



**Cargill Processing  
Limited**

**Odour Reduction &  
Management  
Experience**  
May 14 2014



# Background on Cargill -Footscray

- Oilseed Operations at the Site on Somerville Rd began in the 1950s – Owned by Meggitt at the time.
- Cargill purchased operations in 1982.
- Primarily crush canola seed to produce crude degummed oil and protein meal
- 30 employees work at the facility. Most live in the Western suburbs of Melbourne

# The Environmental Journey Begins

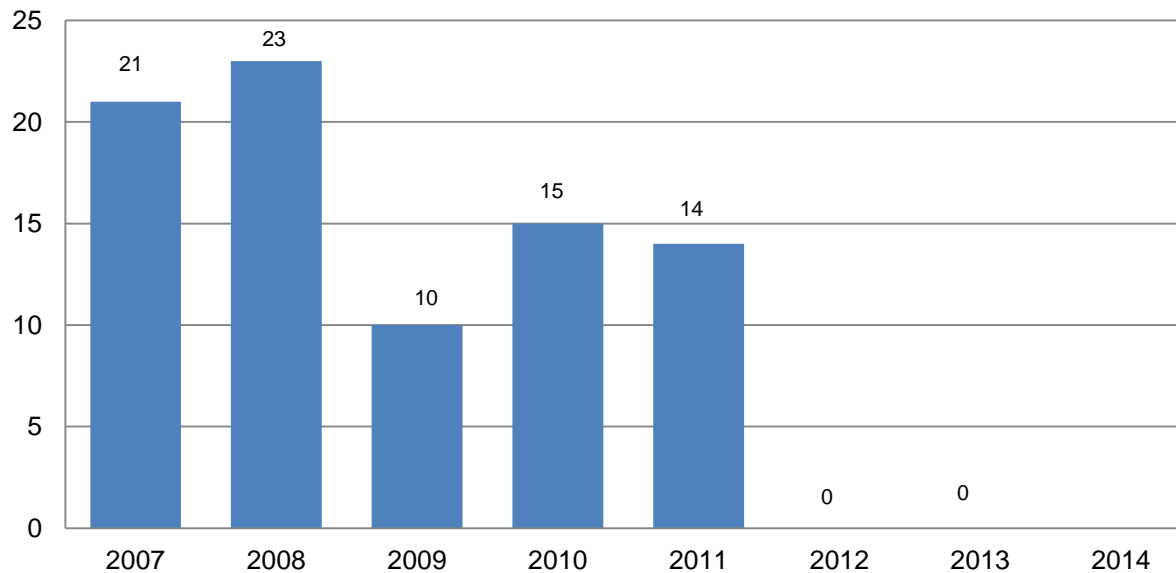
- During 1990's installed chemical scrubber and used boiler for combustion of odours.
- In August 2005 An Odour Abatement Strategy was submitted to EPA.
- This included recommendations to install Biofilters to treat Preparation and Solvent plant odour Streams.
- Preparation Biofilter completed in August 2006
- Extraction Biofilter Completed October 2007
- Total Cost \$1.1 million
- Odour Problems Fixed ????????

# Enforceable Undertaking

- By 2010 there was a decline in performance of biofilters and an increase in odour complaints.
- In 2010 EPA investigates Cargill for Odour Violations in May and August 2010.
- Cargill Enters into an Enforceable Undertaking with EPA as an alternative to Court proceedings.

# Odour Performance

**Number of days where odour complaints were received from residents**



# Challenges/Roadblocks

## Work Culture

- Cargill was in denial over the odour issues. Enforceable Undertaking was a wake up call for Senior Management.
- Employees also needed to be made aware of the impact their actions had on odour.
- Change in management at the Footscray: *6 different Plant Managers in < 10 years.*
- *Most waged employees greater than 20 years in job with high turnover of salaried supervisors.*
- Priority needed to be given to environmental issues.
- Work practices needed to be changed.

# Challenges/Roadblocks

## Location

- Changing area demographics
- Residential property market continuing to become more and more affluent
- Housing developments encroaching on industries in the area
- Residents demanding “higher standards of living” and becoming less tolerant to odour, placing more pressure on Cargill and the EPA
- New residents not aware of the improvement – their expectations are higher than the previous occupants

# Challenges/Roadblocks

## Odour Control Technology

- Difficult to control odour since there is no well-defined regulatory or otherwise acceptable limit – odour is not an “exact” science
- Odour control is not Cargill’s core competency – we had to learn.
- Challenges faced around engineering design of odour control system due to the subjective nature of odours - conservative design inputs were used
- ‘Sensitive noses’, a slight change in production and changing weather conditions, prompted complaints, rendering the odour control system apparently ‘worthless’ to Cargill
- Managing both point source emissions along with fugitive emissions.



# Changes Made

- In 2010 Cargill engaged The Odour Unit ( Environmental Consultants) to review system and make recommendations for improvement.
- An Environmental Supervisor was appointed at the site.
- Rebuild of Biofilter Cells in Preparation (2012)
- Rebuild Biofilter cells in Extraction (2010, 2012 & 2014)
- Install Wet Scrubber to Biofilter in Preparation ( 2011)
- Air Atomised Sprays installed on Ventillation Duct for Biofilter in Preparation (2011)
- Installed new fan on biofilter in Preparation. (2011)

# Changes Made

## - Continued

- All Roller doors into preparation building have been made auto-closing
- Repairs made to ducting to extraction biofilter to stop leaks (2012)
- Smoke test conducted in Preparation Building (2011)
- Gaps in roof structure of preparation building sealed up. (2012 , 2014)
- Annual Environmental Awareness training conducted to all Footscray employees.
- Environmental issues / conditions discussed daily on site.
- Regular Audits are conducted by TOU.
- Annual Cargill Environmental Audit.



Tarpaulin on Biofilter in Preparation



New Roof to Biofilter



Prep Biofilter Feed Fan



Wet Scrubber on  
Process air for  
Prep Biofilter



Prep Building  
Ventilation Duct



Air Atomised water spray  
on ventilation duct





Extraction Biofilter



Rebuild – Extraction Biofilter Jan  
2012

# Moving Forward

- Continue engaging with the TOU to keep in touch with advances in odour treatment technologies.
- Build on the cultures developed at the site around environmental awareness.
- Maintain focus on odour management in light of all the other priorities on site.
- Work closely with Community and EPA to proactively manage our environmental footprint.

