



Stratford Coal CCC Meeting

Presentation -
Company Report & Overview of
Activities

November 2015

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Environment & Community Coordinator

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1. Progress at the Mine

Mining 3rd Quarter 2015

- Waste BCM 0 BCM
- Coal tonnes 51,520 tonnes
- Total BCM 42,933 BCM

*Reclaim from codam only.

2. Environmental Projects/Activities

Management Area	Project	Status
Reporting	<ul style="list-style-type: none"> EPL5161 Annual Review NPI & NGRS Independent Environmental Audit 2014 	<ul style="list-style-type: none"> EPL 5161 Annual Return submitted in August 2015. SCM Annual Review completed and submitted in October 2015. Copies provided to CCC and on Stratford Coal website. 2015 NPI and NGRS reporting has been completed and submitted. IEA Report 2014 revised again with DP&E and awaiting acceptance.
Regulator	<ul style="list-style-type: none"> Site Visits 	<ul style="list-style-type: none"> DP&E site visit during September 2015. EPA site visit during September 2015.
Air Quality	<ul style="list-style-type: none"> Pollution Reduction Programs Real-Time Dust Management 	<ul style="list-style-type: none"> Coal mine wind erosion exposed area assessment completed and submitted to EPA as per requirement under Environmental Protection Licence. One alarm received during the quarter, no operations were occurring at the time. Generally hazy conditions were present due to a southerly change.
Flora	<ul style="list-style-type: none"> Weeds Management Program 	<ul style="list-style-type: none"> Reviewing proposal received from DPI to trial GPG bio-control on Yancoal land.
Noise	<ul style="list-style-type: none"> Quarterly Noise Assessment Real-Time Noise Continuous improvement Projects 	<ul style="list-style-type: none"> Monitoring completed in June and September 2015. No non-compliances. Report available on Stratford Coal website. Next scheduled in December. 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. Several alarms were received during the quarter generally between the hours of 6am-8am. Investigation generally found the main noise contributions to be from birds & insects, traffic and freight trains. Occasionally dull noise from the plant and export train was audible. No changes during the last quarter.

2. Environmental Projects/Activities cont.

Management Area	Project	Status
Water	<ul style="list-style-type: none"> Annual Water Balance 	<ul style="list-style-type: none"> Annual water balance for the 2014 calendar year was completed. Routine water sampling continued Irrigation activities continued
Rehabilitation	<ul style="list-style-type: none"> Rehabilitation Monitoring Mining Operations Plan 	<ul style="list-style-type: none"> Annual rehabilitation monitoring report completed 2015. Landscape function remains generally high across the Stratford rehabilitation. Stratford MOP approved in June 2015 and the rehabilitation cost estimate was revised with Department of Resources & Energy.
Lighting		
Biological	<ul style="list-style-type: none"> Macro-invertebrates 	<ul style="list-style-type: none"> Macro-invertebrates monitoring completed in September 2015. No evidence of adverse impacts from mining on in-stream ecology.
Bushfire Management	<ul style="list-style-type: none"> Bushfire Management 	<ul style="list-style-type: none"> Planning is continuing for hazard reduction burning around ML's and offset areas during Spring 2015.
Community	<ul style="list-style-type: none"> Community Support Program Meetings 	<ul style="list-style-type: none"> Community support payments made including visits to community groups. Review of Community Support Program to be undertaken Attendance at Advance Gloucester meeting planned.

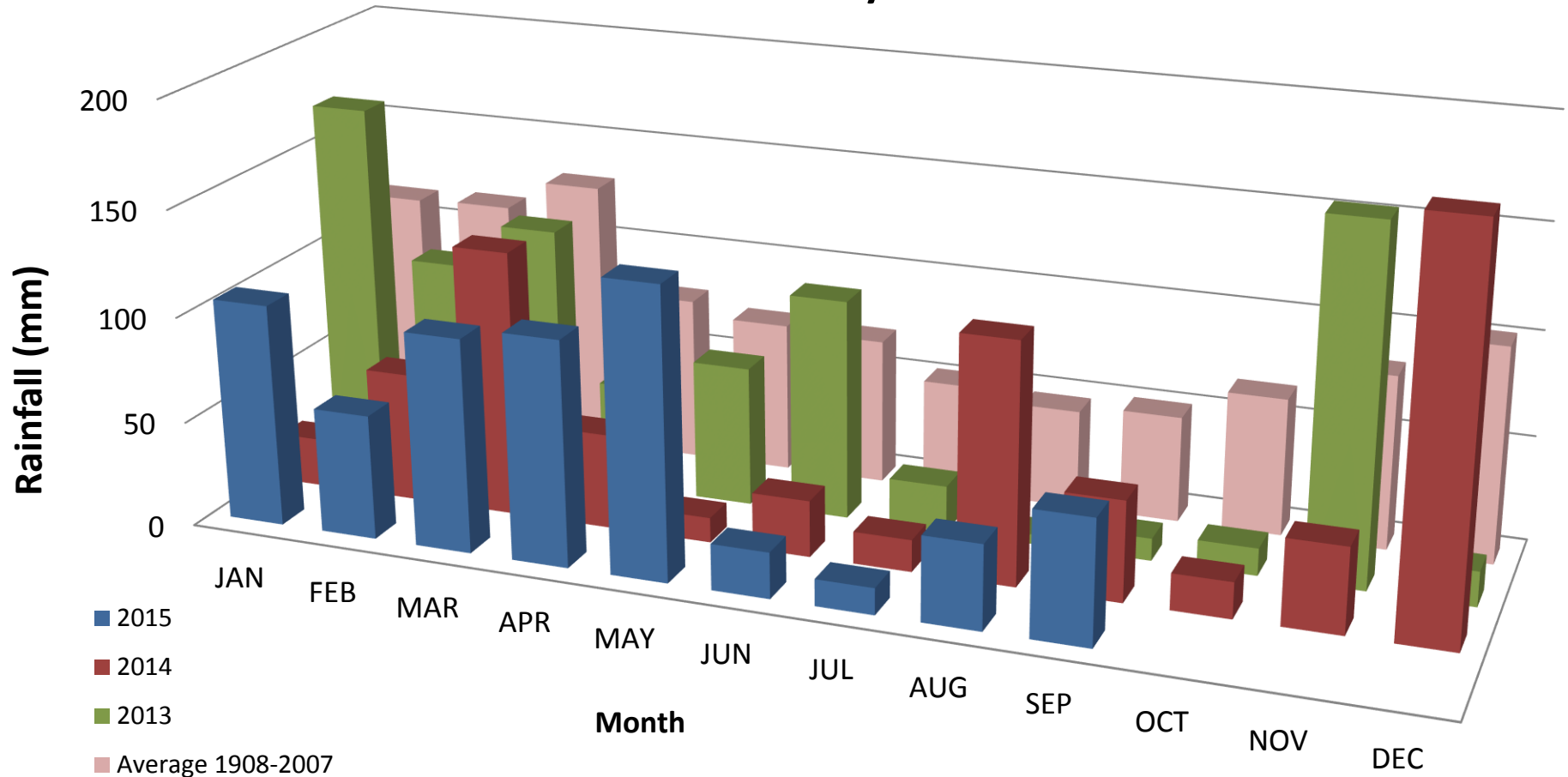
3. Environmental Monitoring Performance

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

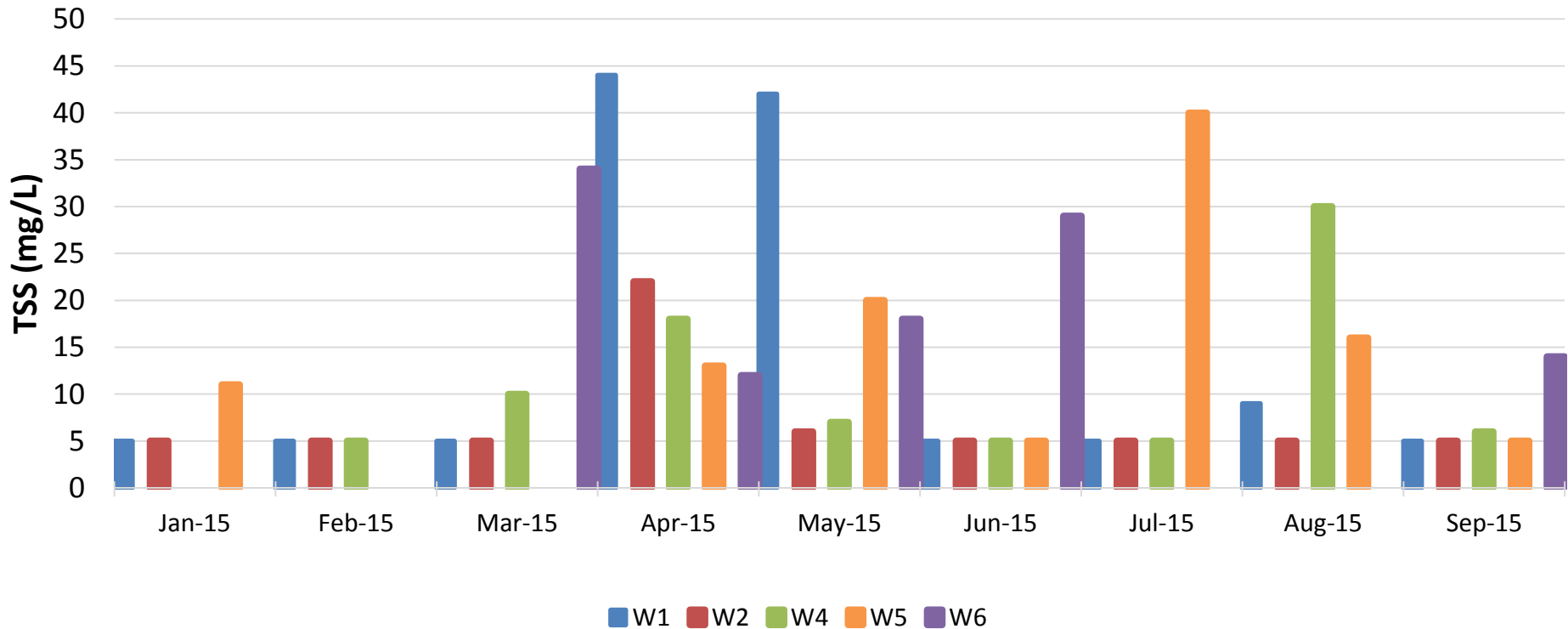
Stratford Monthly Rainfall



- 2015 Year to September: 642.4 mm
- 2015 Q2 above average, Q3 below average

Surface Water – Total Suspended Solids

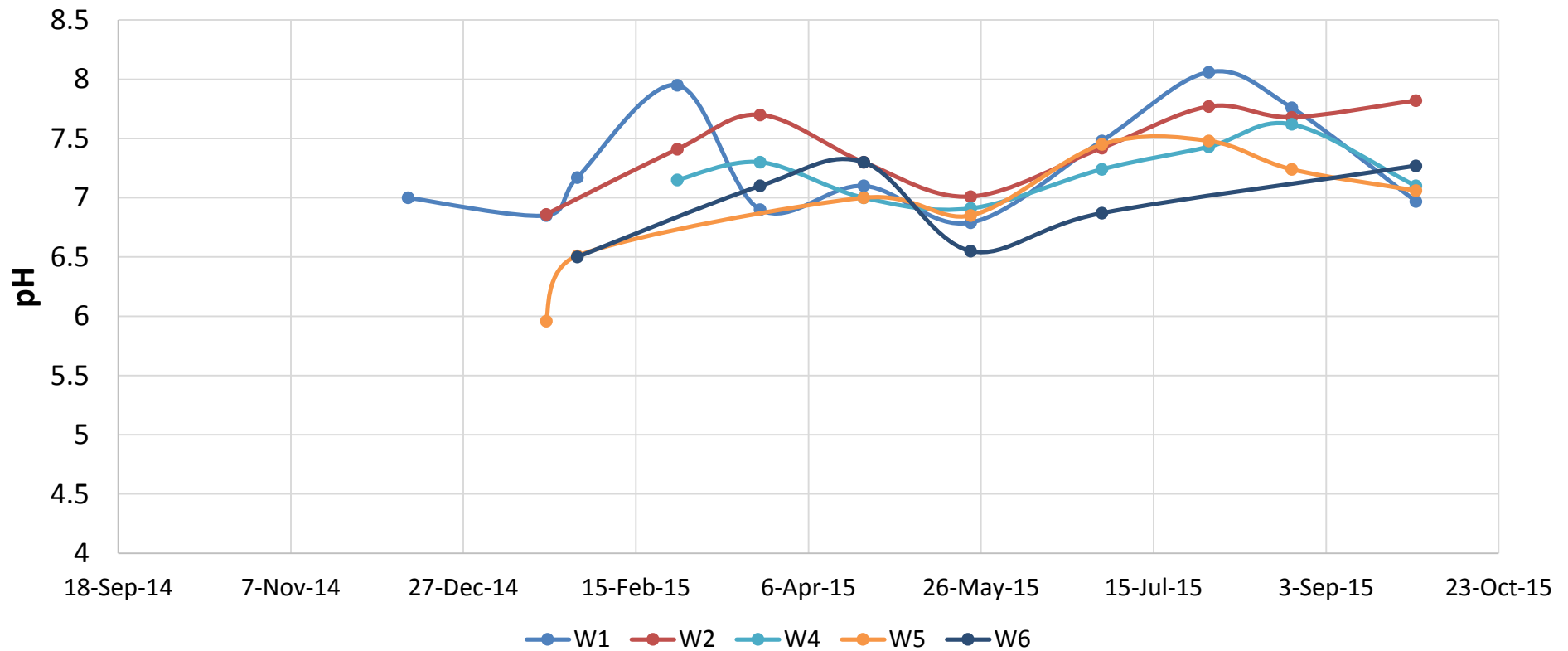
TSS - Avon River/Avondale Creek
12 Months to Sep 2015



- All sites returned generally low TSS results.
- Gaps indicate no flow

Surface Water - pH

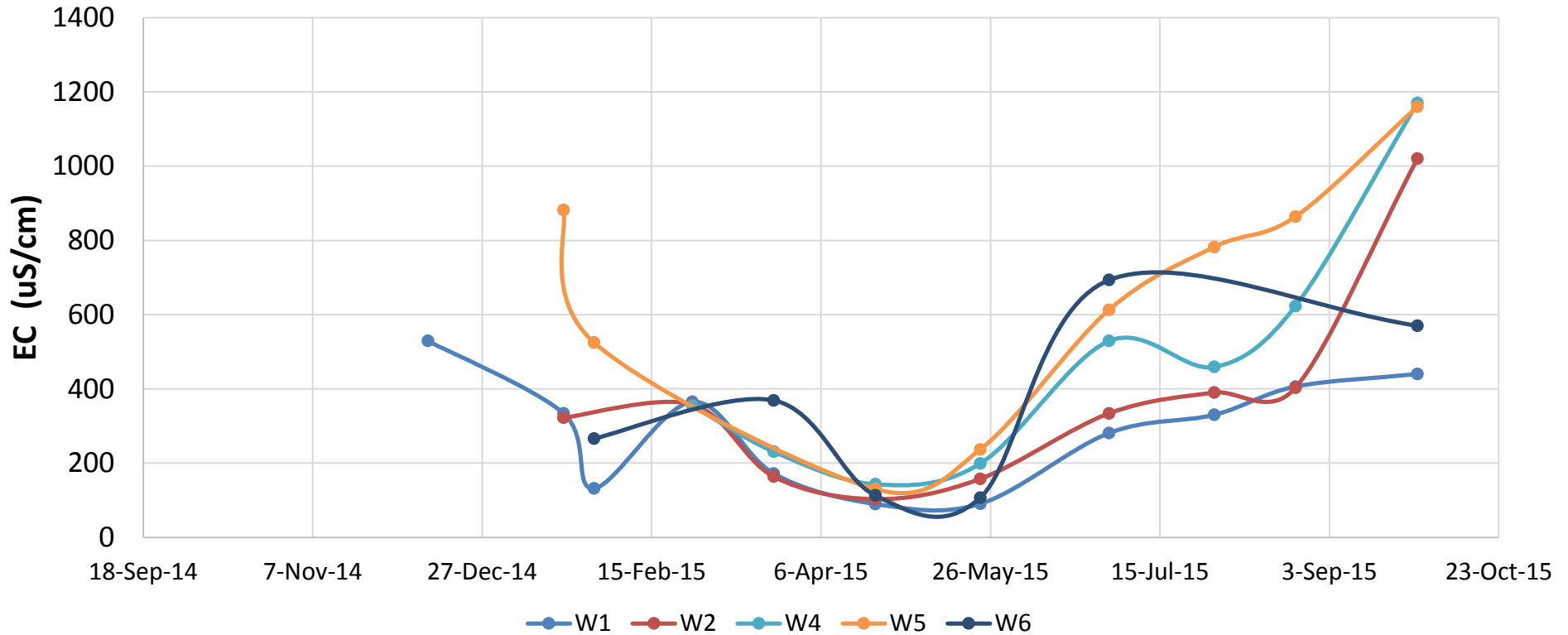
pH - Avon River & Avondale Creek 12 Months to September 2015



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

Surface Water – Electrical Conductivity

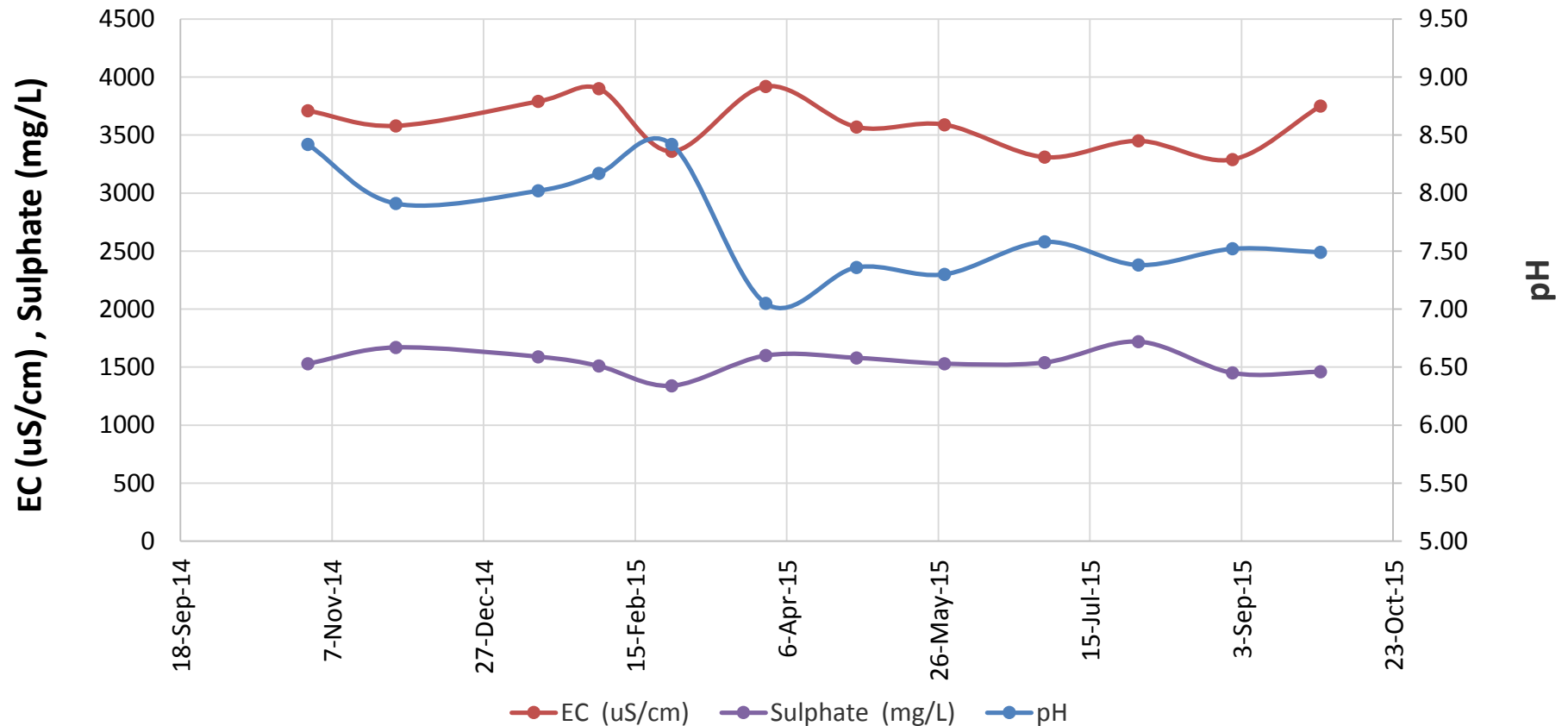
EC - Avon River & Avondale Creek
12 Months to September 2015



- Generally low EC during high flows (April-May) and high EC during low flows (August-September).
- Gaps indicate no flow

Main Pit – Water Quality

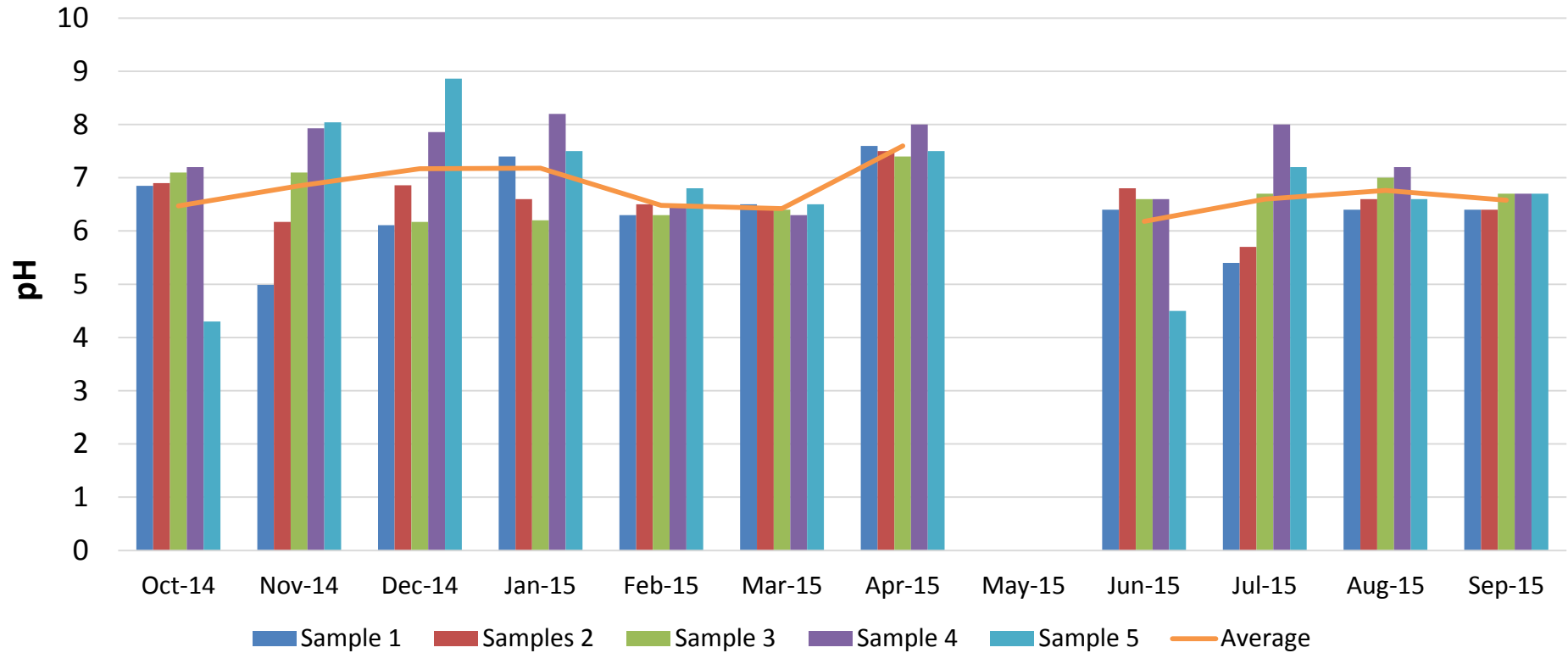
Stratford Main Pit Water Quality 12 months to September 2015



• All results within expected range.

Reject Sampling

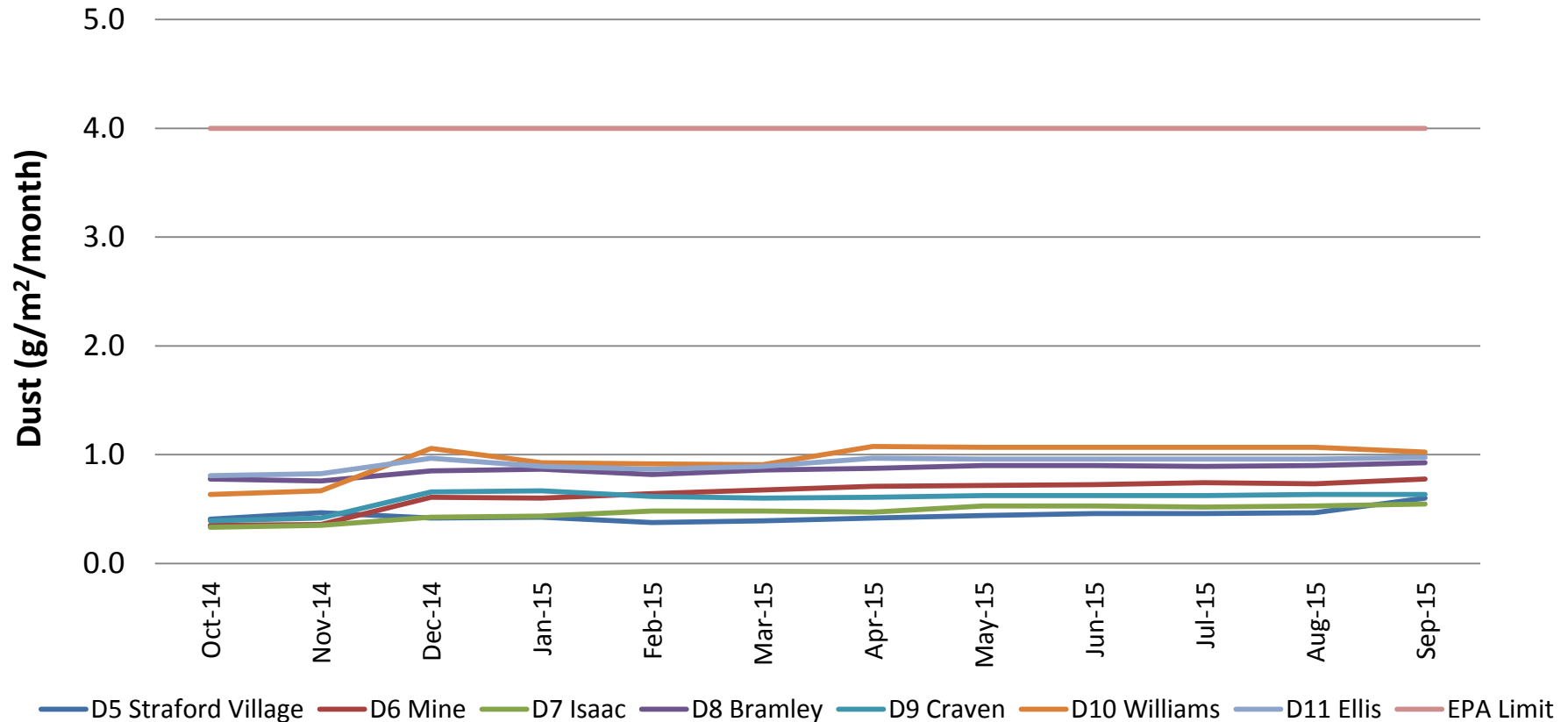
Stratford Main Pit Reject Beach Monitoring 12 months to Sep 2015



- pH within expected range
- No monitoring in May 2015
- Reject Beach limed routinely

Air Quality – Dust Deposition

Stratford Dust Deposition - Annual Rolling Average 12 Months to September 2015



- All sites are well below EPA limit of 4g/m²/month
- Samples with significant contamination excluded

Air Quality – Petrographic Analysis

Visual Description Guide

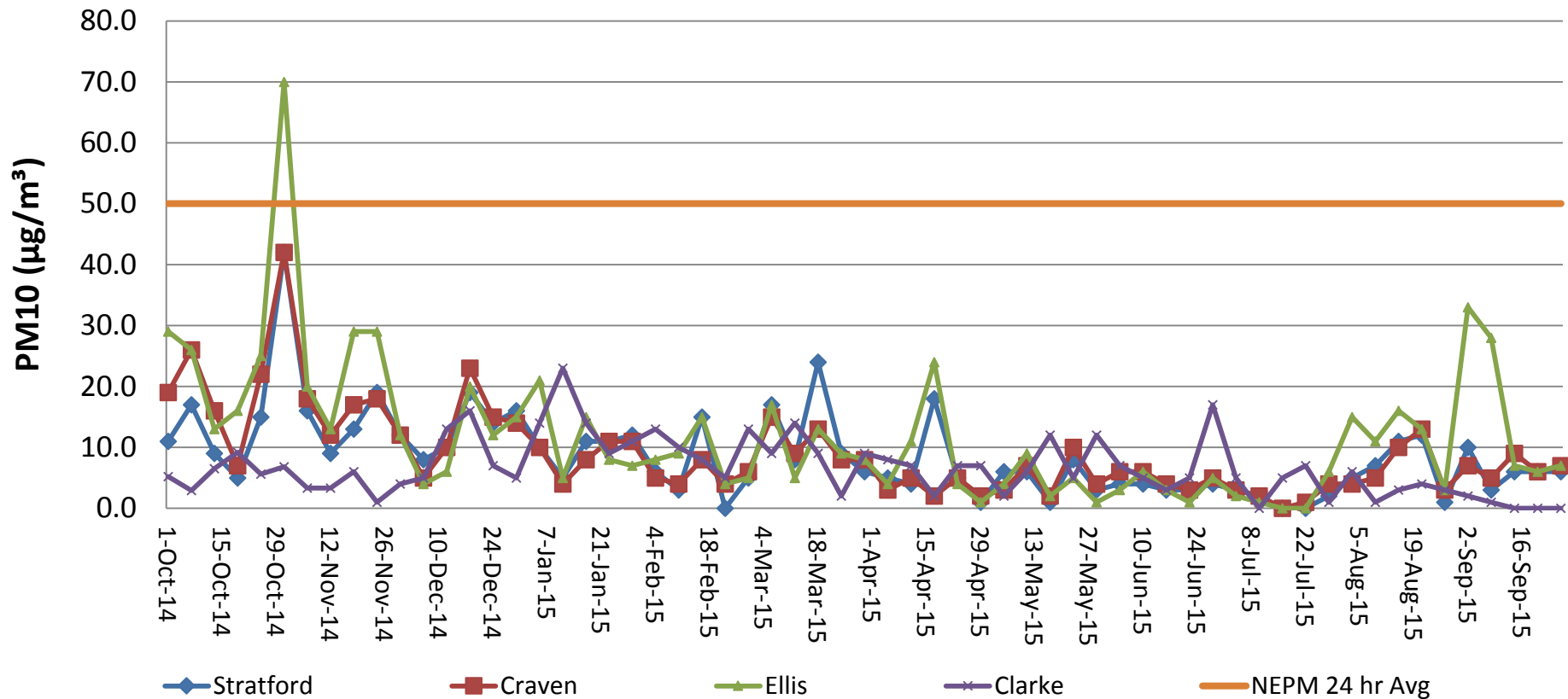
*Insoluble Matter is viewed under a microscope, major constituents are estimated, examples of each category are as follows:

- Dirt/minerals:** Subhedral to euhedral crystalline grains including fine sand, clay and other fine mineral particulates.
- Coal:** Black sharp angled grains with glossy conchoidal fractures or dull with cellular feature.
- Insects:** Whole insects eg spiders, ants, moths or outer parts of insects including wings, legs and exoskeletons.
- Polysaccharide Slime:** Slimy gelatinous material including decomposed soft body parts of insects and vegetation.
- Vegetation:** Plant debris and algae including trichomes, decomposed organic matter and charred particulates showing characteristic cellular plant structures.

<u>Petrographic Analysis</u>				
Month	Sample Number	Insoluble Matter (g/m2/month)	Deposition	Visual Description - Insoluble Matter
Jul-15	D5-Petro	0.3	Light	30% Minerals, 10% Coal, 30% Vegetation, 20% Insects, 10% Polysaccharide slime
	D6-Petro	0.5	Light	30% Minerals, 10% Coal, 30% Vegetation, 20% Insects, 10% Polysaccharide slime
Aug-15	D5-Petro	0.3	Light	60% Minerals, 10% Coal, 20% Vegetation, 10% Insects, 0% Polysaccharide slime
	D6-Petro	0.4	Light	70% Minerals, 10% Coal, 10% Vegetation, 10% Insects, 0% Polysaccharide slime
Sep-15	D5-Petro	0.3	Very Light	60% Minerals, 0% Coal, 30% Vegetation, 10% Insects, 0% Polysaccharide slime
	D6-Petro	0.4	Very Light	40% Minerals, 0% Coal, 40% Vegetation, 20% Insects, 0% Polysaccharide slime

Air Quality – High Volume Air Sampler

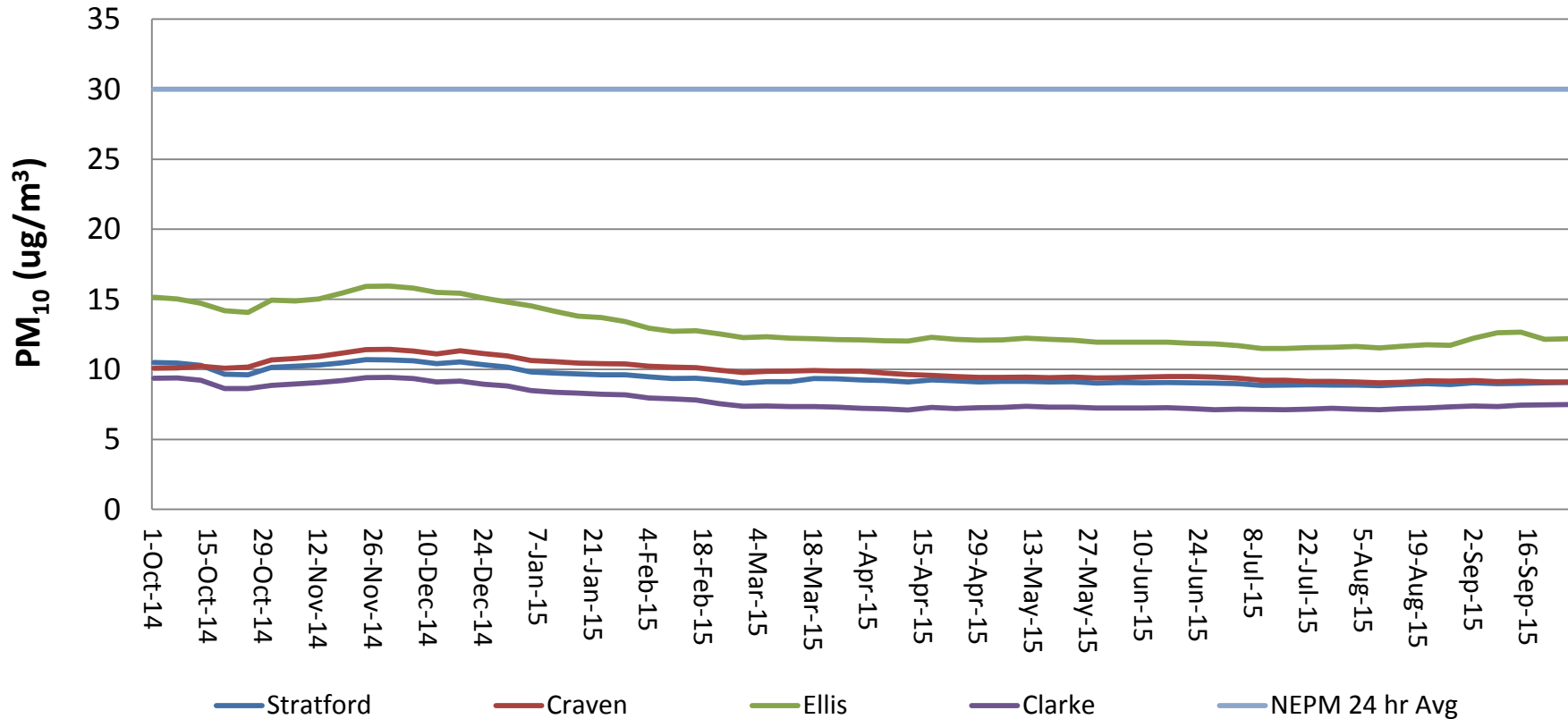
Stratford HVAS Monitoring - Particulate Matter (PM₁₀) 12 Months to September 2015



- All sites generally well below NEPM 24hr average level.
- Spike in October 2014 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

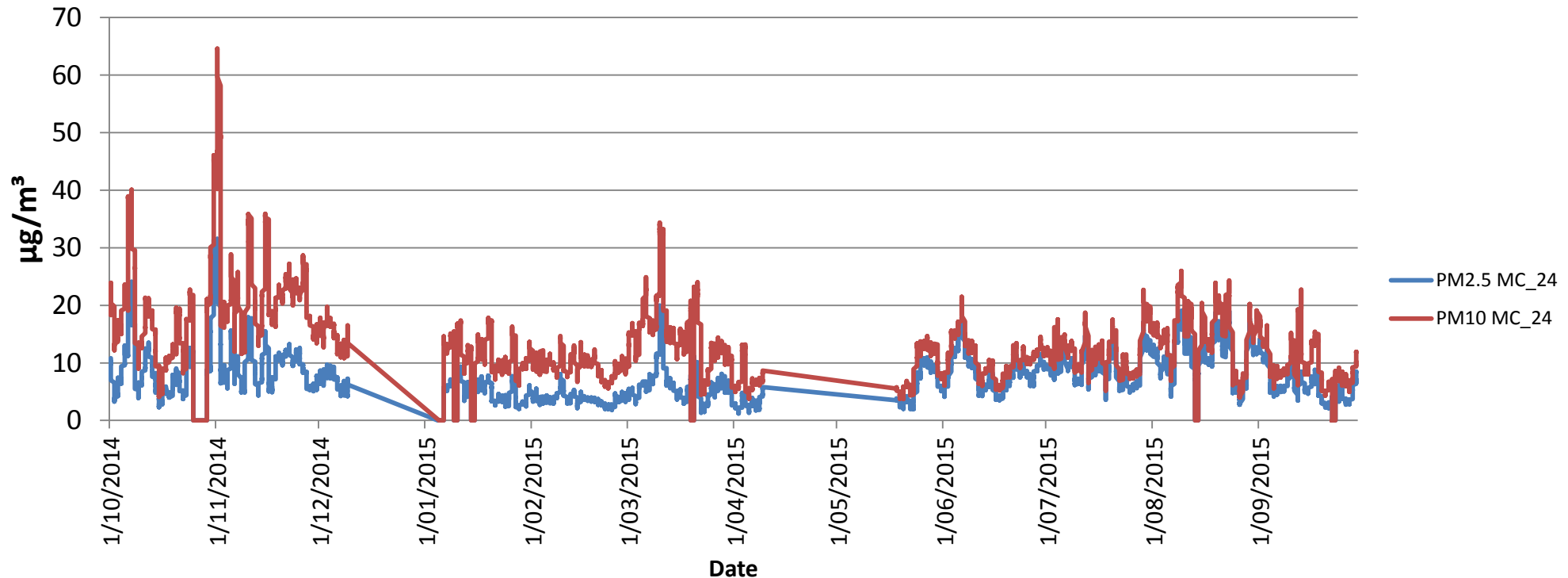
Stratford HVAS Monitoring (PM₁₀) Annual Rolling Average - 12 Months to September 2015



• All site averages well below EPA Limit

Air Quality – TEOM (Real Time) Monitoring

TEOM (Real Time) Dust Monitoring - Hourly averaged PM2.5/PM10 Oct 2014 - Sep 2015



- Several alarms received from the Real-time dust unit (TEOM) in November 2014 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.
- A power outage occurred during December 2014 and May 2015.

4. Community Complaints - Summary

Stratford Complaint Summary

Period: 1/04/2015 - 30/9/2015

Period: 6 Months

Total No. of Complaints: 3 (noise)

Total No. of Complainants: 3

Date/Time of Complaint	Complainant Location	Method of Complaint	Nature of Complaint	Investigation/Outcome
00:27hrs 4/05/15	Stratford (Approx. 4.2km NNW of CHPP)	Community hotline	Noise	1) Complainant Stated: 'Humming noise'. 2) CHPP running from 11:30 to approx. 5:00am, dozer was operating on stockpile. Overcast and light southerly wind most of the night. Weak inversion present. 3) Review of audio files confirmed background humming noise from the CHPP however below real-time noise alarm levels.
13:00hrs 29/05/2015	Stratford Approx. 2.5km west of source	Direct to phone	Noise	Phone call received notifying of a 'banging' sound that was different to usual. Environmental representatives attended residence at approximately 1:30pm to determine if could identify the potential noise and source. Contacted CHPP to understand activities. CHPP operating, dozer on stockpile, train unloading on loop prior to phone call from resident. Further investigation and review believes it could be attributed to dozer operator dropping blade on ground to remove/clean build up. Advised CHPP to communicate this noise source audible off site & adjust operating protocol.
07:41hrs 3/06/2015	Stratford village	Community Hotline	Noise	Noise complaint received, however no other details left and no call back requested. 2) CHPP supervisor investigated operations, the stockpile dozer was pushing off V4. Supervisor listened to real-time noise audio file and commented there seems to be no dominant mine noise. No call back requested. No further change to current controls for operations.