



EEO Implementation

Orica – Kooragang Island Site

Outline

- Orica
- Assessment Trial
- Verification Trial

Orica

Global company employing $\approx 14,000$ people in >50 countries.

- Mining Services
- Chemical Services
- Chemnet
- Consumer Products



Orica and EEO Triggers

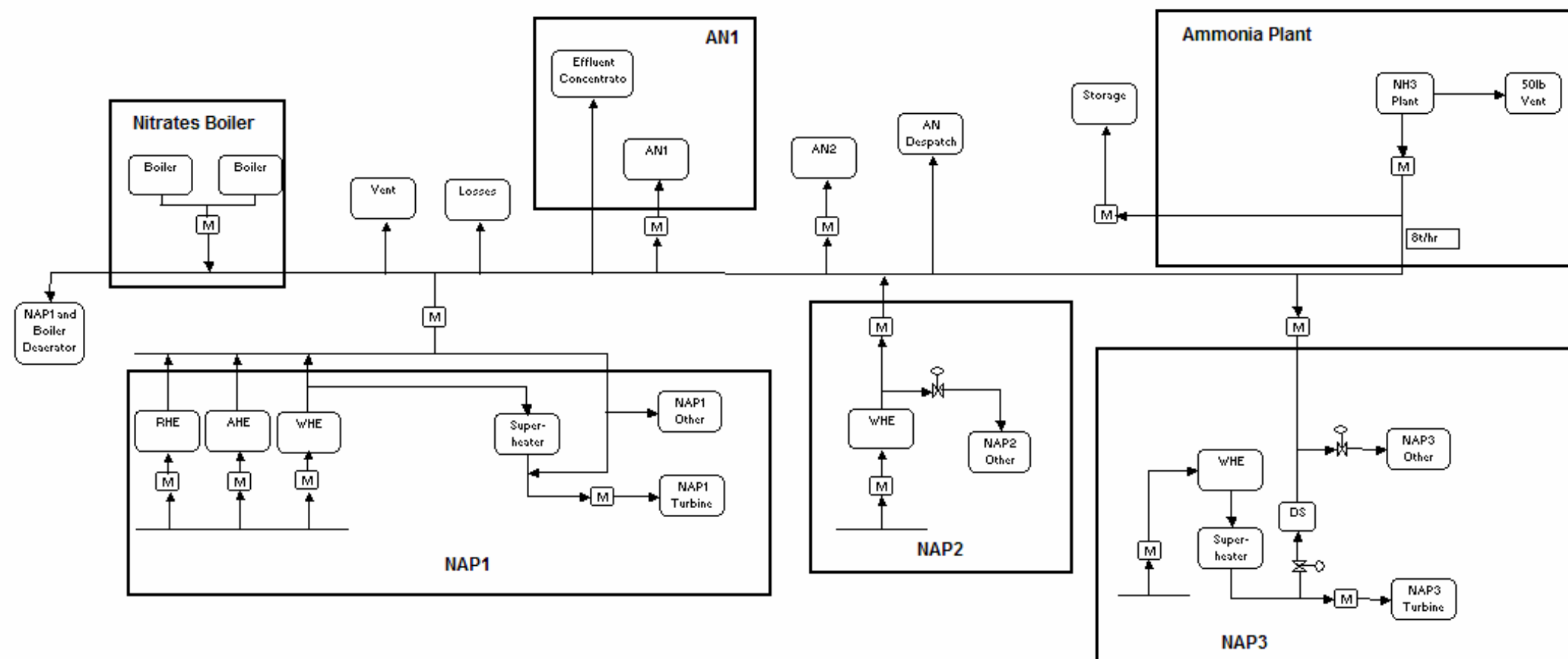
Total energy consumption $\approx 14\text{PJ/a}$

Kooragang Island site $\approx 12\text{PJ/a}$

Assessment Trial – KI 2006

Data review and analysis

- Undertaken prior to workshop
- Energy balances (gas, steam, electricity)
- Graphs of production vs energy use



Assessment Trial – KI 2006

Assessment Workshop

- Assessed management systems
- Brainstormed ideas and ranked opportunities
- Engineers, Managers, external consultant involved
- External consultant then investigated high priority options to prior to finalising action plan

Outcome – Opportunity Action Plan

KI Opportunity Action Plan

- Over 70 potential energy efficiency opportunities identified
 - 12 management actions
 - 16 likely to have payback of <4yrs
 - 14 with a possible payback of <4yrs
 - 32 unlikely to proceed due to safety concerns, environmental risks or uneconomic

Potential benefit if all projects implemented
\$1M/a

KI Opportunity Action Plan

- Steam Integration Opportunities
- Optimisation of fans and motors
- Additional insulation of piping
- Lighting opportunities
- Upgrading of air compressor systems
- Process efficiency improvements
- Upgrading “end of life” equipment
- Air conditioning systems

Current Assessment Methodology

- Full day workshop on Sustainability
 - Energy, water, waste and greenhouse gas emissions
- Team included
 - Engineers, plant operators, external consultant, specialists

Current Assessment Philosophy

- Background on sustainability issues
 - Global
 - Orica's Sustainability Policy
- Review of site energy and water consumption and waste generation
- Brainstorming and ranking of ideas
 - SHE Benefits
 - Poten. cost savings
 - Resources required
 - Likely payback
- Development of action plan

Verification Trial - 2007

- Verification of:
 - corporate systems
 - site systems
- Currently awaiting feedback on findings

EEO Key Elements

- Leadership
- People
- Information and Data Analysis
- Opportunity Identification
- Decision Making
- Communication

Leadership

Corporate

- Sustainability Strategy
- Snr Management Accountability
- Sustainability Team

KI

- Sustainability Policy
- Sustainability Steering Committee (Snr Management)
- Manager appointed to drive programme

People

- Line Management accountability for energy efficiency
- Continuous management of energy
- Daily performance reporting
- Energy KPI's (gas consumption)

Future

- Sustainability training
- Sustainability champions

Information, Data and Analysis

- Comprehensive data records
- Good energy balance information
- Issues
 - Auditability of data and procedures
 - Electricity metering onsite at plant/equipment level

Opportunity Identification

- Late 2007 revisited assessment process to identify further opportunities

Decision Making

- Information on energy performance reviewed regularly
- Well developed capital expenditure process
- 3 year capital plan
- Shadow carbon price on capital projects

- Issues
 - Improvements in capital process to increase focus on energy efficiency in upfront project decisions

Communication

- Strong sustainability reporting at corporate level
- Issues
 - Poor documentation of decision making processes
 - Opportunities to improve on sustainability communication at site level