

Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 January, 1993

Report Prepared by: Patricia Jackson, Environmental Specialist, Remediation & Water

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Submitted by: Mary Scott Wall
Mary Scott Wall, Works Manager

River Water Intake						
Date	TOTAL SUSP. SOLIDS MG/L	ALUMINUM MG/L	CHROMIUM MG/L	CYANIDE MG/L	OIL & GREASE MG/L	ZINC MG/L
3	28	2.9	<0.05	<0.005	1	0.021
9	14	2.3	<0.05	.005	<1	0.014
16	13	2.2	<0.05	<0.005	<1	0.005
21	13	2.2	<0.05	<0.005	<1	0.012
27	5	1.4	<0.05	.007	<1	0.039
Average	14.6	2.2	NA	NA	NA	0.018
Maximum	28	2.9	<0.05	.007	1.000	0.039
Minimum	5	1.4	<0.05	<0.005	<1	0.005

Discharge Water - Outfall Specific Parameters																		
Date	FLOW (MGD)						TEMPERATURE (°F)						pH					
	Measure 1\week						Measure 1\week						Sample 1\week - grab					
	001	002	003	004	005	006	001	002	003	004	005	006	001	002	003	004	005	006
3	*	*	*	0.995	*	28.014	*	*	*	48	*	56	*	*	*	7.48	*	7.33
9	*	*	*	2.376	*	22.125	*	*	*	56	*	56	*	*	*	7.27	*	7.27
16	*	*	*	0.563	*	21.541	*	*	*	51	*	48	*	*	*	7.29	*	7.16
21	*	*	*	2.138	*	15.560	*	*	*	55	*	47	*	*	*	7.31	*	7.07
27	*	*	*	*	*	8.040	*	*	*	*	*	44				*		7.05
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	NA	NA	19.056	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	2.376	*	28.014	*	*	*	56	*	56	*	*	*	7.48	*	7.33
Minimum	*	*	*	0.563	*	8.040	*	*	*	48	*	44	*	*	*	7.27	*	7.05

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Outfall 801 - Combined Discharges

Date	FLOW		ALUMINUM		ARSENIC		BARIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	GPM	MGD	MG/L	POUNDS^	MG/L	POUNDS	MG/L	POUNDS
3	20,145	29.009	3.09	48	<0.002	0	0.289	70
9	17,028	24.501	2.68	79	NM	-	0.103	21
16	15,349	22.104	2.92	133	NM	-	0.402	74
21	12,290	17.698	2.29	13	NM	-	0.312	46
27	5,583	8.040	2.8	94			0.300	20
Permit Limit			3.5 Avg 5.2 Max	432 Avg 650 Max	0.07 Avg 0.11 Max	17.56 Avg 26.50 Max	None	None
Average	14,079	20.270	2.76	73	NA	0.00	0.281	46
Maximum	20,145	29.009	3.09	133	<0.002	0.00	0.402	74
Minimum	5,583	8.040	2.29	13	<0.002	0.00	0.289	20
Date	CADMIUM		CHROMIUM		COPPER		CYANIDE	
	Sample 1\month - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
3	<0.005	0	<0.05	0	<0.02	0.2	<0.005	0
9	NM	-	<0.05	0	NM	-	<0.005	0
16	NM	-	<0.05	0	NM	-	0.007	1.4
21	NM	-	<0.05	0	NM	-	<0.005	0
27	NM		<0.05	0	NM		<0.005	0
Permit Limit	0.20 Avg 0.30 Max	49.50 Avg 74.45 Max	0.16 Avg 0.24 Max	34 Avg 59 Max	0.15 Avg 0.23 Max	37.60 Avg 56.39 Max	0.12 Avg 0.18 Max	23 Avg 45 Max
Average	NA	0.00	NA	0.00	NA	0.20	NA	0.28
Maximum	<0.005	0.00	<0.05	0.00	<0.02	0.20	0.007	1.40
Minimum	<0.005	0.00	<0.05	0.00	<0.02	0.20	<0.005	0.00
Date	FLUORIDE		LEAD		MERCURY		NICKEL	
	Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
3	0.20	48.4	0.1	23	<0.0002	0	<0.04	0
9	NM	-	NM	-	NM	-	NM	-
16	NM	-	NM	-	NM	-	NM	-
21	NM	-	NM	-	NM	-	NM	-
27	NM	-	NM	-	NM	-	NM	-
Permit Limit	None	None	0.53 Avg 0.80 Max	132 Avg 198 Max	.0010 Avg .0016 Max	0.26 Avg 0.40 Max	13.50 Avg 20.20 Max	3337 Avg 5004 Max
Average	0.20	48.4	0.1	23	NA	0	NA	0
Maximum	0.20	48.4	0.1	23	<0.0002	0	<0.04	0
Minimum	0.20	48.4	0.1	23	<0.0002	0	<0.04	0

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Outfall 801 - Combined Discharges

Date	OIL & GREASE		PCBs		PHENOLS		SELENIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS^	PPB	POUNDS	MG/L	POUNDS	MG/L	POUNDS
3	<1	25	<0.5	0	0.007	1.85	<0.002	0
9	2.7	553	<0.5	0	NM	-	NM	-
16	4.0	737	1.56	0.287	NM	-	NM	-
21	3.5	519	0.603	0.089	NM	-	NM	-
27	2.0	134	1.8	0.121	NM	-	NM	-
Permit Limit	None	5,010 Avg 8,350 Max	.00003 mg/l or <0.5 PPB	None	10.40 Avg 15.60 Max	257 Avg 385 Max	0.47 Avg 0.70 Max	116 Avg 174 Max
Average	NA	394	NA	0.0994	NA	1.85	NA	0
Maximum	4	737	1.8	0.287	0.007	1.85	<0.002	0
Minimum	<1	25	<0.5	0	0.007	1.85	<0.002	0

Date	SILVER		TETRACHLOROETHYLENE		SUSPENDED SOLIDS		ZINC	
	Sample 1\week - grab		Sample 2\month - grab		Sample 1\week - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS^	MG/L	POUNDS^
3	<0.01	0	NM	NM	23.27	25	0.012	0.02
9	<0.01	0	0.002	0.36	25.09	2266	0.034	4.07
16	<0.01	0	NM	-	25.3	2267	0.008	0.54
21	<0.01	0	0.017	1.75	19.05	893	0.003	0.2
27	<0.01	0	NM	-	23	1206	0.018	0
Permit Limit	0.18 Avg 0.26 Max	43.78 Avg 65.54 Max	None	1.80 Max	None	8,140 Avg 17,117 Max	1.34 Avg 2.00 Max	113 Avg 270 Max
Average	NA	0	0.0095	1.055	23.142	1331.4	0.015	0.966
Maximum	<0.01	0	0.017	1.75	25.3	2267	0.034	4.07
Minimum	<0.01	0	0.002	0.36	19.05	25	0.003	0.00

SYMBOL

DESCRIPTION

- NM Indicates that a sample was not collected.
- NA Not Applicable; either average values are not appropriate because of less than values or an average value for that parameter is not meaningful.
- * Indicates that there was no flow in the outfall at the time samples were collected.
- < Less than the value (detection limit) reported.
- NS Not sampled due to flood.
- ^ The reported mass values are net addition numbers.

Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 February, 1993

Report Prepared by: Patricia Jackson, Environmental Specialist, Remediation & Water

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Submitted by: Mary Scott Wall
Mary Scott Wall, Works Manager

River Water Intake						
Date	TOTAL SUSP. SOLIDS MG/L	ALUMINUM MG/L	CHROMIUM MG/L	CYANIDE MG/L	OIL & GREASE MG/L	ZINC MG/L
7	52	1.2	<0.05	<0.005	<1	0.037
13	15	1.9	<0.05	.006	<1	0.033
19	18	1.7	<0.05	.007	4	0.028
24	16	2.2	<0.05	<0.005	<1	0.027
Average	25.3	1.8	NA	NA	NA	0.031
Maximum	52	2.2	<0.05	.007	4.000	0.037
Minimum	15	1.2	<0.05	<0.005	<1	0.027

Discharge Water - Outfall Specific Parameters																		
Date	FLOW (MGD)						TEMPERATURE (°F)						pH					
	Measure 1\week						Measure 1\week						Sample 1\week - grab					
	001	002	003	004	005	006	001	002	003	004	005	006	001	002	003	004	005	006
7	*	*	*	5.255	*	15.979	*	*	*	56	54	47	*	*	*	7.48	7.00	7.07
13	*	*	*	2.535	*	7.473	*	*	*	56	*	49	*	*	*	7.39	*	7.31
19	*	*	*	1.659	*	8.936	*	*	*	57	*	60	*	*	*	7.46	*	7.15
24	*	*	*	0.668	*	15.931	*	*	*	58	*	51	*	*	*	7.32	*	6.82
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	NA	NA	12.080	NA	NA	NA	NA	54	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	5.255	*	15.979	*	*	*	58	54	60	*	*	*	7.48	7.00	7.31
Minimum	*	*	*	0.668	*	7.473	*	*	*	56	54	47	*	*	*	7.32	7.00	6.82

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Outfall 801 - Combined Discharges

Date	FLOW		ALUMINUM		ARSENIC		BARIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	GPM	MGD	MG/L	POUNDS^	MG/L	POUNDS	MG/L	POUNDS
7	15,047	21.668	1.56	80	<0.002	0	0.45	81
13	6,949	10.008	1.96	12	NM	-	NM	-
19	7,357	10.595	2.45	67	NM	-	NM	-
24	11,457	16.499	2.58	53	NM	-	NM	-
Permit Limit			3.5 Avg 5.2 Max	432 Avg 650 Max	0.07 Avg 0.11 Max	17.56 Avg 26.50 Max	None	None
Average	10,203	14.693	2.14	53	NA	0.00	NA	81
Maximum	15,047	21.668	2.58	80	<0.002	0.00	0.450	81
Minimum	6,949	10.008	1.56	12	<0.002	0.00	0.450	81
Date	CADMIUM		CHROMIUM		COPPER		CYANIDE	
	Sample 1\month - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
7	<0.005	0	<0.05	0	0.036	6.5	<0.005	0
13	NM	-	<0.05	0	NM	-	0.005	0.4
19	NM	-	<0.05	0	NM	-	0.006	0.5
24	NM	-	<0.05	0	NM	-	0.007	0.9
Permit Limit	0.20 Avg 0.30 Max	49.50 Avg 74.45 Max	0.16 Avg 0.24 Max	34 Avg 59 Max	0.15 Avg 0.23 Max	37.60 Avg 56.39 Max	0.12 Avg 0.18 Max	23 Avg 45 Max
Average	NA	0.00	NA	0.00	0.036	6.50	NA	0.45
Maximum	<0.005	0.00	<0.05	0.00	0.036	6.50	0.007	0.90
Minimum	<0.005	0.00	<0.05	0.00	0.036	6.50	<0.005	0.00
Date	FLUORIDE		LEAD		MERCURY		NICKEL	
	Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
7	0.15	28.5	<0.1	0	<0.0002	0	<0.04	0
13	NM	-	NM	-	NM	-	NM	-
19	NM	-	NM	-	NM	-	NM	-
24	NM	-	NM	-	NM	-	NM	-
Permit Limit	None	None	0.53 Avg 0.80 Max	132 Avg 198 Max	.0010 Avg .0016 Max	0.26 Avg 0.40 Max	13.50 Avg 20.20 Max	3337 Avg 5004 Max
Average	0.15	28.5	NA	0	NA	0	NA	0
Maximum	0.15	28.5	<0.1	0	<0.0002	0	<0.04	0
Minimum	0.15	28.5	<0.1	0	<0.0002	0	<0.04	0

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Outfall 801 - Combined Discharges

Date	OIL & GREASE		PCBs		PHENOLS		SELENIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS^	PPB	POUNDS	MG/L	POUNDS	MG/L	POUNDS
7	1.46	264	1.03	0	0.074	13.36	<0.002	0
13	1.50	125	<0.5	0	NM	-	NM	-
19	4.47	41	<0.5	0.017	NM	-	NM	-
24	<1	17	<0.5	0.005	NM	-	NM	-
Permit Limit	None	5,010 Avg 8,350 Max	.00003 mg/l or <0.5 PPB	None	10.40 Avg 15.60 Max	257 Avg 385 Max	0.47 Avg 0.70 Max	116 Avg 174 Max
Average	1.85	112	NA	0.0055	0.074	13.36	NA	0
Maximum	4.47	264	1.03	0.017	0.074	13.36	<0.002	0
Minimum	<1	17	<0.5	0	0.074	13.36	<0.002	0

Date	SILVER		TETRACHLOROETHYLENE		SUSPENDED SOLIDS		ZINC	
	Sample 1\week - grab		Sample 2\month - grab		Sample 1\week - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS^	MG/L	POUNDS^
7	<0.01	0	0.02	1.71	16.1	0	0.012	0.47
13	<0.01	0	NA	-	18.5	294	0.04	0.58
19	<0.01	0	0.012	1.1	20.6	226	0.031	0.76
24	<0.01	0	NM	-	18.3	320	0.035	1.16
Permit Limit	0.18 Avg 0.26 Max	43.78 Avg 65.54 Max	None	1.80 Max	None	8,140 Avg 17,117 Max	1.34 Avg 2.00 Max	113 Avg 270 Max
Average	NA	0	0.016	1.405	18.375	210	0.0295	0.7425
Maximum	<0.01	0	0.02	1.71	20.6	320	0.04	1.16
Minimum	<0.01	0	0.012	1.1	16.1	0	0.012	0.47

SYMBOL

DESCRIPTION

- NM Indicates that a sample was not collected.
- NA Not Applicable; either average values are not appropriate because of less than values or an average value for that parameter is not meaningful.
- * Indicates that there was no flow in the outfall at the time samples were collected.
- < Less than the value (detection limit) reported.
- NS Not sampled due to flood.
- ^ The reported mass values are net addition numbers.

Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 March, 1993

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Submitted by: Mary Scott Wall
Mary Scott Wall, Works Manager

River Water Intake						
Date	TOTAL SUSP. SOLIDS MG/L	ALUMINUM MG/L	CHROMIUM MG/L	CYANIDE MG/L	OIL & GREASE MG/L	ZINC MG/L
3	12	1.7	<0.05	<0.005	<1	0.028
9	12	1.3	<0.05	<0.005	<1	0.17
15	9	1.0	<0.05	<0.005	4	0.058
21	16	1.4	<0.05	<0.005	<1	0.007
27	8	1.1	<0.05	<0.005	<1	0.017
Average	11.4	1.3	NA	NA	NA	0.056
Maximum	16	1.7	<0.05	<0.005	4.000	0.170
Minimum	8	1.0	<0.05	<0.005	<1	0.007

Discharge Water - Outfall Specific Parameters																		
Date	FLOW (MGD)						TEMPERATURE (°F)						pH					
	Measure 1\week						Measure 1\week						Sample 1\week - grab					
	001	002	003	004	005	006	001	002	003	004	005	006	001	002	003	004	005	006
3	*	*	*	7.626	*	14.727	*	*	*	57	*	62	*	*	*	6.75	*	7.16
9	*	*	*	1.958	*	17.326	*	*	*	65	*	60	*	*	*	7.57	*	7.32
15	*	*	*	3.090	*	15.415	*	*	*	66	*	64	*	*	*	7.55	*	7.02
21	*	*	*	2.167	*	17.909	*	*	*	64	*	61	*	*	*	6.88	*	6.80
27	*	*	*	0	*	8.354	*	*	*	*	*	66				*		6.57
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	NA	NA	14.746	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	7.626	*	17.909	*	*	*	66	*	66	*	*	*	7.57	*	7.32
Minimum	*	*	*	0.000	*	8.354	*	*	*	57	*	60	*	*	*	6.75	*	6.57

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Outfall 801 - Combined Discharges

Date	FLOW		ALUMINUM		ARSENIC		BARIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	GPM	MGD	MG/L	POUNDS^	MG/L	POUNDS	MG/L	POUNDS
3	15,522	22.353	2.5	152	<0.002	0	0.204	38
9	13,391	19.284	1.9	95	NM	-	0.193	31
15	12,850	18.505	1.1	15	NM	-	0.117	18
21	13,941	20.076	1.2	2	NM	-	0.532	89
27	5,801	8.354	1.3	14			0.300	21
Permit Limit			3.5 Avg 5.2 Max	432 Avg 650 Max	0.07 Avg 0.11 Max	17.56 Avg 26.50 Max	None	None
Average	12,301	17.714	1.60	56	NA	0.00	0.269	39
Maximum	15,522	22.353	2.50	152	<0.002	0.00	0.532	89
Minimum	5,801	8.354	1.10	2	<0.002	0.00	0.117	18

Date	CADMIUM		CHROMIUM		COPPER		CYANIDE	
	Sample 1\month - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
3	<0.005	0	<0.05	0	<0.02	2.5	<0.005	0
9	NM	-	<0.05	0	NM	-	<0.005	0
15	NM	-	<0.05	0	NM	-	<0.005	0
21	NM	-	<0.05	0	NM	-	<0.005	0
27	NM		<0.05	0	NM		<0.005	0
Permit Limit	0.20 Avg 0.30 Max	49.50 Avg 74.45 Max	0.16 Avg 0.24 Max	34 Avg 59 Max	0.15 Avg 0.23 Max	37.60 Avg 56.39 Max	0.12 Avg 0.18 Max	23 Avg 45 Max
Average	NA	0.00	NA	0.00	NA	2.50	NA	0.00
Maximum	<0.005	0.00	<0.05	0.00	<0.02	2.50	<0.005	0.00
Minimum	<0.005	0.00	<0.05	0.00	<0.02	2.50	<0.005	0.00

Date	FLUORIDE		LEAD		MERCURY		NICKEL	
	Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
3	0.21	38.5	<0.1	0	<0.0002	0	<0.04	0
9	NM	-	NM	-	NM	-	NM	-
15	NM	-	NM	-	NM	-	NM	-
21	NM	-	NM	-	NM	-	NM	-
27	NM	-	NM	-	NM	-	NM	-
Permit Limit	None	None	0.53 Avg 0.80 Max	132 Avg 198 Max	.0010 Avg .0016 Max	0.26 Avg 0.40 Max	13.50 Avg 20.20 Max	3337 Avg 5004 Max
Average	0.21	38.5	NA	0	NA	0	NA	0
Maximum	0.21	38.5	<0.1	0	<0.0002	0	<0.04	0
Minimum	0.21	38.5	<0.1	0	<0.0002	0	<0.04	0

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Outfall 801 - Combined Discharges

Date	OIL & GREASE		PCBs		PHENOLS		SELENIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS^	PPB	POUNDS	MG/L	POUNDS	MG/L	POUNDS
3	6	1173	<0.5	0	0.019	3.45	<0.002	0
9	1.9	305	<0.5	0.462	NM	-	NM	-
15	5.0	154	<0.5	0	NM	-	NM	-
21	1.8	298	<0.5	0	NM	-	NM	-
27	3.0	209	<0.5	0	NM	-	NM	-
Permit Limit	None	5,010 Avg 8,350 Max	.00003 mg/l or <0.5 PPB	None	10.40 Avg 15.60 Max	257 Avg 385 Max	0.47 Avg 0.70 Max	116 Avg 174 Max
Average	3.60	428	NA	0.0924	0.019	3.45	NA	0
Maximum	6.30	1173	<0.5	0.462	0.019	3.45	<0.002	0
Minimum	1.80	154	<0.5	0	0.019	3.45	<0.002	0

Date	SILVER		TETRACHLOROETHYLENE		SUSPENDED SOLIDS		ZINC	
	Sample 1\week - grab		Sample 2\month - grab		Sample 1\week - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS^	MG/L	POUNDS^
3	0.05	8.6	0.045	7.56	15.8	699	0.027	0.7
9	<0.01	0	NM	-	28.7	2681	0.041	0
15	<0.01	0	<0.005	0.72	13	618	0.03	0
21	<0.01	0	NM	-	15.4	54	0.014	1.22
27	<0.01	0	<0.005	0	12	278	0.019	0.1
Permit Limit	0.18 Avg 0.26 Max	43.78 Avg 65.54 Max	None	1.80 Max	None	8,140 Avg 17,117 Max	1.34 Avg 2.00 Max	113 Avg 270 Max
Average	NA	1.72	NA	2.76	16.98	866	0.0262	0.404
Maximum	0.05	8.6	0.045	7.56	28.7	2681	0.041	1.22
Minimum	<0.01	0	<0.005	0	12	54	0.014	0.00

SYMBOL

DESCRIPTION

- NM Indicates that a sample was not collected.
- NA Not Applicable; either average values are not appropriate because of less than values or an average value for that parameter is not meaningful.
- * Indicates that there was no flow in the outfall at the time samples were collected.
- < Less than the value (detection limit) reported.
- NS Not sampled due to flood.
- ^ The reported mass values are net addition numbers.

Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 April, 1993

Report Prepared by: Patricia Jackson, Environmental Specialist, Remediation & Water

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Submitted by: Mary Scott Wall
Mary Scott Wall, Works Manager

River Water Intake						
Date	TOTAL SUSP. SOLIDS MG/L	ALUMINUM MG/L	CHROMIUM MG/L	CYANIDE MG/L	OIL & GREASE MG/L	ZINC MG/L
6	7	1.4	<0.05	<0.005	<1	0.016
12	12	1.6	<0.05	.006	1	0.039
18	13	1.6	<0.05	<0.005	<1	0.022
24	12	1.8	<0.05	.009	<1	0.016
Average	11.0	1.6	NA	NA	NA	0.023
Maximum	13	1.8	<0.05	.009	1.000	0.039
Minimum	7	1.4	<0.05	<0.005	<1	0.016

Discharge Water - Outfall Specific Parameters																		
Date	FLOW (MGD)						TEMPERATURE (°F)						pH					
	Measure 1\week						Measure 1\week						Sample 1\week - grab					
	001	002	003	004	005	006	001	002	003	004	005	006	001	002	003	004	005	006
6	*	*	*	7.498	*	23.470	*	*	*	65	54	65	*	*	*	7.07	*	6.68
12	*	*	*	2.439	*	22.433	*	*	*	60	*	50	*	*	*	6.88	*	6.78
18	*	*	*	0.000	*	14.736	*	*	*	*	*	57	*	*	*	*	*	6.67
24	*	*	*	0.000	*	9.437	*	*	*	*	*	62	*	*	*	*	*	7.05
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	NA	NA	17.519	NA	NA	NA	NA	54	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	7.498	*	23.470	*	*	*	65	54	65	*	*	*	7.07	*	7.05
Minimum	*	*	*	0.000	*	9.437	*	*	*	60	54	50	*	*	*	6.88	*	6.67

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

April, 1993

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Outfall 801 - Combined Discharges

Date	FLOW		ALUMINUM		ARSENIC		BARIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	GPM	MGD	MG/L	POUNDS^	MG/L	POUNDS	MG/L	POUNDS
6	21,504	30.968	1.77	97	<0.002	0	1.43	368
12	17,272	24.872	1.63	6	NM	-	0.51	105
18	10,233	14.736	1.4	0	NM	-	0.5	61
24	6,553	9.437	1.8	0	NM	-	1.8	47
Permit Limit			3.5 Avg 5.2 Max	432 Avg 650 Max	0.07 Avg 0.11 Max	17.56 Avg 26.50 Max	None	None
Average	13,891	20.003	1.65	26	NA	0.00	1.060	145
Maximum	21,504	30.968	1.80	97	<0.002	0.00	1.800	368
Minimum	6,553	9.437	1.40	0	<0.002	0.00	0.500	47
Date	CADMIUM		CHROMIUM		COPPER		CYANIDE	
	Sample 1\month - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
6	<0.005	0	0.059	15.4	0.025	6.4	0.007	1.8
12	NM	-	<0.05	0	NM	-	0.011	2.2
18	NM	-	<0.05	0	NM	-	0.01	1.2
24	NM	-	<0.05	0	NM	-	0.005	0.4
Permit Limit	0.20 Avg 0.30 Max	49.50 Avg 74.45 Max	0.16 Avg 0.24 Max	34 Avg 59 Max	0.15 Avg 0.23 Max	37.60 Avg 56.39 Max	0.12 Avg 0.18 Max	23 Avg 45 Max
Average	NA	0.00	NA	3.85	0.025	6.40	0.008	1.40
Maximum	<0.005	0.00	0.059	15.40	0.025	6.40	0.011	2.20
Minimum	<0.005	0.00	<0.05	0.00	0.025	6.40	0.005	0.40
Date	FLUORIDE		LEAD		MERCURY		NICKEL	
	Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
6	0.14	36.6	0.399	103	<0.0002	0	<0.04	0
12	NM	-	NM	-	NM	-	NM	-
18	NM	-	NM	-	NM	-	NM	-
24	NM	-	NM	-	NM	-	NM	-
Permit Limit	None	None	0.53 Avg 0.80 Max	132 Avg 198 Max	.0010 Avg .0016 Max	0.26 Avg 0.40 Max	13.50 Avg 20.20 Max	3337 Avg 5004 Max
Average	0.142	36.6	0.399	103	NA	0	NA	0
Maximum	0.142	36.6	0.399	103	<0.0002	0	<0.04	0
Minimum	0.142	36.6	0.399	103	<0.0002	0	<0.04	0

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

April, 1993

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Outfall 801 - Combined Discharges

Date	OIL & GREASE		PCBs		PHENOLS		SELENIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS^	PPB	POUNDS	MG/L	POUNDS	MG/L	POUNDS
6	6.50	1690	1.744	0.45	19.31	412	<0.002	0
12	<1	142	<0.5	0	NM	-	NM	-
18	7.00	860	<0.5	0	NM	-	NM	-
24	1.00	79	<0.5	0	NM	-	NM	-
Permit Limit	None	5,010 Avg 8,350 Max	.00003 mg/l or <0.5 PPB	None	10.40 Avg 15.60 Max	257 Avg 385 Max	0.47 Avg 0.70 Max	116 Avg 174 Max
Average	NA	693	NA	0.1125	19.31	412	NA	0
Maximum	7.00	1690	1.744	0.45	19.31	412	<0.002	0
Minimum	<1	79	<0.5	0	19.31	412	<0.002	0

Date	SILVER		TETRACHLOROETHYLENE		SUSPENDED SOLIDS		ZINC	
	Sample 1\week - grab		Sample 2\month - grab		Sample 1\week - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS^	MG/L	POUNDS^
6	<0.01	0	0.009	2.37	23.5	4209	0.009	0
12	<0.01	0	NM	-	12.3	61	0.05	2.62
18	<0.01	0	0	0	15	246	0.015	0
24	<0.01	0	NM	-	13	79	0.011	0
Permit Limit	0.18 Avg 0.26 Max	43.78 Avg 65.54 Max	None	1.80 Max	None	8,140 Avg 17,117 Max	1.34 Avg 2.00 Max	113 Avg 270 Max
Average	NA	0	0.0045	1.185	15.95	1148.75	0.02125	0.655
Maximum	<0.01	0	0.009	2.37	23.5	4209	0.05	2.62
Minimum	<0.01	0	0	0	12.3	61	0.009	0.00

SYMBOL

DESCRIPTION

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Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 May, 1993

Report Prepared by: Patricia Jackson, Environmental Specialist, Remediation & Water

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Submitted by: Mary Scott Wall
Mary Scott Wall, Works Manager

River Water Intake						
Date	TOTAL SUSP. SOLIDS MG/L	ALUMINUM MG/L	CHROMIUM MG/L	CYANIDE MG/L	OIL & GREASE MG/L	ZINC MG/L
8	13	1.5	<0.05	<0.005	<1	0.033
14	12	1.4	<0.05	<0.005	<1	0.041
20	12	1.1	<0.05	<0.005	2	0.007
26	14	1.1	<0.05	<0.005	<1	0.013
Average	12.8	1.3	NA	NA	NA	0.024
Maximum	14	1.5	<0.05	<0.005	2.000	0.041
Minimum	12	1.1	<0.05	<0.005	<1	0.007

Discharge Water - Outfall Specific Parameters																		
Date	FLOW (MGD)						TEMPERATURE (°F)						pH					
	Measure 1\week						Measure 1\week						Sample 1\week - grab					
	001	002	003	004	005	006	001	002	003	004	005	006	001	002	003	004	005	006
8	*	*	*	2.066	*	22.157	*	*	*	66	54	74	*	*	*	7.20	*	7.00
14	*	*	*	3.892	*	19.563	*	*	*	64	*	77	*	*	*	7.19	*	7.15
20	*	*	*	3.637	*	21.455	*	*	*	63	*	79	*	*	*	7.40	*	7.29
26	*	*	*	2.414	*	17.706	*	*	*	58	*	67	*	*	*	7.55	*	7.07
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	NA	NA	20.220	NA	NA	NA	NA	54	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	3.892	*	22.157	*	*	*	66	54	79	*	*	*	7.55	*	7.29
Minimum	*	*	*	2.066	*	17.706	*	*	*	58	54	67	*	*	*	7.19	*	7.00

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

May, 1993

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Outfall 801 - Combined Discharges

Date	FLOW		ALUMINUM		ARSENIC		BARIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	GPM	MGD	MG/L	POUNDS^	MG/L	POUNDS	MG/L	POUNDS
8	16,820	24.223	5.1	640	<0.002	0	0.4	83
14	16,287	23.455	1.4	16	NM	-	0.3	62
20	17,425	25.092	1.3	42	NM	-	0.2	45
26	13,971	20.120	1.2	22	NM	-	0.2	34
Permit Limit			3.5 Avg 5.2 Max	432 Avg 650 Max	0.07 Avg 0.11 Max	17.56 Avg 26.50 Max	None	None
Average	16,126	23.223	2.25	180	NA	0.00	0.275	56
Maximum	17,425	25.092	5.10	640	<0.002	0.00	0.400	83
Minimum	13,971	20.120	1.20	16	<0.002	0.00	0.200	34
Date	CADMIUM		CHROMIUM		COPPER		CYANIDE	
	Sample 1\month - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
8	0.008	1.63	<0.05	0	<0.02	0	<0.005	0.3
14	NM	-	<0.05	0	NM	-	<0.005	0.2
20	NM	-	<0.05	0	NM	-	0.005	1.2
26	NM	-	<0.05	0	NM	-	0.01	1.8
Permit Limit	0.20 Avg 0.30 Max	49.50 Avg 74.45 Max	0.16 Avg 0.24 Max	34 Avg 59 Max	0.15 Avg 0.23 Max	37.60 Avg 56.39 Max	0.12 Avg 0.18 Max	23 Avg 45 Max
Average	0.008	1.63	NA	0.00	NA	0.00	NA	0.88
Maximum	0.008	1.63	<0.05	0.00	<0.02	0.00	0.010	1.80
Minimum	0.008	1.63	<0.05	0.00	<0.02	0.00	<0.005	0.20
Date	FLUORIDE		LEAD		MERCURY		NICKEL	
	Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
8	0.15	30.6	<0.1	0	<0.0002	0	<0.04	0
14	NM	-	NM	-	NM	-	NM	-
20	NM	-	NM	-	NM	-	NM	-
26	NM	-	NM	-	NM	-	NM	-
Permit Limit	None	None	0.53 Avg 0.80 Max	132 Avg 198 Max	.0010 Avg .0016 Max	0.26 Avg 0.40 Max	13.50 Avg 20.20 Max	3337 Avg 5004 Max
Average	0.150	30.6	NA	0	NA	0	NA	0
Maximum	0.150	30.6	<0.1	0	<0.0002	0	<0.04	0
Minimum	0.150	30.6	<0.1	0	<0.0002	0	<0.04	0

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

May, 1993

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Outfall 801 - Combined Discharges

Date	OIL & GREASE		PCBs		PHENOLS		SELENIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS^	PPB	POUNDS	MG/L	POUNDS	MG/L	POUNDS
8	<1	0	<0.2	0.144	21.39	562	<0.002	0
14	<1	0	<0.2	0	NM	-	NM	-
20	<1	30	<0.2	0	NM	-	NM	-
26	<1	0	<0.2	0	NM	-	NM	-
Permit Limit	None	5,010 Avg 8,350 Max	.00003 mg/l or <0.5 PPB	None	10.40 Avg 15.60 Max	257 Avg 385 Max	0.47 Avg 0.70 Max	116 Avg 174 Max
Average	NA	7.5	NA	0.036	21.39	562	NA	0
Maximum	<1	30	<0.2	0.144	21.39	562	<0.002	0
Minimum	<1	0	<0.2	0	21.39	562	<0.002	0
Date	SILVER		TETRACHLOROETHYLENE		SUSPENDED SOLIDS		ZINC	
	Sample 1\week - grab		Sample 2\month - grab		Sample 1\week - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS^	MG/L	POUNDS^
8	<0.01	0	NM	-	18.7	21,394	0.035	0.47
14	<0.01	0	<0.005	0.52	14.5	487	0.043	0.52
20	<0.01	0	NM	-	12.9	28,761	0.019	2.41
26	<0.01	0	<0.005	0.26	12.4	20	0.017	0.74
Permit Limit	0.18 Avg 0.26 Max	43.78 Avg 65.54 Max	None	1.80 Max	None	8,140 Avg 17,117 Max	1.34 Avg 2.00 Max	113 Avg 270 Max
Average	NA	0	NA	0.39	14.625	12,666	0.0285	1.035
Maximum	<0.01	0	<0.005	0.52	18.7	28,761	0.043	2.41
Minimum	<0.01	0	<0.005	0.26	12.4	20	0.017	0.47

SYMBOL

DESCRIPTION

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Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 June, 1993

Report Prepared by: Patricia Jackson, Environmental Specialist, Remediation & Water

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Submitted by: Mary Scott Wall
Mary Scott Wall, Works Manager

River Water Intake						
Date	TOTAL SUSP. SOLIDS MG/L	ALUMINUM MG/L	CHROMIUM MG/L	CYANIDE MG/L	OIL & GREASE MG/L	ZINC MG/L
4	20	1.6	<0.05	<0.005	<1	0.015
12	7	1.0	<0.05	<0.005	<1	0.03
17	12	0.8	<0.05	<0.005	<1	<.005
23	8	0.9	<0.05	<0.005	<1	<.005
Average	11.8	1.075	NA	NA	NA	0.023
Maximum	20	1.6	<0.05	<0.005	<1	0.030
Minimum	7	0.8	<0.05	<0.005	<1	.015

Discharge Water - Outfall Specific Parameters																		
Date	FLOW (MGD)						TEMPERATURE (°F)						pH					
	Measure 1\week						Measure 1\week						Sample 1\week - grab					
	001	002	003	004	005	006	001	002	003	004	005	006	001	002	003	004	005	006
4	*	*	*	3.747	*	14.869	*	*	*	74	*	77	*	*	*	7.08	*	6.98
12	*	*	*	*	*	5.554	*	*	*	*	*	77	*	*	*	*	*	7.16
17	*	*	*	3.884	*	26.640	*	*	*	80	*	87	*	*	*	7.50	*	7.45
23	*	*	*	4.435	*	17.091	*	*	*	68	*	78	*	*	*	7.10	*	7.03
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	NA	NA	16.039	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	4.435	*	26.640	*	*	*	80	*	87	*	*	*	7.50	*	7.45
Minimum	*	*	*	3.747	*	5.554	*	*	*	68	*	77	*	*	*	7.08	*	6.98

Hawkeye Aluminum Company (HALCO)
Davenport Works
NPDES Monthly Report
Permit No. 7167099
June, 1993

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Outfall 801 - Combined Discharges

Date	FLOW		ALUMINUM		ARSENIC		BARIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	GPM	MGD	MGL	POUNDS^	MGL	POUNDS	MGL	POUNDS
4	12,928	18.616	1.4	37	<0.002	0	<0.1	0
12	3,857	5.554	0.7	0	NM	-	<0.1	0
17	21,197	30.524	1.8	245	NM	-	0.2	44.4
23	14,949	21.527	0.7	0	NM	-	<0.1	0
Permit Limit			3.5 Avg 5.2 Max	432 Avg 650 Max	0.07 Avg 0.11 Max	17.56 Avg 26.50 Max	None	None
Average	13,233	19.055	1.15	71	NA	0.00	NA	11.1
Maximum	21,197	30.524	1.80	245	<0.002	0.00	0.200	44.4
Minimum	3,857	5.554	0.70	0	<0.002	0.00	<0.1	0
Date	CADMIUM		CHROMIUM		COPPER		CYANIDE	
	Sample 1\month - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\week - grab	
	MGL	POUNDS	MGL	POUNDS	MGL	POUNDS	MGL	POUNDS
4	<0.005	0	<0.05	0	<0.02	0.9	<0.005	0.34
12	NM	-	<0.05	0	NM	-	<0.005	0
17	NM	-	<0.05	0	NM	-	<0.005	0
23	NM	-	<0.05	0	NM	-	<0.005	0
Permit Limit	0.20 Avg 0.30 Max	49.50 Avg 74.45 Max	0.16 Avg 0.24 Max	34 Avg 59 Max	0.15 Avg 0.23 Max	37.60 Avg 56.39 Max	0.12 Avg 0.18 Max	23 Avg 45 Max
Average	NA	0.00	NA	0.00	NA	0.90	NA	0.09
Maximum	<0.005	0.00	<0.05	0.00	<0.02	0.90	<0.005	0.34
Minimum	<0.005	0.00	<0.05	0.00	<0.02	0.90	<0.005	0.00
Date	FLUORIDE		LEAD		MERCURY		NICKEL	
	Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab		Sample 1\month - grab	
	MGL	POUNDS	MGL	POUNDS	MGL	POUNDS	MGL	POUNDS
4	0.19	29.2	0.1	15.5	<0.0002	0	<0.04	0
12	NM	-	NM	-	NM	-	NM	-
17	NM	-	NM	-	NM	-	NM	-
23	NM	-	NM	-	NM	-	NM	-
Permit Limit	None	None	0.53 Avg 0.80 Max	132 Avg 198 Max	.0010 Avg .0016 Max	0.26 Avg 0.40 Max	13.50 Avg 20.20 Max	3337 Avg 5004 Max
Average	0.188	29.2	0.1	15.5	NA	0	NA	0
Maximum	0.188	29.2	0.1	15.5	<0.0002	0	<0.04	0
Minimum	0.188	29.2	0.1	15.5	<0.0002	0	<0.04	0

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Outfall 801 - Combined Discharges

Date	OIL & GREASE		PCBs		PHENOLS		SELENIUM	
	Sample 1\week - grab		Sample 1\week - grab		Sample 1\month - grab		Sample 1\month - grab	
	MG/L	POUNDS^	PPB	POUNDS	MG/L	POUNDS	MG/L	POUNDS
4	<1	0	<0.2	0	0.005	0.28	<0.002	0
12	<1	0	<0.2	0	NM	-	NM	-
17	<1	97	<0.2	0	NM	-	NM	-
23	2.2	396	<0.2	0	NM	-	NM	-
Permit Limit	None	5,010 Avg 8,350 Max	.00003 mg/l or <0.5 PPB	None	10.40 Avg 15.60 Max	257 Avg 385 Max	0.47 Avg 0.70 Max	116 Avg 174 Max
Average	NA	123	NA	0	NA	0.28	NA	0
Maximum	2.2	396	<0.2	0	0.005	0.28	<0.002	0
Minimum	<1	0	<0.2	0	0.005	0.28	<0.002	0

Date	SILVER		TETRACHLOROETHYLENE		SUSPENDED SOLIDS		ZINC	
	Sample 1\week - grab		Sample 2\month - grab		Sample 1\week - grab		Sample 1\week - grab	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS^	MG/L	POUNDS^
4	<0.01	0	NM	-	45	18,932	0.015	0.69
12	<0.01	0	0.005	0.23	8	46	0.019	0
17	<0.01	0	NM	-	14	416	0.045	11.54
23	<0.01	1.42	0.01	1.53	8	74	0.134	24.05
Permit Limit	0.18 Avg 0.26 Max	43.78 Avg 65.54 Max	None	1.80 Max	None	8,140 Avg 17,117 Max	1.34 Avg 2.00 Max	113 Avg 270 Max
Average	NA	0.355	0.0075	0.88	18.75	4,867	0.05325	9.07
Maximum	<0.01	1.42	0.01	1.53	45	18,932	0.134	24.05
Minimum	<0.01	0	0.005	0.23	8	46	0.015	0

SYMBOL

DESCRIPTION

- NM Indicates that a sample was not collected.
- NA Not Applicable; either average values are not appropriate because of less than values or an average value for that parameter is not meaningful.
- * Indicates that there was no flow in the outfall at the time samples were collected.
- < Less than the value (detection limit) reported.
- NS Not sampled due to flood.
- ^ The reported mass values are net addition numbers.