

Annual Summary of MP2 Monitoring Data required by NSW EPL 1699

Site:	Tahmoor PPP
EPL:	1699
Link:	http://www.epa.nsw.gov.au/prpoeoapp
Licensee name:	Inghams Enterprises Pty Ltd
Licensee's address:	Locked Bag 2039, North Ryde, NSW 1670
Location of monitoring point / area:	MP1 - Irrigation Pond, MP2 - Irrigation area (soil monitoring points C1, X, G4, P1a, P1b, P2 and P3 on effluent re-use areas)
Pollutant:	Secondary treated effluent
Unit of measure:	Various, see results tables below
Monitoring frequency:	MP1 - Monthly, MP2 - Annually
Any other relevant requirements:	MP2 - Next monitoring scheduled for Dec 2020
Any limit imposed by the licence:	No

MP2 - Annually Sampling date	Topsoil depth	Site	Avail. Phosphorus mg/kg	CEC cmol/kg	Conductivity dS/m	Exchangeable				ESP %	Nitrate mg/kg	pH	Total P mg/kg	TKN mg/kg
						Ca cmol/kg	Mg cmol/kg	K cmol/kg	Na cmol/kg					
15/01/2013	0-20cm	C1	68	16.3	0.19	9	4	1.3	1.4	9	44	5.4	959	4136
		G4	570	22.3	0.4	16.1	2.6	0.7	2.6	1	15	6.3	3238	3975
		X	552	11.2	0.22	7.9	1.9	0.9	0.6	5	4.3	5.4	1407	3256
		P1a	34	16.2	0.18	9.4	3.5	0.8	1.7	10.5	9.5	4.8	861	3411
		P1b	65	11.3	0.19	6	3	0.5	1.6	14.1	15.5	5.1	636	2494
		P2	8	13.7	0.24	6	4.4	1.6	1.8	13.1	10.6	5.6	535	3069
		P3	106	9.1	0.39	5.2	2.7	1	1.4	15.3	15.5	4.8	950	2264
	40-70cm	C1	119	7.4	0.18	3	2.5	1.6	0.9	12	24.8	5.2	414	1055
		G4	4	15.3	0.21	6.2	5.8	0.5	2.6	17	1.9	5.5	139	548
		X	54	3.3	0.05	1.7	1.4	0.2	0.8	24	2	5.3	203	568
		P1a	3	11.5	0.08	3.1	4.2	0.3	1.2	10.4	2.7	4.1	174	987
		P1b	6	13.2	0.06	2.5	7.6	0.3	1.5	11.3	2.3	4.5	132	984
		P2	3	7.9	0.07	1.2	4.7	0.5	0.9	11.3	2.8	5.6	242	1017
		P3	28	4.4	0.1	1.7	1.8	0.7	0.5	11.3	3	4.2	215	412
24/10/2013	0-20cm	C1	72	11.2	0.12	6	2.5	1.2	1.3	12	7.5	5.4	990	2900
		G4	153	13.6	0.22	9	1.6	0.3	2.5	18	9.4	5.7	1630	3900
		X	163	10.9	0.08	7	1.7	0.7	0.9	8	6.6	5.2	1150	3200
		P1a	28	14.9	0.16	6.3	3.1	0.7	3.3	22	10	5.4	1040	4100
		P1b	61	14.8	0.17	6.5	3	0.7	2.6	18	12	5.2	1090	3300
		P2	33	18.9	0.28	7.7	4.9	1.5	3.2	17	9.7	5.5	1190	3300
		P3	>350	10.5	0.26	5.2	1.8	1.9	1.7	16	52	5.2	1720	3400
	40-70cm	C1	13	7.5	0.08	3.2	2.2	0.6	1.2	16	2.7	5.2	250	1000
		G4	1	11.7	0.14	2.2	4.9	0.2	1.7	154	<0.5	4.7	140	510
		X	41	4.2	0.04	1.5	1.3	0.3	0.7	17	<0.5	4.7	280	310
		P1a	1	16.9	0.12	1.1	5.8	0.4	1.3	8	<0.5	4.2	150	710
		P1b	1	14.8	0.1	1.6	7.6	0.3	1	7	<0.5	4.4	120	600
		P2	1	12.8	0.14	1.7	6.8	1	1.4	11	1.1	5.1	220	710
		P3	160	3.6	0.06	1.7	1.3	0.6	0.5	14	0.9	5	380	400
30/10/2014	0-20cm	C1	76	15.8	0.1	7.1	3	1	2.4	15	12	5.3	1060	3500
		G4	100	17.8	0.16	9.4	2.8	0.6	2.1	12	18	5.5	1560	2500
		X	120	15.7	0.07	9	2.1	0.8	0.6	4	13	5.7	900	3030
		P1a	12	13.7	0.18	5.3	3.8	0.8	1.9	14	18	4.8	480	2400
		P1b	43	17.2	0.17	8.8	3.2	0.5	2.6	15	24	5.6	990	3300
		P2	31	16.7	0.08	7.8	4.2	1	1.8	11	16	5.4	830	3200
		P3	380	8.4	0.13	4.5	1.9	0.7	1.9	23	0.5	5.6	1080	910
	40-70cm	C1	1	15.4	0.13	1.3	4.8	1.1	3.5	23	2.6	4.3	260	700
		G4	<1	16.6	0.15	3.5	5.8	0.6	2.3	14	<0.5	4.4	150	520
		X	4	9	0.06	2.4	3.7	0.2	1.2	13	<0.5	4.8	130	330
		P1a	13	10.8	0.11	2.3	4.5	0.4	2.7	25	4.7	4.4	260	950
		P1b	3	14.2	0.06	3.4	5.4	0.4	1.5	11	1.5	4.8	210	760
		P2	<1	15.6	0.06	2	5.8	0.4	1.5	10	2	4.5	240	880
		P3	5	9.4	0.12	1.8	3	1.1	1.9	20	<0.5	5.4	130	380
22/10/2015	0-20cm	C1	29	12.4	0.13	4.6	2.4	0.9	1.4	11	9.1	5.4	640	2300
		G4	108	10.9	0.23	1.5	3.6	0.3	0.9	8	8	5.8	1060	2500
		X	110	15.4	0.15	1.7	5.9	0.4	2	13	2.4	5.3	410	1900
		P1a	25	12.5	0.05	4.1	3.7	0.6	0.8	6	2.6	5.4	590	1500
		P1b	48	15.5	0.23	6.9	2.7	0.5	2.1	14	13	5.5	450	2200
		P2	48	18.7	0.15	7.4	4	0.7	1.8	10	7.5	5.7	1400	4000

		P3	209	15.8	0.15	5.9	2.7	0.8	1.6	10	1	5.7	1400	1500
	40-70cm	C1	<1	14.2	0.1	4.2	0.8	1.4	10	1	1	4.4	180	460
		G4	<1	12.5	0.28	1.9	0.2	1.6	13	0.5	5	4.6	110	380
		X	3	12.7	0.07	2.0	1	0.3	2	<0.5	<0.5	4.6	190	330
		P1a	13	10.9	0.06	3.5	0.3	0.9	8	1.1	1.1	4.8	360	790
		P1b	1	11.3	0.08	4.6	0.1	0.7	6	<0.5	<0.5	4.6	120	690
		P2	1	13.8	0.07	6.1	0.5	0.9	7	0.9	0.9	5.2	250	720
		P3	10	11.1	0.22	4.1	1	1.2	11	<0.5	<0.5	4.8	240	440
11/11/2016	0-20cm	C1	28	14	0.13	8.4	2.8	1.3	1.7	12	12	5.6	860	2400
		G4	115	16	0.2	12	1.9	0.73	1.6	10	6.9	5.9	1110	2200
		X	95	12	0.1	8.3	1.9	1.1	0.58	5	2.8	5.5	200	1800
		P1a	14	20	0.15	12	5.4	0.78	2.2	11	11	5.4	470	2600
		P1b	38	17	0.17	10	3.2	0.56	2.5	15	9.4	5.6	990	1800
		P2	78	23	0.17	16	3.8	1.3	2.4	11	45	6	2530	3000
		P3	211	12	0.13	7.2	2.5	1.2	1.3	11	17	5.9	1710	2200
	40-70cm	C1	<1	10	0.11	0.92	4.2	0.61	1.8	18	2.3	4.4	270	550
		G4	<1	12	0.27	2.1	5.9	0.29	2.4	21	0.7	4.6	200	450
		X	1	7	0.07	1.5	2.8	0.4	1.1	16	0.7	4.4	150	260
		P1a	5	8.4	0.08	1.8	4.1	0.35	1.3	16	3.1	4.6	250	710
		P1b	1	10	0.13	2.6	5.3	0.18	1.3	13	0.5	4.6	200	490
		P2	<1	11	0.09	2.2	6.8	0.48	1.4	13	1.3	5	280	720
		P3	3	7.9	0.11	1.6	3.9	0.68	1.4	17	0.6	4.7	260	370
15/11/2017	0-20cm	C1	39	12	0.07	7.9	2.1	1	1.3	11	1	5.5	830	2700
		G4	91	13	0.09	9.4	1.8	0.63	0.98	8	1.4	5.6	470	1500
		X	87	12	0.11	8.2	1.6	1	0.81	7	2.5	5.6	740	2700
		P1a	17	11	0.07	5.9	3.2	0.61	1.6	14	2.7	5.4	640	2900
		P1b	40	13	0.09	8.1	2.8	0.52	1.5	11	2.3	5.3	990	3800
		P2	46	19	0.13	11	4.4	1.5	2.1	11	3.8	5.7	940	3200
		P3	170	10	0.09	5.8	2.5	0.76	1.4	13	2.8	5.6	1300	3000
	40-70cm	C1	14	6.4	0.05	2.8	1.4	0.71	1.4	21	1.2	5.2	290	940
		G4	13	7.2	0.08	3.4	1.9	0.47	1.5	21	0.5	5.7	200	600
		X	34	4.3	0.04	2.3	0.85	0.39	0.66	15	0.8	5.2	180	500
		P1a	3.2	6.1	0.06	1.3	3	0.25	1.1	17	1.5	4.5	260	810
		P1b	3.3	10	0.08	2.8	5.6	0.11	1.3	13	1	4.7	360	1200
		P2	1	10	0.09	2.1	6.2	0.49	1.4	14	1	5.2	270	920
		P3	13	5.4	0.09	1.3	2.5	0.43	1.1	20	<0.5	5	260	450
12/03/2019	0-20cm	C1	60	18	0.1	10	3.6	2.1	1.6	9	3.2	6.1	1220	3600
		G4	110	14	0.06	10	1.7	0.57	1.4	10	1.2	5.9	1010	2500
		X	130	12	0.07	7.6	1.8	1.3	0.73	6	1.5	5.7	820	2600
		P1a	16	13	0.07	6.9	3.9	0.57	1.7	13	5.7	5.9	530	1800
		P1b	57	17	0.09	11	3.3	0.82	1.6	9	3.4	6	1090	3900
		P2	87	19	0.09	11	4.3	2.2	1.6	8	3.6	5.9	1570	4000
		P3	200	16	0.12	10	2.8	2.5	0.58	4	3.3	5.9	1250	4200
	40-70cm	C1	14	11	0.13	3.4	3.5	0.67	2.3	21	0.8	4.4	360	820
		G4	23	9.8	0.12	4.4	2.8	0.35	1.9	19	<0.5	4.7	260	640
		X	54	5.7	0.06	2.5	1.5	0.36	0.93	16	0.8	4.6	270	800
		P1a	2.4	7.4	0.16	1.6	3.2	0.29	1.6	22	1.4	4.5	220	640
		P1b	9.7	7.6	0.07	2.1	3.1	0.16	1.1	14	0.5	4.3	130	590
		P2	1.2	8.8	0.08	1.5	5	0.8	1.2	14	0.9	4.9	300	910
		P3	32	8.1	0.09	2.3	3.4	0.76	1.35	17	0.6	4.9	280	670
17/12/2019	0-20cm	C1	12	16	0.092	8.9	3.2	1.9	1.6	10	5.6	5.5	940	2600
		G4	81	19	0.095	13	2.5	2.8	0.43	2	3.2	5.8	1490	2800
		X	54	13	0.077	9.1	1.6	1.6	0.69	5	1.8	5.6	870	3400
		P1a	23	14	0.064	7.9	4.1	0.89	1.3	9	1.8	5.8	860	1600
		P1b	24	13	0.09	8.2	2.5	0.5	1.8	14	6.66	5.5	1190	4100
		P2	6.8	18	0.066	10	3.9	1.7	2.5	14	6	5.6	1120	2500
		P3	190	12	0.089	6.7	2.1	1.3	1.7	14	3	5.6	1820	2400
	40-70cm	C1	1.8	10	0.081	2.2	4	0.86	1.9	19	3.3	4.8	500	1600
		G4	<1	13	0.2	2.3	6	0.39	2.7	21	0.6	4.8	550	1100
		X	23	9.3	0.081	4.6	2.3	0.6	1.4	14	0.7	4.9	360	1200
		P1a	2.4	6.1	0.065	1.8	2.4	0.37	1.1	18	0.9	4.8	360	600
		P1b	9.7	10	0.095	2	4.7	0.2	1.6	16	1.2	4.4	390	1300
		P2	<1	11	0.093	1.8	6.8	0.43	1.7	15	1.9	5	550	1200
		P3	12	7	0.076	1.9	2.3	0.7	1.7	24	0.6	4.7	310	670

Note the sampling and testing requirement no longer applies unless the site recommences land irrigation of treated effluent.
Conditions P1.3 and P1.4 from a license variation in Oct 2020.