

DWR CYMRU WELSH WATER - PONTSTICILL WTW

Analysis of water clarification sludge cake

Sampling Point No: 300991

Sample ID: 8214360

Date: 16/12/2024

Application rate (t/ha)	50.0
Application rate (t/acre)	20.2
pH	6.3
Dry solids (%)	21.20

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	1.12	0.24	%	2.4	119	0.2	12
Ammonium N	20.6	4.37	mg/kg	0.0	0		
Phosphorus (P)	1060	224.72	mg/kg	0.2	11		
Phosphate (P ₂ O ₅)		0.00		0.5	26	0.1	5
Potassium (K)	467	99.00	mg/kg	0.1	5		
Potash (K ₂ O)		0.00		0.1	6	0.0	1
Magnesium (Mg)	619	131.23	mg/kg	0.1	7		
Magnesium (MgO)		0.00		0.2	11	0.0	2
Sulphur (S)	6520	1382.24	mg/kg	1.4	69		
Sulphur (SO ₃)		0.00		3.5	173	0.3	17

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	98.8	20.95	mg/kg	20.95	1.05	15.00	7%
Copper	46.2	9.79	mg/kg	9.79	0.49	7.50	7%
Nickel	18.9	4.01	mg/kg	4.01	0.20	3.00	7%
Lead	8.3	1.76	mg/kg	1.76	0.09	15.00	1%
Cadmium	0.98	0.21	mg/kg	0.21	0.01	0.15	7%
Chromium	7.53	1.60	mg/kg	1.60	0.08	15.00	1%
Arsenic	60.4	12.80	mg/kg	12.80	0.64	0.70	91%
Mercury	0.47	0.10	mg/kg	0.10	0.00	0.10	5%
Other Elements							
Iron	10300	2183.60	mg/kg	2183.60	109		
Aluminium	150000	31800.00	mg/kg	31800.00	1590		

Sampling Point No:	300991	Location:	PONTSTICILL WTW SLUDGE TANKERING POINT
Date Sampled:	16/12/2024	Time Taken:	12:12
Laboratory:	ALS	Sample ID:	8214360
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	619	mg/kg		
288 Aluminium	150000	mg/kg		
357 Arsenic	60.4	mg/kg		
4620 pH	6.3	pH		
7774 Mercury	0.47	mg/kg	<	
8241 Volatile solids	60.4	%		
9233 Ammoniacal nitrogen	20.6	mg/kg		
9234 Sulphur	6520	mg/kg		
9271 Cadmium	0.98	mg/kg		
9272 Chromium	7.53	mg/kg		
9273 Copper	46.2	mg/kg		
9275 Nickel	18.9	mg/kg		
9276 Lead	8.3	mg/kg		
9277 Zinc	98.8	mg/kg		
9278 Iron	10300	mg/kg		
9281 % Dry solids	21.2	%		
9282 % Minerals	39.6	%		
9283 % K (dry weight)	0.0467	mg/kg		
9284 % P (dry weight)	0.106	%		
9285 % N (dry weight)	1.12	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit

DWR CYMRU WELSH WATER - PONTSTICILL WTW

Analysis of liquid water clarification sludge

Sampling Point No: 300991

Sample ID: 8189092

Date: 26/11/2024

Application rate (t/ha)	250.0
Application rate (t/acre)	101.2
pH	7.1
Dry solids (%)	2.51

NUTRIENT CONTENT

	Dry Wt result	Wet Wt result	Units	Total		Available	
				(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	1.3	0.03	%	0.3	82	0.0	8
Ammonium N	86.9	2.18	mg/kg	0.0	1		
Phosphorus (P)	721	18.10	mg/kg	0.0	5		
Phosphate (P ₂ O ₅)		0.00		0.0	10	0.0	2
Potassium (K)	212	5.32	mg/kg	0.0	1		
Potash (K ₂ O)		0.00		0.0	2	0.0	0
Magnesium (Mg)	417	10.47	mg/kg	0.0	3		
Magnesium (MgO)		0.00		0.0	4	0.0	1
Sulphur (S)	9210	231.17	mg/kg	0.2	58		
Sulphur (SO ₃)		0.00		0.6	144	0.1	14

POTENTIALLY TOXIC ELEMENTS

	Dry Wt result	Wet Wt result	Units	Rate		Limit	% of Annual Addition Limit
				(g/tonne)	(kg/ha)	(kg/ha/yr)	
Zinc	52.3	1.31	mg/kg	1.31	0.33	15.00	2%
Copper	36.2	0.91	mg/kg	0.91	0.23	7.50	3%
Nickel	5.1	0.13	mg/kg	0.13	0.03	3.00	1%
Lead	5.17	0.13	mg/kg	0.13	0.03	15.00	0%
Cadmium	0.38	0.01	mg/kg	0.01	0.00	0.15	2%
Chromium	2.71	0.07	mg/kg	0.07	0.02	15.00	0%
Arsenic	73.9	1.85	mg/kg	1.85	0.46	0.70	66%
Mercury	1.6	0.04	mg/kg	0.04	0.01	0.10	10%
Other Elements							
Iron	8480	212.85	mg/kg	212.85	53		
Aluminium	200000	5020.00	mg/kg	5020.00	1255		

Sampling Point No:	300991	Location:	PONTSTICILL WTW SLUDGE TANKERING POINT
Date Sampled:	26/11/2024	Time Taken:	10:54
Laboratory:	ALS	Sample ID:	8189092
No. of Results:	20		
Sampling Reason:	WTW Sludge - Product Monitoring (SW_ME)		
Type:	WTW Sludge (SW)		

Sample Results



Code	Result	Units	Qualifier	Lower Limit
238 Magnesium	417	mg/kg		
288 Aluminium	200000	mg/kg		
357 Arsenic	73.9	mg/kg		
4620 pH	7.1	pH		
7774 Mercury	1.6	mg/kg	<	
8241 Volatile solids	58.4	%		
9233 Ammoniacal nitrogen	86.9	mg/kg		
9234 Sulphur	9210	mg/kg		
9271 Cadmium	0.38	mg/kg		
9272 Chromium	2.71	mg/kg	<	
9273 Copper	36.2	mg/kg		
9275 Nickel	5.1	mg/kg	<	
9276 Lead	5.17	mg/kg	<	
9277 Zinc	52.3	mg/kg		
9278 Iron	8480	mg/kg		
9281 % Dry solids	2.51	%		
9282 % Minerals	41.6	%		
9283 % K (dry weight)	0.0212	mg/kg		
9284 % P (dry weight)	0.0721	%		
9285 % N (dry weight)	1.3	%		

Comments:

Signed:

Approved by:

Position:

Upper Limit
