Surface Water Results
June 2024

City of Newcastle - Summerhill Waste Management Centre

141 Minmi Road, Wallsend, NSW

Environment Protection License 5897 - Condition M2 – Special Frequency 1 (Daily during discharge)
Monthly rainfall = 134.6mm

Purpose of Sampling		SW56, SW57 & SW58A	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID	**EPL ID**	1/06/2024	2/06/2024	3/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	7.28	7.48
SW56	**56**	7.41	7.52	7.48
SW57	**57**	7.56	7.37	7.24
SW58a	**61**	7.44	7.53	7.43
SW59	**66**	N/A	7.40	7.52
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	349	396
SW56	**56**	493	640	618
SW57	**57**	264	239	393
SW58a	**61**	428	564	524
SW59	**66**	N/A	464	345
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	143	176
SW56	**56**	194	548	766
SW57	**57**	79	73	44
SW58a	**61**	159	459	289
SW59	**66**	N/A		
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	0.025	0.025
SW56	**56**	3.71	7.03	6.56
SW57	**57**	0.08	0.025	0.025
SW58a	**61**	2.52	4.01	1.36
SW59	**66**	N/A	0.025	0.025
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	16	7
SW56	**56**	6	11	12
SW57	**57**	3	2	2
SW58a	**61**	6	8	6
SW59	**66**	N/A	12	2

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Purpose of Sampling		SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59
CN ID		4/06/2024	5/06/2024	6/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	7.54	7.50	7.70
SW57	**57**	7.25	7.23	7.23
SW58a	**61**	7.31	7.24	7.28
SW59	**66**	7.46	7.40	6.93
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	624	625	625
SW57	**57**	426	431	421
SW58a	**61**	549	658	508
SW59	**66**	572	568	278
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	749	676	596
SW57	**57**	31	23	32
SW58a	**61**	289	210	614
SW59	**66**	453	497	1450
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	6.73	6.48	6.92
SW57	**57**	0.21	0.18	0.15
SW58a	**61**	1.42	2.24	1.44
SW59	**66**	0.120	0.025	0.025
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	10	11	6
SW57	**57**	<2	<2	<2
SW58a	**61**	6	7	5
SW59	**66**	<2	2	2

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Purpose of Sampling		SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID		7/06/2024	8/06/2024	9/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.64	7.50	7.47
SW56	**56**	7.66	7.52	7.72
SW57	**57**	7.39	7.32	7.20
SW58a	**61**	7.44	7.32	7.23
SW59	**66**	7.54	7.05	7.03
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	404	439	472
SW56	**56**	626	626	641
SW57	**57**	351	378	399
SW58a	**61**	542	531	518
SW59	**66**	524	363	383
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	34	80	58
SW56	**56**	329	386	389
SW57	**57**	36	36	29
SW58a	**61**	439	424	502
SW59	**66**	106	970	806
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.04	0.09	0.05
SW56	**56**	7.04	7.02	6.91
SW57	**57**	0.07	0.06	0.15
SW58a	**61**	2.44	1.36	0.46
SW59	**66**	0.060	0.025	0.025
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	6	6	4
SW56	**56**	6	10	27
SW57	**57**	2	2	3
SW58a	**61**	8	11	10
SW59	**66**	3	1	1

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Purpose of Sampling		SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID		10/06/2024	11/06/2024	12/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.54	7.25	7.27
SW56	**56**	7.77	7.57	7.50
SW57	**57**	7.20	7.25	7.31
SW58a	**61**	7.22	7.28	7.27
SW59	**66**	7.04	6.96	7.26
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	513	525	526
SW56	**56**	644	642	642
SW57	**57**	411	410	411
SW58a	**61**	512	530	566
SW59	**66**	441	438	546
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	76	51	58
SW56	**56**	288	292	293
SW57	**57**	28	26	24
SW58a	**61**	415	471	354
SW59	**66**	545	695	398
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.060	0.140	0.13
SW56	**56**	6.91	6.72	6.57
SW57	**57**	0.12	0.09	0.06
SW58a	**61**	0.06	0.025	0.025
SW59	**66**	0.025	0.025	0.025
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	6	3	4
SW56	**56**	10	13	8
SW57	**57**	2	3	2
SW58a	**61**	6	4	3
SW59	**66**	<2	<2	2

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Purpose of Sampling		SW55, SW56, SW57, SW58A & SW59	SW55, SW57 & SW58A	SW55, SW57 & SW58A
CN ID		13/06/2024	14/06/2024	15/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.40	7.66	7.95
SW56	**56**	7.70	N/A	N/A
SW57	**57**	7.39	7.48	7.71
SW58a	**61**	7.42	7.21	7.43
SW59	**66**	7.27	N/A	N/A
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	540	538	522
SW56	**56**	641	N/A	N/A
SW57	**57**	411	412	401
SW58a	**61**	586	679	492
SW59	**66**	551	N/A	N/A
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	57	51	61
SW56	**56**	338	N/A	N/A
SW57	**57**	29	34	13
SW58a	**61**	425	312	37
SW59	**66**	505	N/A	N/A
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.21	0.14	0.06
SW56	**56**	6.45	N/A	N/A
SW57	**57**	0.025	0.025	0.025
SW58a	**61**	0.025	0.05	0.025
SW59	**66**	0.025	N/A	N/A
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	4	3	10
SW56	**56**	6	N/A	N/A
SW57	**57**	2	2	2
SW58a	**61**	<2	<2	<2
SW59	**66**	<2	N/A	N/A

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Purpose of Sampling		SW55, SW57 & SW58A	SW56, SW57 & SW58A	SW57 & SW58A
CN ID	**EPL ID**	16/06/2024	17/06/2024	18/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.33	7.47	7.24
SW56	**56**	7.59	N/A	N/A
SW57	**57**	7.35	7.38	7.29
SW58a	**61**	7.26	6.94	7.14
SW59	**66**	N/A	N/A	N/A
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	535	551	550
SW56	**56**	639	N/A	N/A
SW57	**57**	410	415	424
SW58a	**61**	670	771	813
SW59	**66**	N/A	N/A	N/A
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	62	40	28
SW56	**56**	301	N/A	N/A
SW57	**57**	16	25	14
SW58a	**61**	38	66	67
SW59	**66**	N/A	N/A	N/A
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.025	0.08	0.08
SW56	**56**	4.93	N/A	N/A
SW57	**57**	0.025	0.025	0.025
SW58a	**61**	0.025	0.025	0.060
SW59	**66**	N/A	N/A	N/A
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	8	2	3
SW56	**56**	17	N/A	N/A
SW57	**57**	3	2	<2
SW58a	**61**	<2	<2	<2
SW59	**66**	N/A	N/A	N/A

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Purpose of Sampling		SW55, SW57 & SW58A	SW55, SW57 & SW58A	SW55, SW57 & SW58A
CN ID	**EPL ID**	19/06/2024	20/06/2024	21/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.20	7.60	7.22
SW56	**56**	N/A	N/A	N/A
SW57	**57**	7.21	7.54	7.29
SW58a	**61**	7.08	7.28	7.59
SW59	**66**	N/A	N/A	N/A
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	554	600	557
SW56	**56**	N/A	N/A	N/A
SW57	**57**	418	422	422
SW58a	**61**	832	849	552
SW59	**66**	N/A	N/A	N/A
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	43	26	23
SW56	**56**	N/A	N/A	N/A
SW57	**57**	20	15	11
SW58a	**61**	25	31	30
SW59	**66**	N/A	N/A	N/A
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.11	0.025	0.025
SW56	**56**	N/A	N/A	N/A
SW57	**57**	0.12	0.06	0.08
SW58a	**61**	0.130	0.06	0.025
SW59	**66**	N/A	N/A	N/A
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	3	4	5
SW56	**56**	N/A	N/A	N/A
SW57	**57**	<2	2	3
SW58a	**61**	<2	<2	4
SW59	**66**	N/A	N/A	N/A

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Purpose of Sampling		SW57	SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID	**EPL ID**	22/06/2024	23/06/2024	24/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	7.76
SW56	**56**	N/A	7.08	7.38
SW57	**57**	7.31	7.30	7.29
SW58a	**61**	N/A	7.37	7.42
SW59	**66**	N/A	7.45	7.50
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	529
SW56	**56**	N/A	409	629
SW57	**57**	405	341	370
SW58a	**61**	N/A	559	608
SW59	**66**	N/A	625	631
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	39
SW56	**56**	N/A	330	321
SW57	**57**	17	38	24
SW58a	**61**	N/A	223	266
SW59	**66**	N/A	232	250
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	0.025
SW56	**56**	N/A	2.54	2.20
SW57	**57**	0.025	0.025	0.06
SW58a	**61**	N/A	1.14	0.82
SW59	**66**	N/A	0.340	0.460
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	6
SW56	**56**	N/A	11	13
SW57	**57**	<2	5	2
SW58a	**61**	N/A	10	7
SW59	**66**	N/A	6	4

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Purpose of Sampling		SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59	SW55, SW56, SW57, SW58A & SW59
CN ID	**EPL ID**	25/06/2024	26/06/2024	27/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	7.43	7.43	7.54
SW56	**56**	7.46	7.47	7.34
SW57	**57**	7.25	7.37	7.29
SW58a	**61**	7.62	7.60	7.66
SW59	**66**	7.22	7.35	7.33
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	561	604	614
SW56	**56**	638	635	635
SW57	**57**	397	395	400
SW58a	**61**	565	588	608
SW59	**66**	614	625	638
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	53	54	157
SW56	**56**	321	303	334
SW57	**57**	26	20	24
SW58a	**61**	203	169	153
SW59	**66**	635	416	318
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	0.025	0.025	0.025
SW56	**56**	2.30	2.04	1.25
SW57	**57**	0.12	0.025	0.025
SW58a	**61**	0.25	0.025	0.025
SW59	**66**	0.36	0.31	0.27
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	6	5	9
SW56	**56**	12	11	8
SW57	**57**	2	2	2
SW58a	**61**	6	6	5
SW59	**66**	5	3	4

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Purpose of Sampling		SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59	SW56, SW57, SW58A & SW59
CN ID	**EPL ID**	28/06/2024	29/06/2024	30/06/2024
Parameter:			**pH (pH unit)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	7.44	7.23	7.30
SW57	**57**	7.45	7.24	7.36
SW58a	**61**	7.51	7.34	7.37
SW59	**66**	7.42	7.32	7.27
Parameter:			**Electrical Conductivity (µS/cm)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	633	636	632
SW57	**57**	401	407	356
SW58a	**61**	649	668	463
SW59	**66**	648	676	659
Parameter:			**Suspended Solids (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	312	327	353
SW57	**57**	32	60	40
SW58a	**61**	267	227	260
SW59	**66**	288	310	701
Parameter:			**Ammonia (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	0.94	0.44	0.33
SW57	**57**	0.16	0.11	0.025
SW58a	**61**	0.025	0.025	0.025
SW59	**66**	0.34	0.34	0.29
Parameter:			**Biological Oxygen Demand (mg/L)**	
SW55	**55**	N/A	N/A	N/A
SW56	**56**	7	11	12
SW57	**57**	2	3	5
SW58a	**61**	4	7	8
SW59	**66**	3	5	5

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Environment Protection Licence 5897 - Condition M2 – SF1 and SF2 Sampling

	CN ID		SW57
	EPL ID		57
DATE			**28/06/24**
Parameter	**Units**	**LOR**	
Alkalinity (as calcium carbonate)	mg/L	1	79
Aluminium	mg/L	0.01	0.32
Ammonia	mg/L	0.05	0.16
Copper	mg/L	0.001	<0.001
Biological Oxygen Demand	mg/L	2	2
Electrical Conductivity	uS/cm	10	401
Iron	mg/L	0.05	0.80
Lead	mg/L	0.001	<0.001
Nitrate as N	mg/L	0.05	0.17
Organochlorine Pesticides	mg/L	0.0005	<0.0005
Organophosphate Pesticides	mg/L	0.0005	<0.0005
pH	pH Units	0.01	7.45
Total Suspended Solids	mg/L	5	32
Zinc	mg/L	0.005	<0.005

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Environment Protection Licence 5897 - Condition M2 – SF1, SF2 and SF3 Sampling

	CN ID		SW55	SW55	SW55	SW56	SW56
	EPL ID		55	55	55	56	56
DATE			2/06/24	07/06/24	24/06/24	01/06/24	23/06/24
Parameter	Units	LOR					
Alkalinity (as calcium carbonate)	mg/L	1	91	105	137	122	123
Aluminium	mg/L	0.01	0.64	2.25	0.99	8.24	1.13
Ammonia	mg/L	0.05	<0.05	0.04	<0.05	3.71	2.54
Arsenic	mg/L	0.001	0.002	0.003	0.003	0.006	0.004
Barium	mg/L	0.001	0.036	0.044	0.039	0.071	0.077
Benzene	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
BOD	mg/L	2	16	6	6	6	11
Cadmium	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Calcium	mg/L	1	23	25	30	22	24
Chloride	mg/L	1	26	29	40	46	64
Chromium (Hex)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium (Total)	mg/L	0.001	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	mg/L	0.001	<0.001	0.001	0.005	0.004	0.005
Copper	mg/L	0.001	0.008	<0.001	0.011	0.015	0.012
Electrical Conductivity	uS/cm	10	349	404	428	550	409
Ethyl benzene	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Fluoride	mg/L	0.1	0.3	0.3	0.4	0.03	0.4
Iron	mg/L	0.05	0.76	2.27	1.39	7.71	1.75
Lead	mg/L	0.001	0.007	0.007	0.004	0.013	0.014
Magnesium	mg/L	1	10	11	15	8	14
Manganese	mg/L	0.001	0.064	0.072	0.113	0.481	0.345
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nitrate as N	mg/L	0.01	0.29	0.27	<0.05	0.36	4.58
Organochlorine Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Organophosphate Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
pH	pH Units	0.01	7.28	7.64	7.76	7.41	7.08
Polycyclic Aromatic Hydrocarbons	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium	mg/L	1	10	12	12	7	10
Sodium	mg/L	1	33	42	62	53	83

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	CN ID		SW55	SW55	SW55	SW56	SW56
	EPL ID		55	55	55	56	56
DATE			2/06/24	07/06/24	24/06/24	01/06/24	23/06/24
Parameter	**Units**	**LOR**					
Sulfate	mg/L	1	42	44	65	34	50
Total Suspended Solids	mg/L	5	143	34	39	194	330
Toluene	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Dissolved Solids	mg/L	10	295	325	366	412	688
Total Organic Carbon	mg/L	1	18	17	18	17	18
Total Petroleum Hydrocarbons	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Phenolics	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Zinc	mg/L	0.005	0.045	0.039	0.031	0.060	0.052

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	CN ID		SW58a	SW58a	SW59	SW59
	EPL ID		58a	58a	59	59
DATE			01/06/24	23/06/24	2/06/24	23/06/24
Parameter	Units	LOR				
Alkalinity (as calcium carbonate)	mg/L	1	95	99	64	87
Aluminium	mg/L	0.01	8.51	31.2	1.38	0.03
Ammonia	mg/L	0.05	2.52	1.14	<0.05	0.34
Arsenic	mg/L	0.001	0.005	0.010	0.002	0.003
Barium	mg/L	0.001	0.098	0.124	0.062	0.055
Benzene	mg/L	0.001	<0.001	<0.001	<0.001	<0.001
BOD	mg/L	2	6	10	12	6
Cadmium	mg/L	0.0001	0.0002	0.0001	<0.0001	<0.0001
Calcium	mg/L	1	18	19	6	10
Chloride	mg/L	1	37	59	53	56
Chromium (Hex)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Chromium (Total)	mg/L	0.001	<0.01	<0.01	<0.01	<0.01
Cobalt	mg/L	0.001	0.002	0.007	0.004	0.003
Copper	mg/L	0.001	0.007	0.020	0.012	0.008
Electrical Conductivity	uS/cm	10	384	559	513	625
Ethyl benzene	mg/L	0.002	<0.002	<0.002	<0.002	<0.002
Fluoride	mg/L	0.1	0.3	0.4	0.4	0.5
Iron	mg/L	0.05	0.79	16.0	1.82	1.85
Lead	mg/L	0.001	0.008	0.021	0.008	0.007
Magnesium	mg/L	1	8	12	8	13
Manganese	mg/L	0.001	0.110	0.256	0.227	0.131
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Nitrate as N	mg/L	0.01	0.27	3.15	0.06	0.17
Organochlorine Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Organophosphate Pesticides	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
pH	pH Units	0.01	7.35	7.37	7.40	7.45
Polycyclic Aromatic Hydrocarbons	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium	mg/L	1	15	8	3	4
Sodium	mg/L	1	38	80	78	106
Sulfate	mg/L	1	41	61	71	118

Surface Water Results
June 2024

	CN ID		SW58a	SW58a	SW59	SW59
	EPL ID		58a	58a	59	59
DATE			01/06/24	23/06/24	2/06/24	23/06/24
Parameter	**Units**	**LOR**				
Total Suspended Solids	mg/L	5	138	223	464	232
Toluene	mg/L	0.002	<0.002	<0.002	<0.002	<0.002
Total Dissolved Solids	mg/L	10	296	630	534	677
Total Organic Carbon	mg/L	1	17	16	18	15
Total Petroleum Hydrocarbons	mg/L	0.05	<0.05	<0.05	<0.05	<0.05
Total Phenolics	mg/L	0.05	<0.05	<0.05	<0.05	<0.05
Zinc	mg/L	0.005	0.055	0.086	0.049	0.034

Summerhill Waste Management Centre

141 Minmi Road, Wallsend, NSW

Final data obtained: 8/07/24
Date published: 15/07/24

Notes:
CN = City of Newcastle
EPL = Environment Protection Licence
NR = no result (non-compliant sample, water body dry etc)
NA = Not applicable, sample not required
SW58a located in Wentworth Creek and impacted by other catchment activities.

A copy of the Environmental Protection Licence can be viewed at:
http://app.epa.nsw.gov.au/prpoeoapp/

A map showing the location of monitoring points can be viewed at:

Surface Water Results
June 2024

https://www.newcastle.nsw.gov.au/Living/Waste-and-recycling/Summerhill-Waste-management-Centre/Environmental-Monitoring