



Teys Australia Wagga Wagga
Dampier Street
Wagga Wagga
NSW 2650

Teys Australia Southern Property Pty Ltd (Teys Australia Wagga Wagga)

Environmental Monitoring Data Summary

Environmental Protection Licence number 2262

Executive Summary

Teys Australia Wagga is the holder of Environmental Protection Licence (EPL) 2262. This Licence is administered by the *NSW Environmental Protection Authority (EPA)*, and includes conditions relevant to the site's operation, including environmental monitoring, as is outlined in this report. All environmental monitoring results required under EPL 2262 are submitted to the *EPA* each year in a formal annual return, and interpreted, and submitted to the *NSW Department of Planning and Infrastructure* in an Annual Environmental Management Review (AEMR).

All monitoring specified under EPL 2262 was completed in the 2011/2012 annual reporting period, which covered the period between 6 December 2011 and 5 December 2012.

Nil instances of non – compliance with any of the conditions in EPL 2262 occurred during the reporting period.

Further information is available by contacting the Teys Corporate Environmental team on (07) 3287 2188.

A full copy of EPL 2262 can be obtained on the EPA website from the following URL using the search function for licence number “2262”:

<http://www.environment.nsw.gov.au/prpoeoapp/>

EPA Monitoring Point 4: Summary of results for soil monitoring on CFA High irrigation paddock (EPA Monitoring Point 4)

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Date Published</i>	<i>Minimum Value</i>	<i>Mean Value</i>	<i>Maximum Value</i>
Conductivity	(dS/m)	Annual	1	21/09/2012	7/11/2012	13/11/2012	0.09	0.19	0.40
Exchangeable Calcium	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	266.0	649.6	1024.0
Exchangeable Magnesium	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	68.0	234.4	443.5
Exchangeable Potassium	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	36.8	134.1	255.3
Exchangeable Sodium	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	74.3	323.4	739.0
Exchangeable Sodium Percentage	Percent	Annual	1	21/09/2012	7/11/2012	13/11/2012	4.4	12.6	20.7
Extractable Phosphorus	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	11.1	93.0	228.0
Nitrate	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	1.0	4.5	12.0
Nitrogen (total)	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	51.0	497.7	1370.0
pH	pH	Annual	1	21/09/2012	7/11/2012	13/11/2012	5.9	6.67	7.8
Phosphorus (total)	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	53.0	182.5	277.0
Phosphorus Sorption Capacity	(L/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	24.0	38.5	69.0
Total Organic Carbon	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	200	2790	5200

The monitoring data in the table above has been taken from monitoring point 4 in EPL 2262. The monitoring point has been established to monitor the soil on which treated wastewater is applied. The monitoring point is located within in the 'CFA High' irrigation area.

EPA Monitoring Point 6: Summary of results for soil monitoring on CFA Low irrigation paddock (EPA Monitoring point 6).

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Date Published</i>	<i>Minimum Value</i>	<i>Mean Value</i>	<i>Maximum Value</i>
Conductivity	(dS/m)	Annual	1	21/09/2012	7/11/2012	13/11/2012	0.235	0.474	1.04
Exchangeable Calcium	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	1368.0	1653.4	2120.0
Exchangeable Magnesium	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	646.38	995.21	1409.40
Exchangeable Potassium	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	124.2	171.12	319.70
Exchangeable Sodium	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	512.21	2066.4	4848.40
Exchangeable Sodium Percentage	Percent	Annual	1	21/09/2012	7/11/2012	13/11/2012	7.0	21.8	37.40
Extractable Phosphorus	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	36.8	99.19	245.0
Nitrate	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	1.0	3.4	8.0
Nitrogen (total)	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	309.0	1183.7	2580.0
pH	pH	Annual	1	21/09/2012	7/11/2012	13/11/2012	5.8	7.19	8.7
Phosphorus (total)	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	226.0	358.9	848.0
Phosphorus Sorption Capacity	(L/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	36.0	51.5	74.0
Total Organic Carbon	(mg/kg)	Annual	1	21/09/2012	7/11/2012	13/11/2012	3600	10330	28000

The monitoring data in the table above has been taken from monitoring point 6 in EPL 2262. The monitoring point has been established to monitor the soil on which treated wastewater is applied. The monitoring point is located within in the 'CFA Low' irrigation area.

EPA Monitoring Point 1: Summary of results for waste water applied to irrigation areas (monitoring point 1) under Environmental Protection Licence 2262 (monthly sample – required only when irrigating)

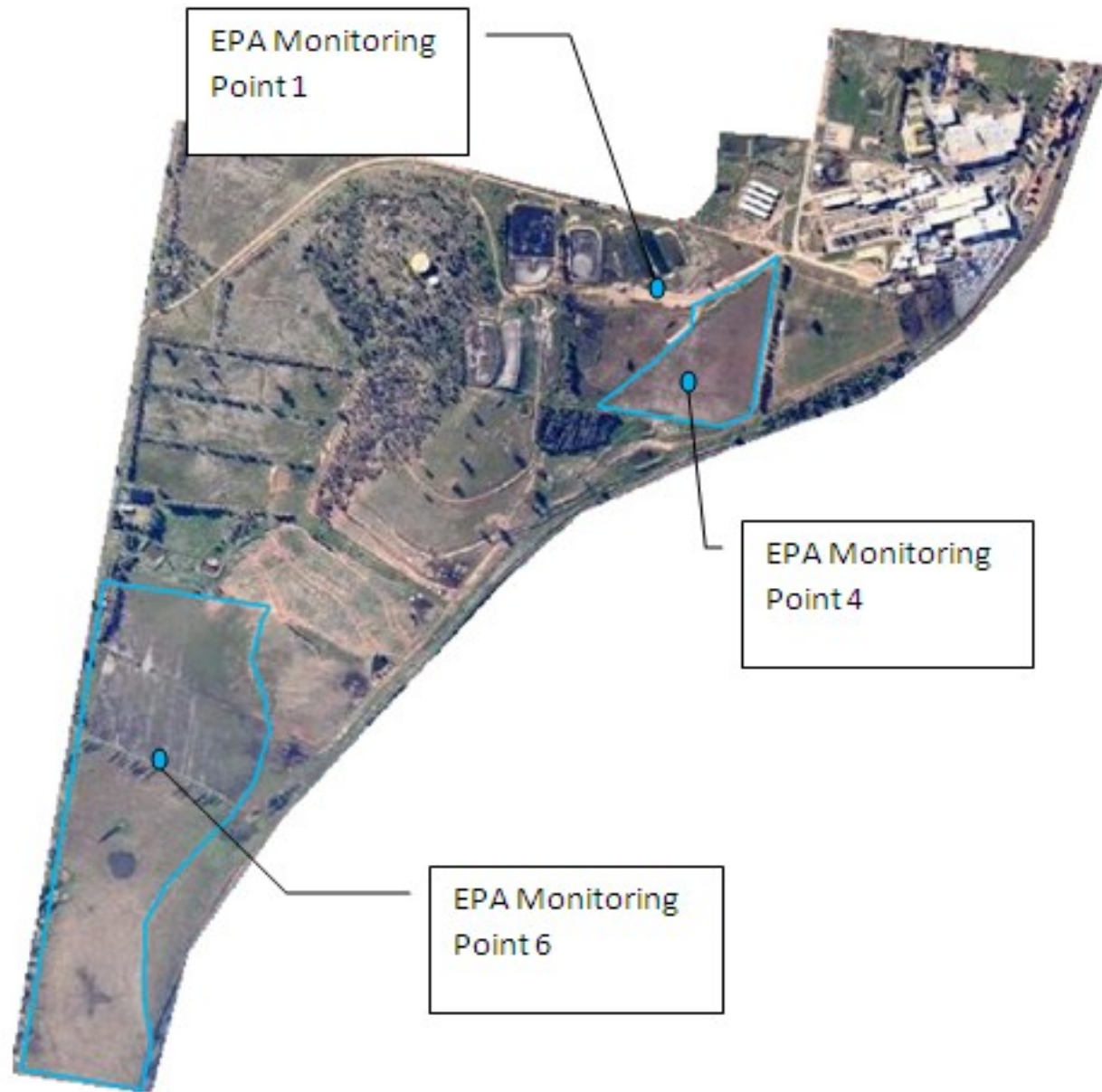
<i>Pollutant</i>	<i>Unit of measure</i>	<i>Monitoring frequency required by Licence</i>	<i>No. of times measured during month</i>	<i>100 percentile limit</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Date Published</i>	<i>Value</i>	<i>Exceedance (Yes/no)</i>
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	December				
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	January				
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	February				
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	March	NA*	NA*	NA*	NA*
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	April	NA*	NA*	NA*	NA*
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	May	NA*	NA*	NA*	NA*
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	June	NA*	NA*	NA*	NA*
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	July	NA*	NA*	NA*	NA*
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	August	NA*	NA*	NA*	NA*
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	September	19/09/12	20/09/12	14	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	October	12/10/12	15/10/12	11	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	November	16/11/12	22/11/12	4	No

The monitoring data in the table above has been taken from monitoring point 1 from EPL 2262. The monitoring point has been established to monitor effluent quality at the discharge from the wastewater treatment system, to the effluent utilisation area on the Teys site. The monitoring point is located at the equalisation pond, downstream of the biological nutrient removal (BNR) system.

The 100 percentile limit refers to a maximum concentration, which BOD concentrations must be below, in order for the water to be irrigated on site.

*NA – no irrigation occurred in given month. No monitoring required.

Locations of monitoring points 1, 4 and 6 are shown in the Figure 1 below.



Units of measure – Abbreviations outlined in full

mg/L = Concentration in milligrams per litre, which is equivalent unit of measure to parts per million (ppm)

dS/m = Decisiemens per metre, a measure of electrical conductivity, which gives an indication of the concentration of dissolved ions

mg/kg = Milligrams per kilogram, a measure of concentration of different parameters within a soil sample

L/kg = Litres per kilogram, a measure of the amount of mineral retained by the soil

Correction Log

This section is included to correct any incorrect data which may have been published in good faith.

Teys Australia Southern Property Pty Ltd T/A Teys Australia Wagga Wagga

EPL number 2262

Pollutant:

Table 4: Correction log

<i>Sample date and time</i>	<i>Original data</i>	<i>Corrected data</i>	<i>Date corrected</i>	<i>Date originally published</i>	<i>Reason</i>

Note: No corrections required to date.