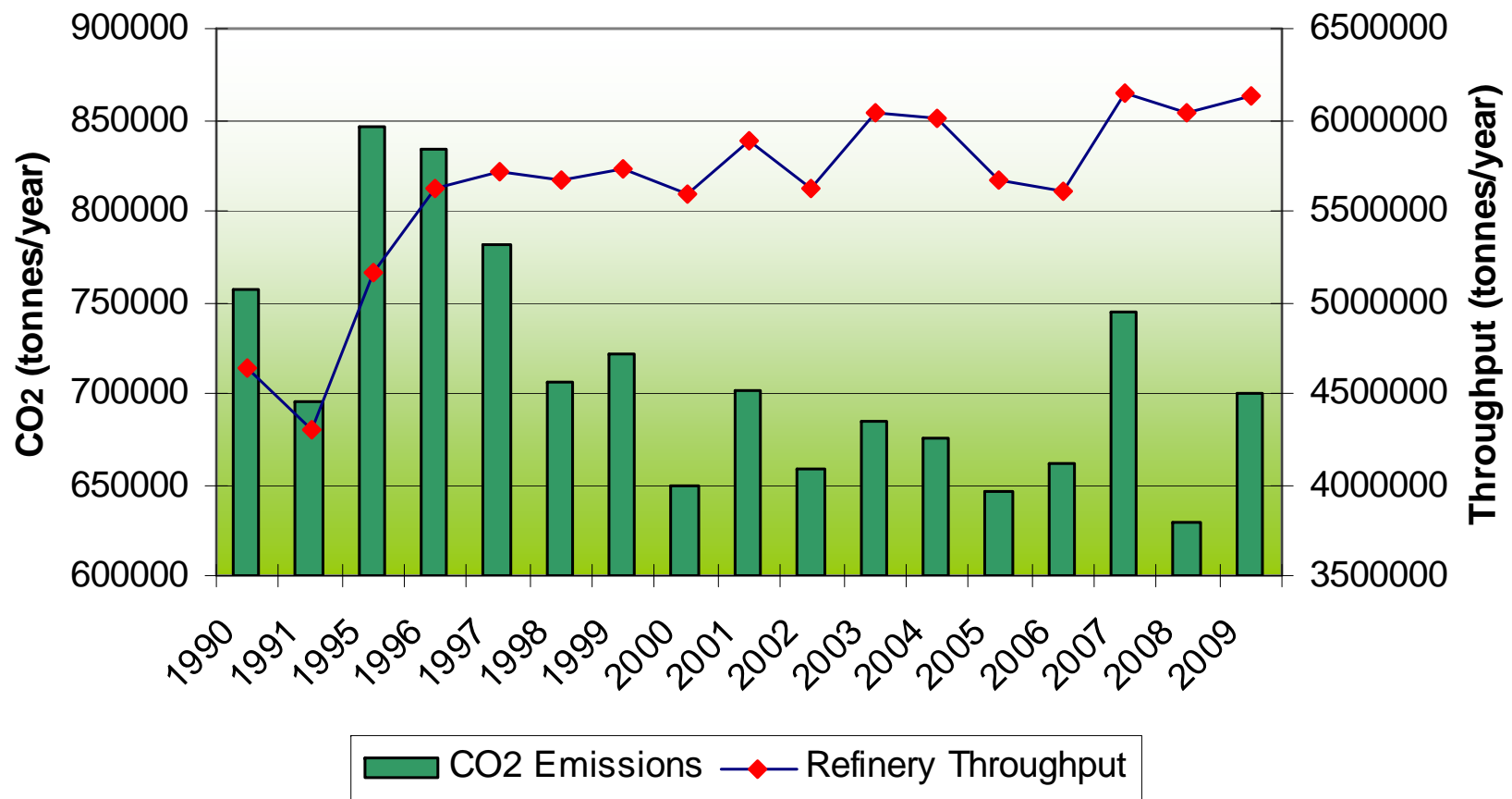
## NOx Emissions from BP Refinery (Kwinana)



# Energy



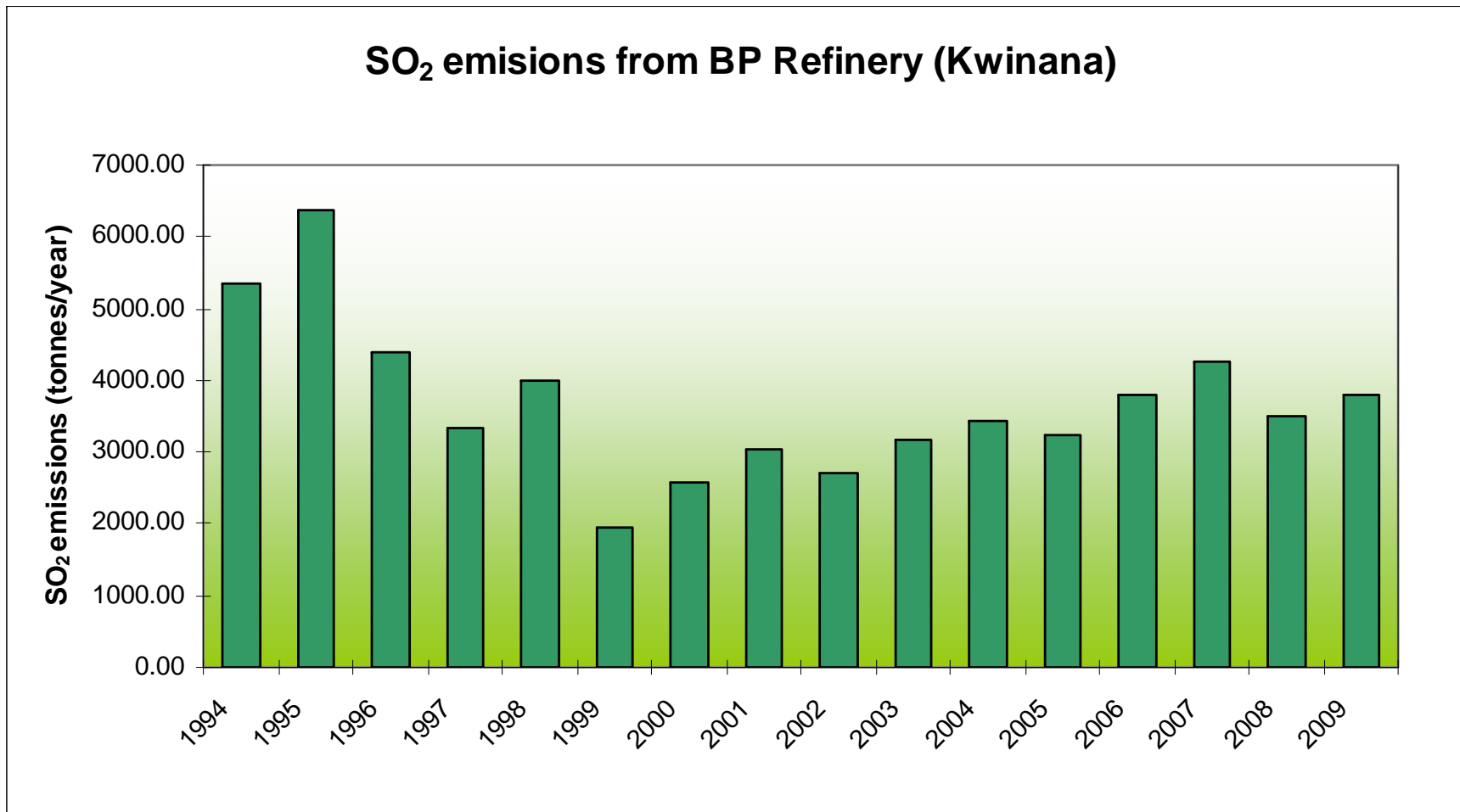
### CO2 Emissions from BP Refinery (Kwinana) tonnes/year



# Sulfur dioxide



**SO<sub>2</sub> emissions from BP Refinery (Kwinana)**



•Low Sulphur diesel – 5000 to 50 ppm since 1999

# Noise



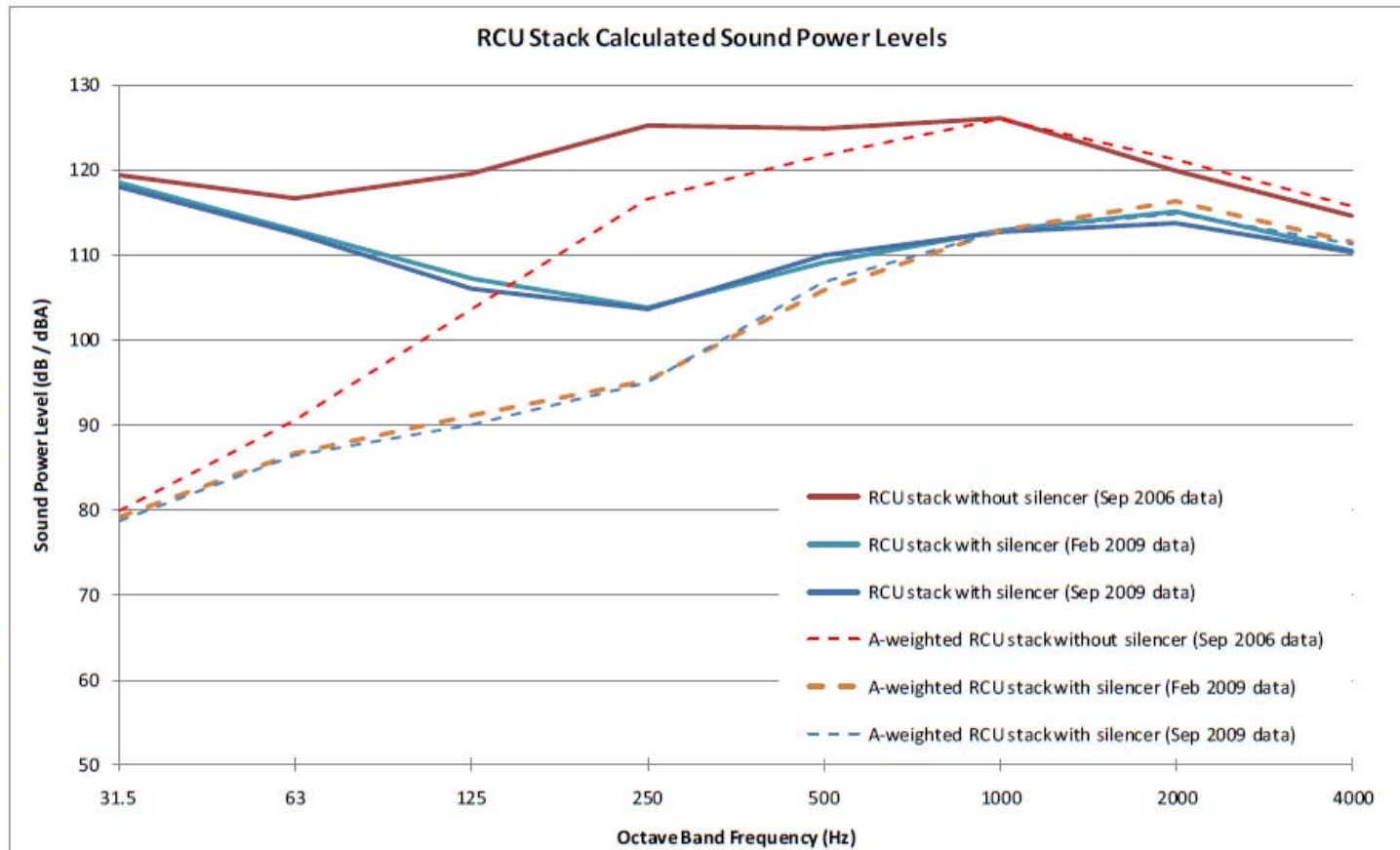
## RCU Silencer Installed in 2008



# Noise



Figure 3-1 Calculated Sound Power Levels (linear and A-weighted)



# Noise

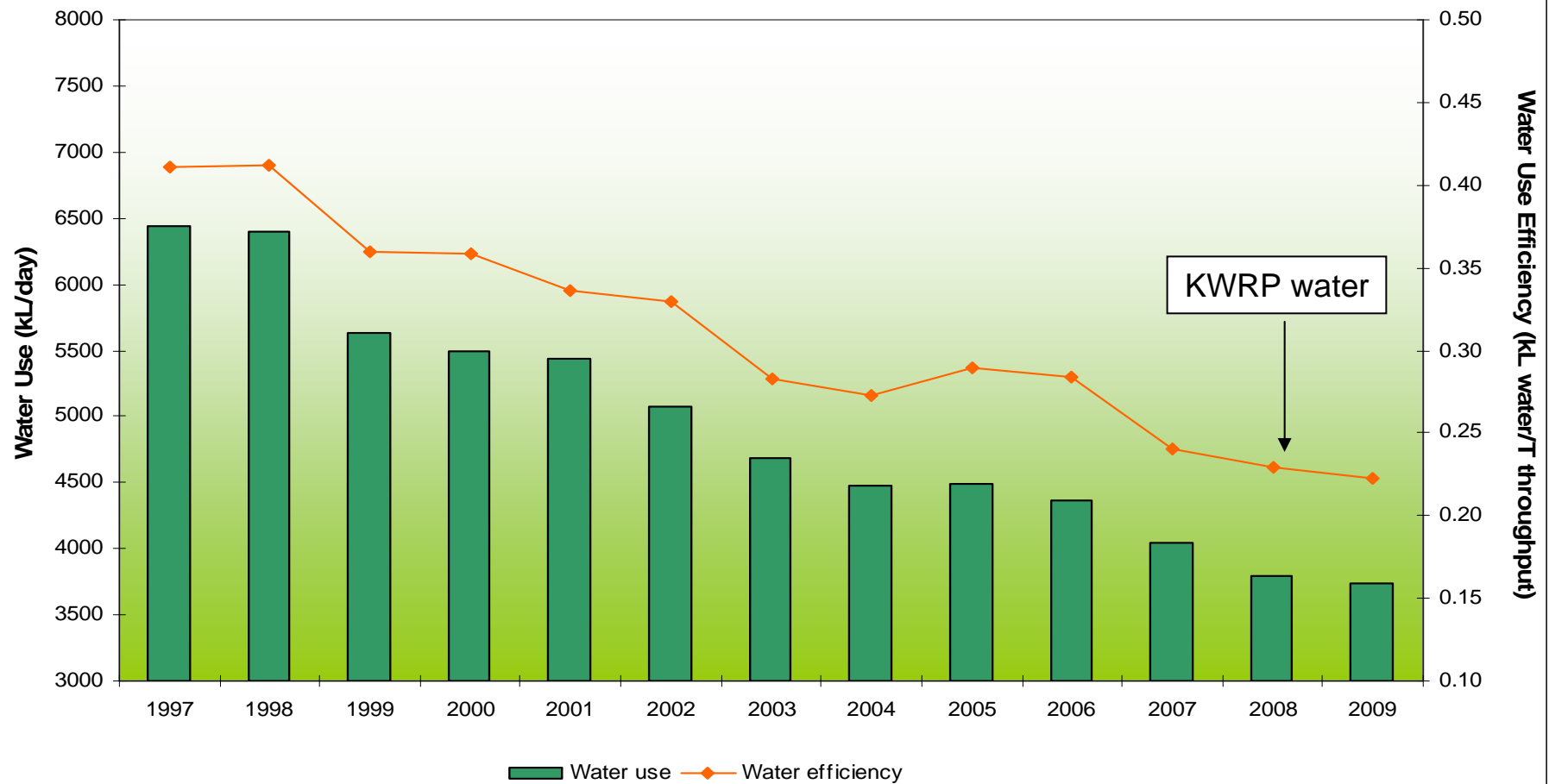


- RCU silencer resulted in a 10 dBA reduction in the sound power level
- It has most impact at far field locations (1.5 to 2 dBA reduction) as the source is 80 m high
- Modelling under the worst noise meteorological conditions indicates the Refinery is still a significant contributor (within 5 dBA of the assigned noise level) at 2 locations in the KIC monitoring location
- There have been no noise complaints since the installation of the silencer

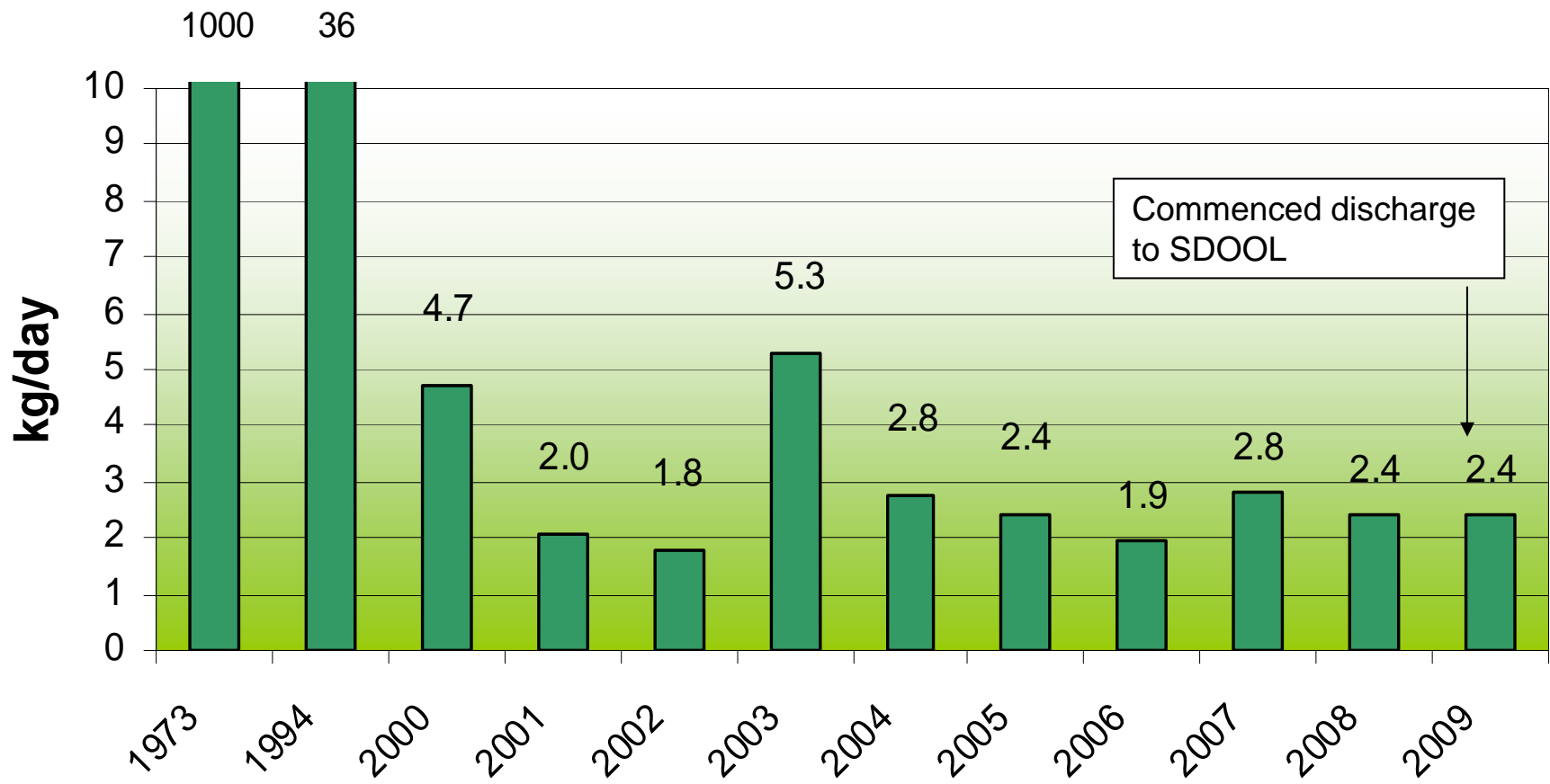
# Total water use



Average Daily Water Use at BP Refinery (Kwinana)



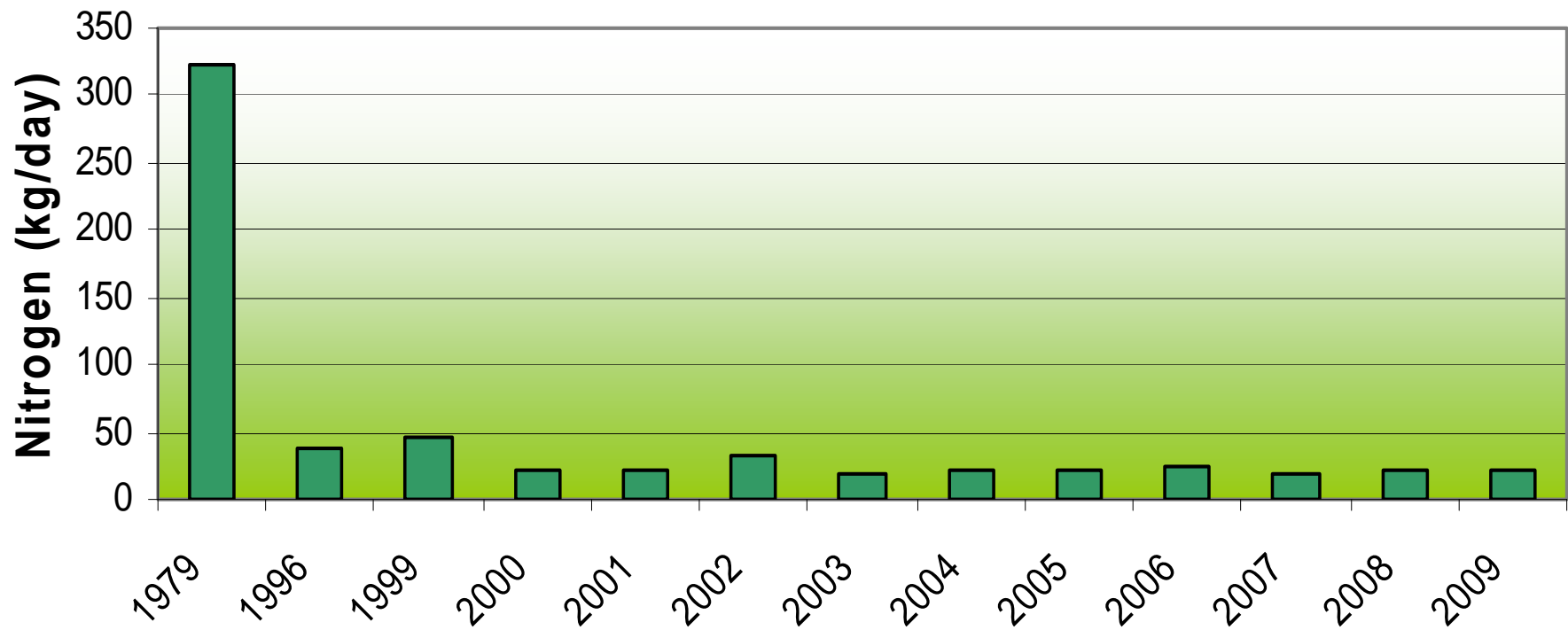
## Wastewater Emissions - Oil



# Nitrogen



## Annual Average Nitrogen Emissions from BP Refinery (Kwinana)



# Summary



- **BP Refinery Kwinana has recently published its Public Environment Report (2007 to 2009) and BP Australia Sustainability report (2009-2010)**
- **There have been large improvements in lowering emissions over the last 10 years, but these have been steady for the last 3 years.**
- **Further improvements in emissions will require effort from everyone at the Refinery – operators, maintenance, projects...**

**Main environmental improvements from 2007 to 2009 were in:**

- **Noise – RCU silencer**
- **Water use (total and potable) - KWRP**
- **Water discharge - SDOOL**

# The End



- Questions





# Future projects

- Improve Pall Filter availability
- Upgrade pollutant control on RCU
- Grit blasting area to control dust / dispersion of grit
- WWTP upgrade (DAF)