



# Stratford Coal CCC Meeting

Presentation -  
Company Report & Overview of  
Activities

February 2015

Michael Plain  
Environment & Community Coordinator

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# 1. Progress at the Mine

## Mining 4<sup>th</sup> Quarter 2014

- Waste BCM                      0 BCM
- Coal tonnes                    23,000 tonnes
- Total BCM                      19,000 BCM
  
- Codam mining only



# 2. Environmental Projects/Activities

Management Area	Project	Status
Reporting	EPL 11745 Annual Return	•Completed and submitted
Air Quality	Pollution Reduction Programs Real-Time Dust Management	<ul style="list-style-type: none"> <li>•PRP U3 Handling overburden in adverse weather conditions – weather station alarming and response protocol is now being implemented.</li> <li>•Several alarms received from the Real-time dust unit (TEOM) in November resulting from local bushfires and hazy conditions in the valley. No operations and wind direction not consistent with contribution from the mine. Alarms also received on 9-Jan from power outage.</li> </ul>
Flora	2014 Noxious Weed Program	•Completed
Fauna	2014 Wild Dog Control Program	Completed. Program will reassessed in 2015.
Noise	<ul style="list-style-type: none"> <li>• Quarterly Noise Assessment</li> <li>• Mobile Plant Assessment</li> <li>• Real-Time Noise</li> </ul> •Continuous improvement Projects	<ul style="list-style-type: none"> <li>•November assessment completed.</li> <li>•Scheduled for March 2015.</li> <li>• System operational for period 8pm to 8am. Noise profiles continue to be monitored and generally indicate no exceedence of the performance criteria due to mining/CHPP activities.</li> <li>•Several alarms were received during the quarter and investigation generally found contributions from birds &amp; insects, traffic and freight trains. Occasionally dull noise from the plant was audible.</li> <li>•During December the RTN unit had been giving intermittent unusual high readings over extended time periods. Novecom performed attended monitoring and found inconsistency in the readings. The unit was replaced on 9-Jan-15 to undergo repairs.</li> <li>•No changes during the last quarter.</li> </ul>



## 2. Environmental Projects/Activities cont.

Management Area	Project	Status
Rehabilitation	<ul style="list-style-type: none"><li>• BRN Pit</li><li>• Roseville West Pit</li></ul>	<ul style="list-style-type: none"><li>• Shaping and topsoiling of waste dump completed.</li><li>• Rehabilitation works of approx. 40 ha of BRN waste dump completed including new areas and existing rehab requiring maintenance.</li><li>• Rehabilitation of BRN go-line area.</li><li>• Improvement works on existing Roseville rehab.</li></ul>
Lighting	<ul style="list-style-type: none"><li>• CHPP Lighting</li></ul>	<ul style="list-style-type: none"><li>• The continual improvement of the control of lighting, to enable us to easily turn off lights when not required.</li></ul>
Bushfire Management	<ul style="list-style-type: none"><li>• Bushfire Management</li></ul>	<ul style="list-style-type: none"><li>• RFS visited site with Alan Andrews to discuss a bushfire reduction burning plan. Due to RFS resources and weather condition during previous quarter back-burning was not possible. RFS have proposed a plan the next 2-3 years management.</li></ul>

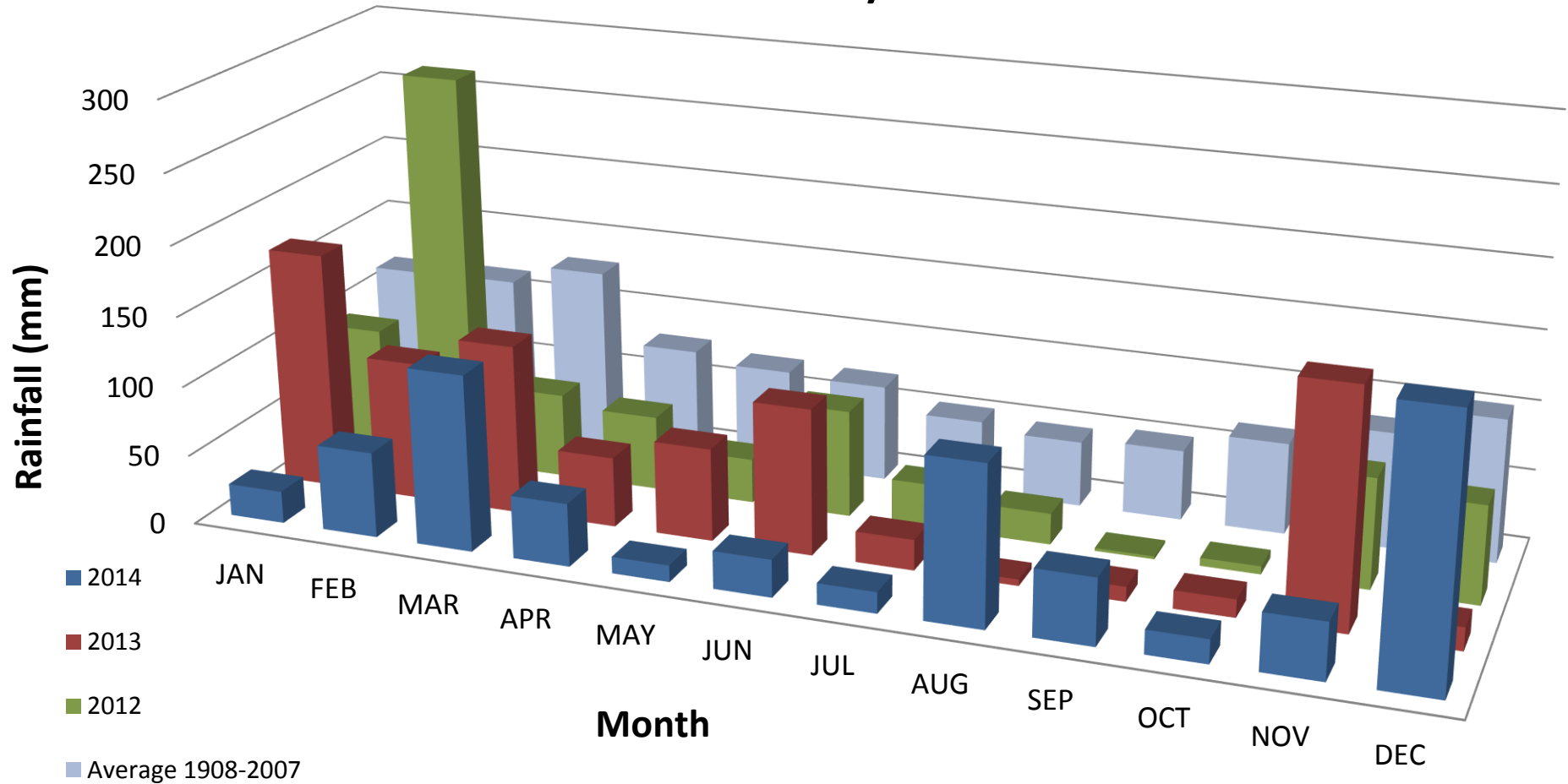
# 3. Environmental Monitoring Performance

1. Rainfall
2. Surface Water
  - a. Total Suspended Solids
  - b. pH
  - c. Electrical Conductivity
3. Main Pit Water Quality
4. Reject Monitoring
5. Air Quality
  - a. Dust Deposition
  - b. Dust Deposition – Petrographic Analysis
  - c. High Volume Air Sampler
  - d. High Volume Air Sampler-Rolling Average
  - e. Real Time Dust Monitoring (TEOM) – PM2.5/PM 10



# Rainfall

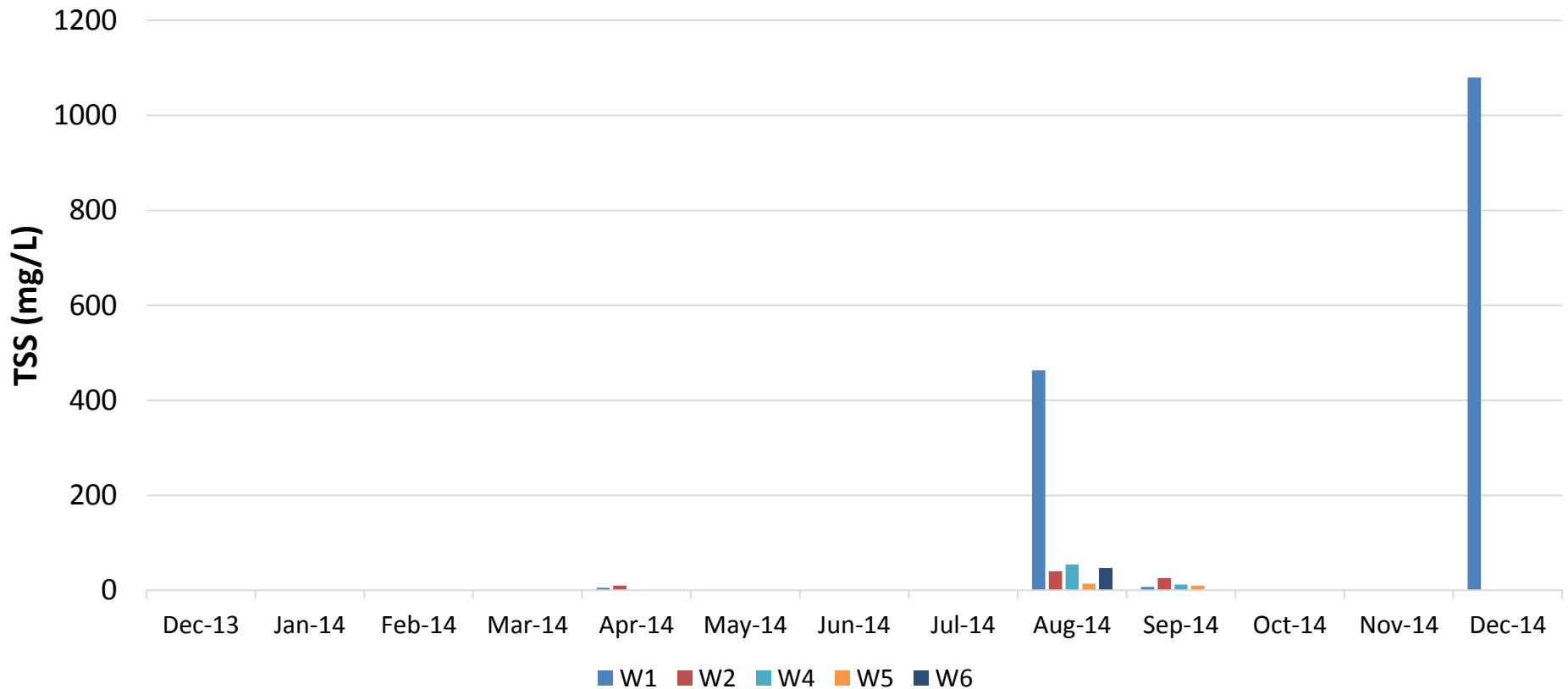
## Stratford Monthly Rainfall



- December 2014 Rainfall: 188 mm
- 2014 Annual Total: 716.2 mm

# Surface Water – Total Suspended Solids

Surface Water Monitoring -TSS  
Avon River/Avondale Creek

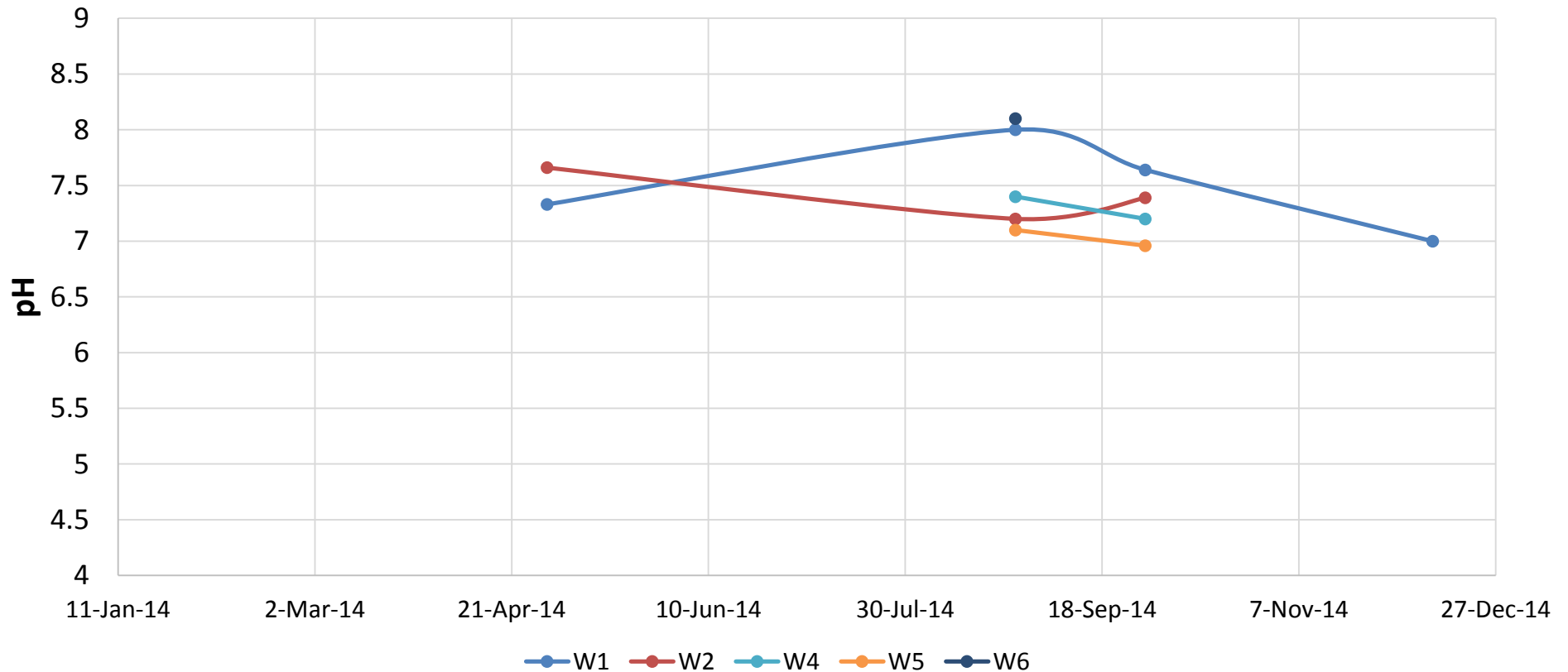


- All sites returned generally low TSS. High reading at W1 (upstream of operations) on 27-Aug-14 and 11-Dec-14 following heavy rain
- Gaps indicate no flow



# Surface Water - pH

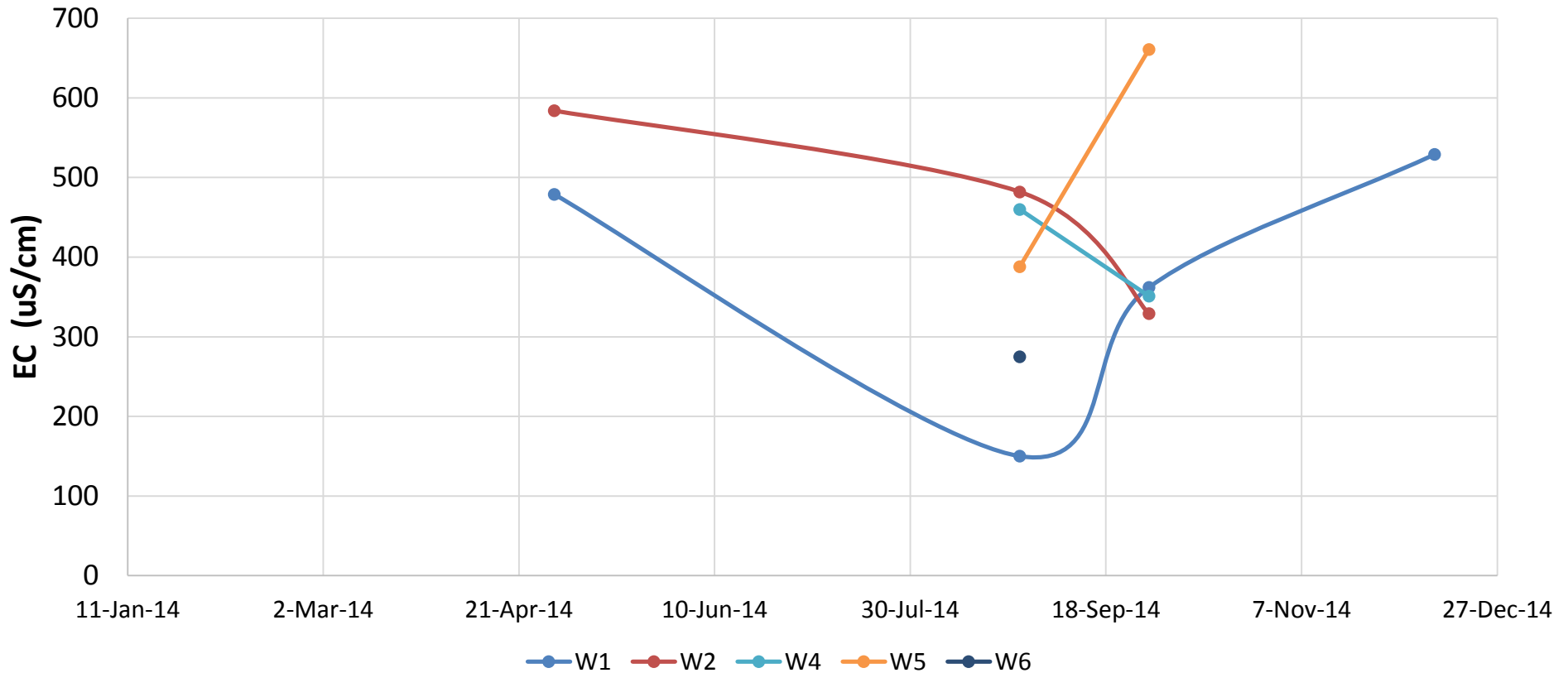
## pH - Avon River & Avondale Creek 12 Months to December 2014



- All sites generally within ANZECC Guideline range (pH 6.5 - 8.0).
- Gaps indicate no flow

# Surface Water – Electrical Conductivity

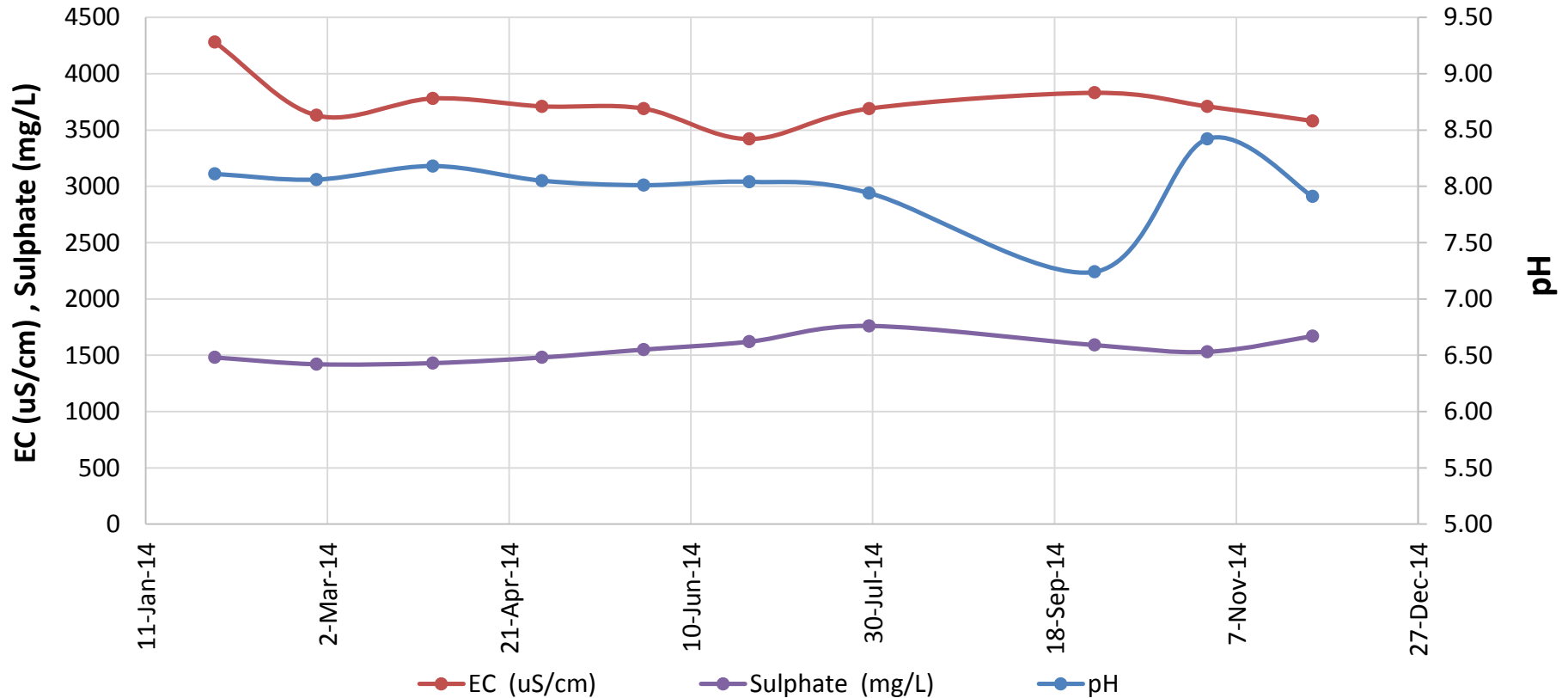
## EC - Avon River & Avondale Creek December 2014



• Gaps indicate no flow

# Main Pit – Water Quality

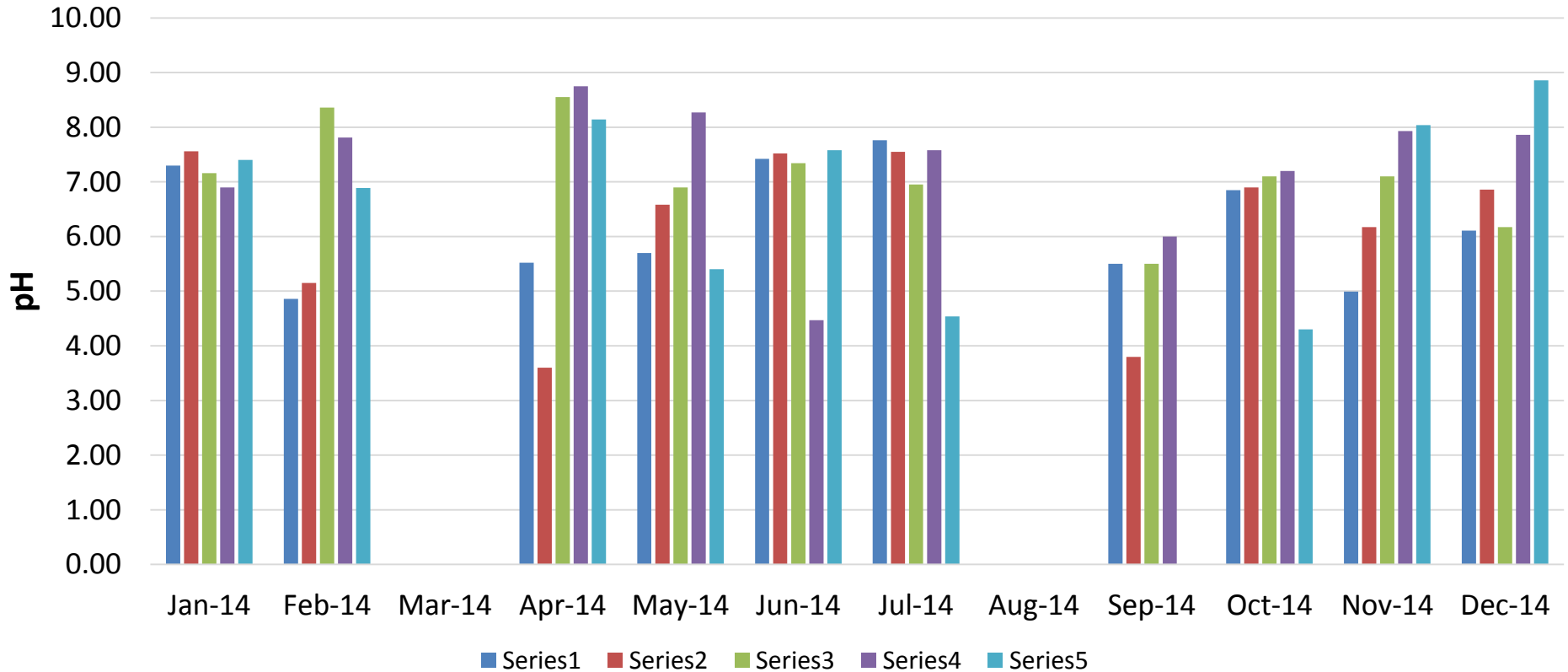
## Stratford Main Pit Water Quality 12 months to December 2014



• All results within expected range.

# Reject Sampling

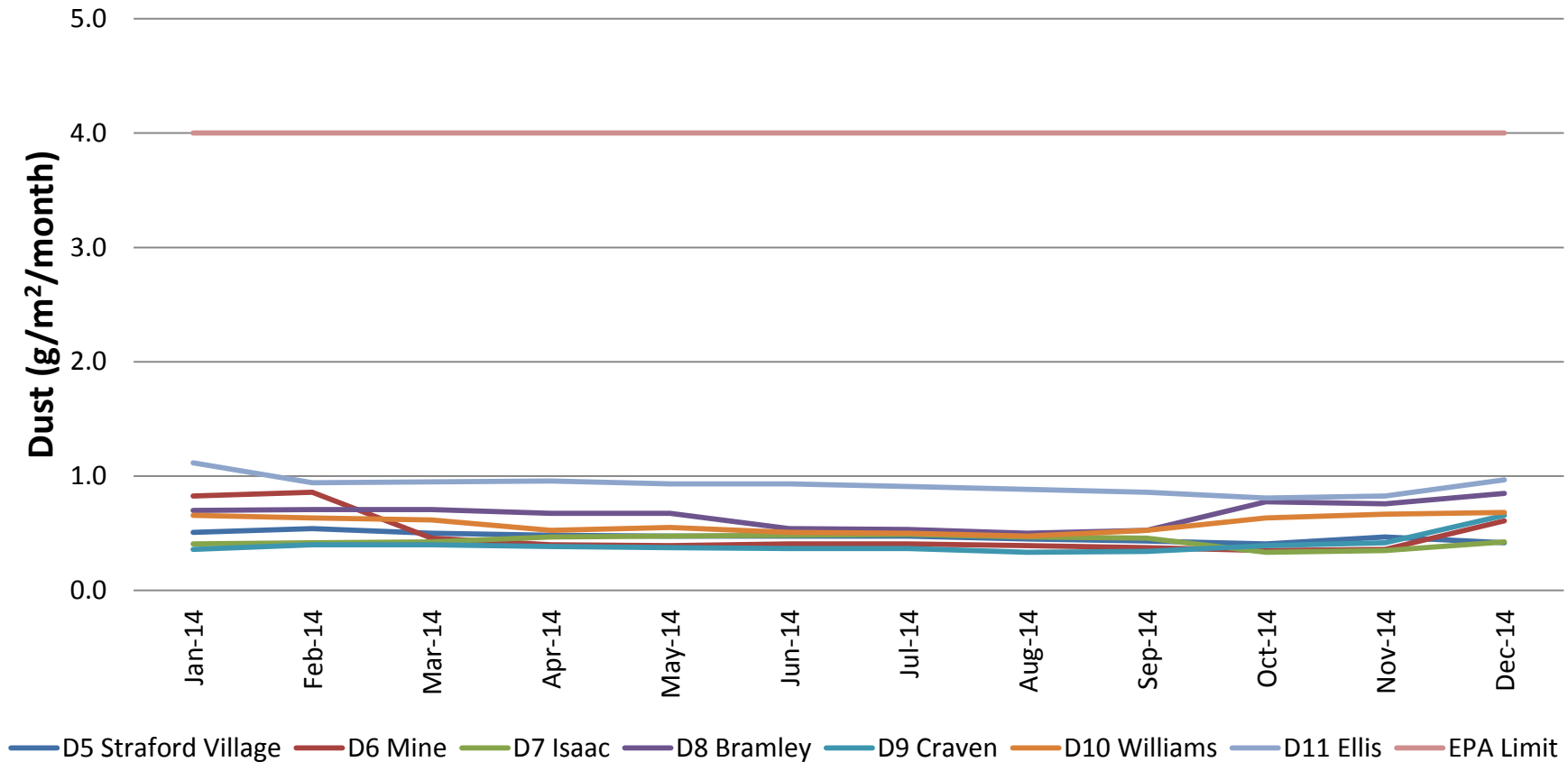
## Stratford Main Pit Reject Monitoring 12 months to December 2014



- pH within expected range
- No access Aug-14
- Faulty pH probe in March – Reject Beach limed 12 March

# Air Quality – Dust Deposition

## Stratford Dust Deposition - Annual Rolling Average 12 Months to December 2014



- All sites are well below EPA limit of 4g/m<sup>2</sup>/month
- Samples with significant contamination excluded

# Air Quality – Petrographic Analysis

Samples are examined under a stereo-microscope (50x) to determine the nature of the dust deposits.

The relative amount of dust deposits on the filter paper is described as:

Trace	-traces only on filter paper
Light	-thin cover over most of the filter paper
Moderate	-thin cover over filter paper
Heavy	-thicker cover over filter paper

## Guide to Descriptions used by Laboratory

**Coal:** Black sharp angled grains with glossy conchoidal fractures or dull with cellular features.

**Dirt/Minerals:** Subhedral to euhedral crystalline grains including fine sand, clay and other fine mineral particulates.

**Insects:** Whole insects such as spiders, ants, moths or outer parts of insects including wings, legs and exoskeletons.

**Vegetation:** Plant debris and algae including trichomes, decomposed organic matter and charred particulates showing characteristic cellular plant structures.

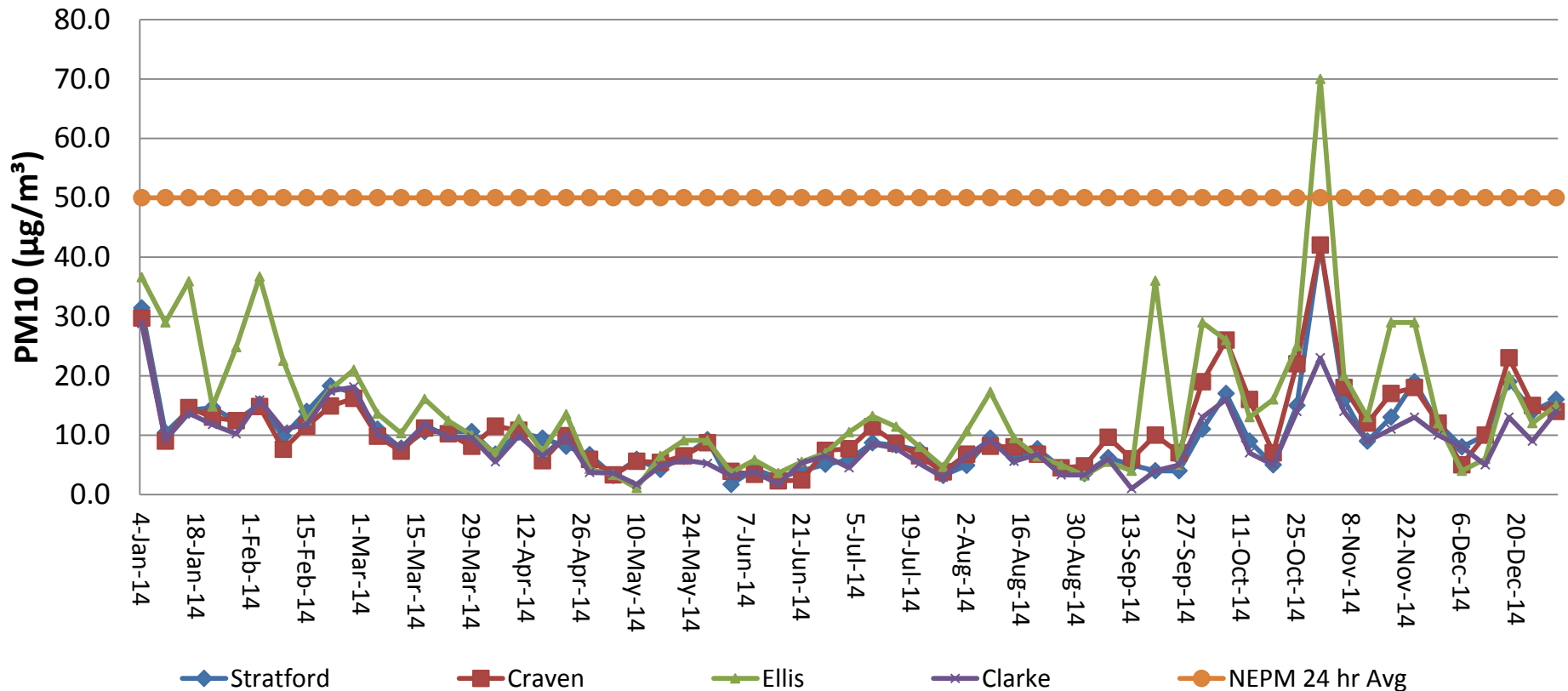
**Contamination:** Gelatinous material such as bird droppings

Petrographic Analysis				
Month	Sample Number	Insoluble Matter (g/m2/month)	Deposition	Visual Description - Insoluble Matter
Oct-14	D5-Petro	0.2	Very Light	40% Minerals, 10% Coal, 40% Vegetation, 10% Insects, 0% Contamination
	D6-Petro	0.4	Light	60% Minerals, 10% Coal, 20% Vegetation, 10% Insects, 0% Contamination
Nov-14	D5-Petro	1.0	Light	50% Minerals, 0% Coal, 40% Vegetation, 10% Insects, 0% Contamination
	D6-Petro	0.6	Light	60% Minerals, 10% Coal, 20% Vegetation, 10% Insects, 0% Contamination
Dec-14	D5-Petro	1.1	Medium	70% Minerals, 10% Coal, 10% Vegetation, 10% Insects, 0% Contamination
	D6-Petro	3.1	Medium	40% Minerals, 0% Coal, 20% Vegetation, 10% Insects, 30% Contamination



# Air Quality – High Volume Air Sampler

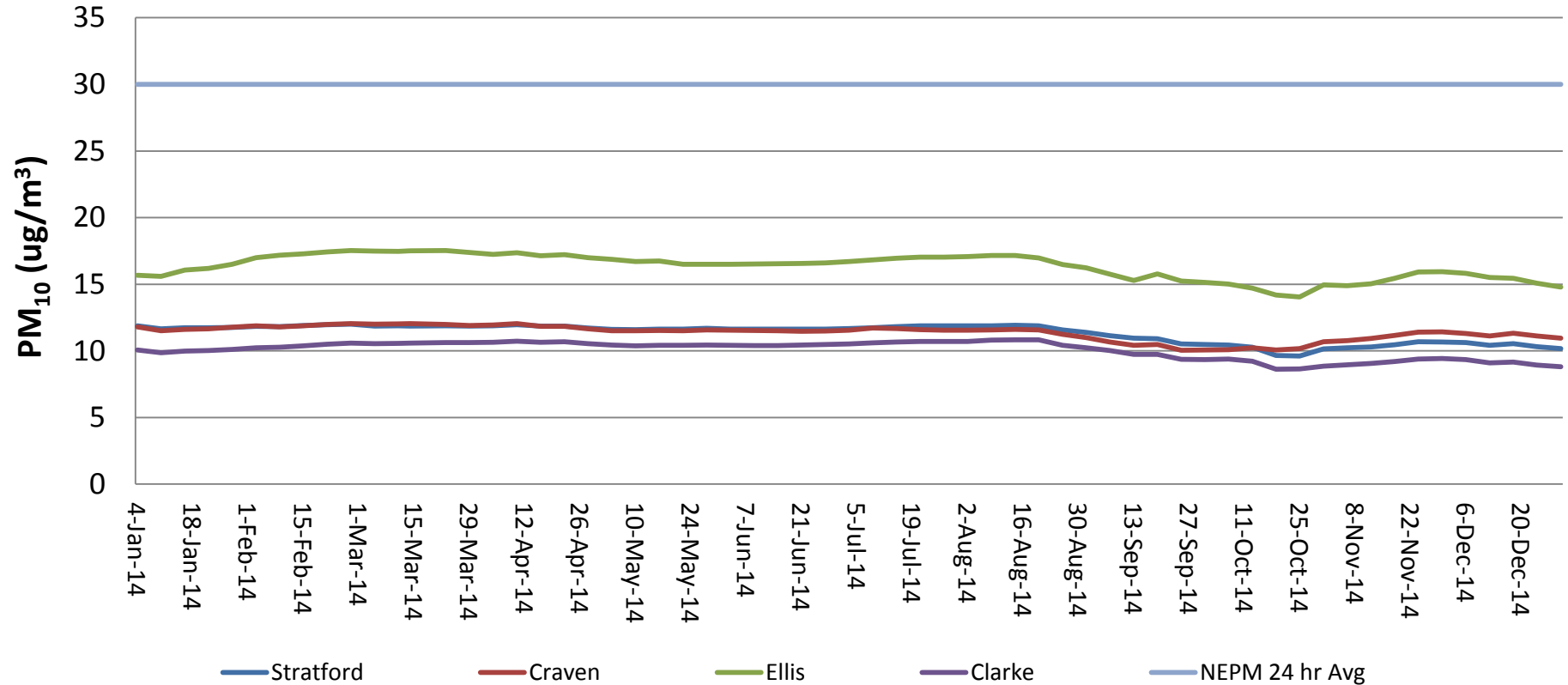
## High Volume Dust Monitoring - Particulate Matter (PM10) 12 Months to December 2014



- All sites generally well below NEPM 24hr average level.
- Spike in October is due to fires to the west and south of the mine site. Not considered a breach of licence criteria as the Development consents exclude extraordinary events such as bushfires.

# Air Quality – HVAS Rolling Average

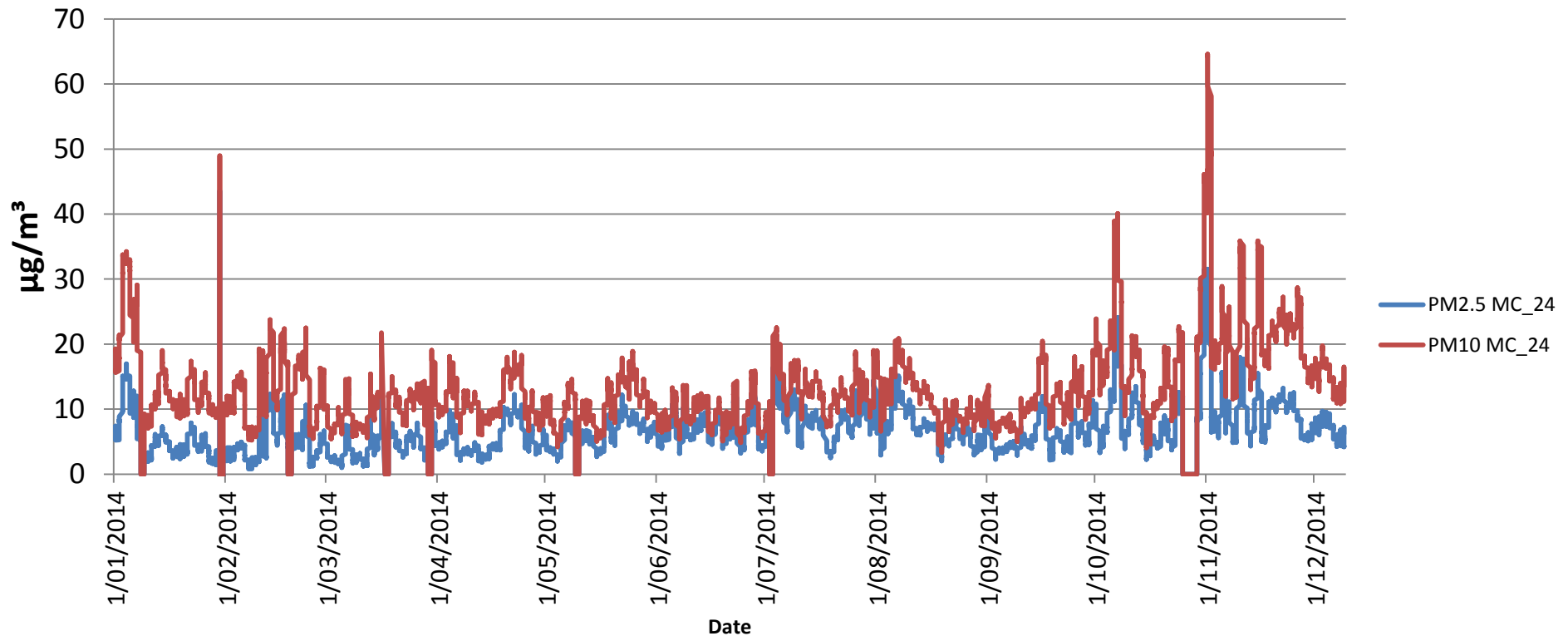
## Stratford HVAS Monitoring (PM<sub>10</sub>) Annual Rolling Average - 12 Months to December 2014



• All site averages well below EPA Limit

# Air Quality – TEOM (Real Time) Monitoring

## TEOM (Real Time) Dust Monitoring - Hourly averaged PM2.5/PM10 Jan 2014 - Dec 2014



- Several alarms received from the Real-time dust unit (TEOM) in November resulting from local bushfires and hazy conditions in the valley, particularly 1-5 November 2015. No operations and wind direction not consistent with contribution from the mine.
- Zero/negative values are due to moisture vapour/dew drying on filter creating small negative mass readings.

# 4. Community Complaints - Summary

## Stratford Complaint Summary

Period: 1/10/14 - 31/12/14

Period: 3 Months

Total No. of Complaints: 2 (noise)

Total No. of Complainants: 2

Time/Date of Complaint	Complainant Location	Method of Complaint	Nature of Complaint	Outcome
11:30hrs 23/12/2014	Unknown	CHPP Manager Mobile	Noise	Complaint regarding train and plant noise. CHPP Manager advised that plant was not operating and that there were no trains on the loop at that time. No complainant details were left.
16:30hrs 31/12/2014	Approx. 1.2km west of operations	Direct e-mail	Noise	Complaint relates to noise from stockpile dozer from previous night. Strong temperature inversions present from 8pm to 5am. CHPP was running until 2:00am and the stockpile dozer was operating to 6am to load an export train. RTN audio reviewed and only minor mine noise was audible. CHPP Manager reminded to minimise night-time use of dozer on stockpile when possible. Phone call with complainant and email response provided.