

Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 July, 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
7	6	1.1	<0.05	<0.005	<1	0.017
12	8	0.7	<0.05	<0.005	<1	0.009
20	15	0.9	<0.05	<0.005	<1	0.023
24	10	0.9	<0.05	<0.005	1	<.005
Average	9.8	.900	NA	NA	.250	0.016
Maximum	15	1.1	<0.05	<0.005	1.000	0.023
Minimum	6	0.7	<0.05	<0.005	<1	<.005

Discharge Water - Outfall Specific Parameters																		
Date	FLOW (MGD)						TEMPERATURE (°F)						pH					
	Measure 1week						Measure 1week						Sample 1week - grab					
	001	002	003	004	005	006	001	002	003	004	005	006	001	002	003	004	005	006
7	*	*	*	4.062	*	22.442	*	*	*	78	*	80	*	*	*	7.76	*	7.33
12	*	*	*	6.345	*	32.220	*	*	*	74	*	84	*	*	*	8.04	*	7.70
20	*	*	*	6.647	*	16.825	*	*	*	73	*	80	*	*	*	7.77	*	7.75
24	*	*	*	5.396	*	20.148	*	*	*	79	*	87	*	*	*	7.84	*	7.84
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	5.613	NA	22.909	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	6.647	*	32.220	*	*	*	79	*	87	*	*	*	8.04	*	7.84
Minimum	*	*	*	4.062	*	16.825	*	*	*	73	*	80	*	*	*	7.76	*	7.33

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

July, 1993

Page 2 of 3

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	18,406	26.505	1.2	37	<0.002	0	0.1	22.1
12	26,781	38.565	1.5	242	NM	-	0.1	32.1
20	16,300	23.472	1	28	NM	-	0.2	33.6
24	17,739	25.544	1.3	84	NM	-	0.1	25.8
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	19,807	28.522	1.25	98	NA	0.00	0.13	28.4
Maximum	26,781	38.565	1.50	242	<0.002	0.00	0.20	33.6
Minimum	16,300	23.472	1.00	28	<0.002	0.00	0.10	22.10
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	<0.02	0	<0.005	0
12	NM	-	<0.05	0	NM	-	<0.005	0
20	NM	-	<0.05	0	NM	-	<0.005	0
24	NM	-	<0.05	0	NM	-	<0.005	0.27
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	0.00	NA	0.07
Maximum	<0.005	0.00	<0.05	0.00	<0.02	0.00	<0.005	0.27
Minimum	<0.005	0.00	<0.05	0.00	<0.02	0.00	<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	0.18	40.4	<0.1	0	<0.0002	0	<0.04	0
12	NM	-	NM	-	NM	-	NM	-
20	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	0.183	40.4	NA	0	NA	0	NA	0
Maximum	0.183	40.4	<0.1	0	<0.0002	0	<0.04	0
Minimum	0.183	40.4	<0.1	0	<0.0002	0	<0.04	0

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

July, 1993

Page 3 of 3

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	0	<0.2	0	0.047	10.32	<0.002	0
12	1.2	374	<0.2	0	NM	-	NM	-
20	<1	140	<0.2	0	NM	-	NM	-
24	<1	45	<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	0.3	140	NA	0	0.047	10.32	NA	0
Maximum	1.2	374	<0.2	0	0.047	10.32	<0.002	0
Minimum	<1	0	<0.2	0	0.047	10.32	<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	2.89	<0.005	1.08	5	135	0.021	0.94
12	<0.01	0	NM		41	10,630	0.009	0.54
20	<0.01	0	0.013	3.23	11	0	0.011	0
24	<0.01	0	NM		8	180	0.009	1.83
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	0.025	0.7225	0.065	2.155	16.25	2,736	0.0125	0.8275
Maximum	0.01	2.89	0.013	3.23	41	10,630	0.021	1.83
Minimum	<0.01	0	<0.005	1.08	5	0	0.009	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.

Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 August, 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
2	12	0.8	0.08	<0.005	<1	<.005
10	7	0.7	0.05	<0.005	2	<.005
15	8	0.7	0.09	<0.005	<1	0.009
21	12	0.9	0.12	<0.005	<1	<.005
27	6	0.7	0.08			
Average	9.0	.760	.084	NA	NA	NA
Maximum	12	0.9	.120	<0.005	2.000	0.009
Minimum	6	0.7	.050	<0.005	<1	<.005

Discharge Water - Outfall Specific Parameters																		
Date	FLOW (MGD)						TEMPERATURE (°F)						pH					
	Measure 1week						Measure 1week						Sample 1week - grab					
	001	002	003	004	005	006	001	002	003	004	005	006	001	002	003	004	005	006
2	*	*	*	7.178	*	18.203	*	*	*	62	*	83	*	*	*	7.46	*	6.90
10	*	*	*	9.599	*	24.115	*	*	*	77	*	79	*	*	*	7.49	*	6.92
15	*	*	*	10.67	*	22.230	*	*	*	75	*	84	*	*	*	7.60	*	7.00
21	*	*	*	5.716	.055	26.786	*	*	*	72	74	86	*	*	*	7.86	8.71	7.36
27				4.152		19.560				76		80				7.75	*	7.67
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	NA	.055	22.179	NA	NA	NA	72	74	82	NA	NA	NA	7.63	8.71	7.17
Maximum	*	*	*	10.67	.055	26.786	*	*	*	77	74	86	*	*	*	7.86	8.71	7.67
Minimum	*	*	*	4.152	.055	18.203	*	*	*	62	74	79	*	*	*	7.46	8.71	6.90

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

Page 2 of 3

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
2	17,626	25.381	1.1	84	<0.002	0	0.2	42
10	23,411	33.714	0.6	24	NM	-	0.2	56
15	22,843	32.896	0.6	9	NM	-	0.2	55
21	22,609	32.557	0.7	5	NM	-	0.1	32
27	16,467	23.712	0.5	0			0.200	40
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	20,591	29.652	0.70	24	NA	0.00	0.180	45.0
Maximum	23,411	33.714	1.10	84	<0.002	0.00	0.200	56.0
Minimum	16,467	23.712	0.50	0	<0.002	0.00	0.100	32
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
2	<0.005	0	<0.05	3.6	<0.02	1.8	<0.005	0.5
10	NM	-	0.06	17.7	NM	-	<0.005	1.2
15	NM	-	0.08	32	NM	-	<0.005	1
21	NM	-	<0.05	0	NM	-	<0.005	0.34
27	NM	-	0.07	13.8	NM	-	<0.005	0.2
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	0.07	13.42	NA	1.80	NA	0.65
Maximum	<0.005	0.00	0.08	32.00	<0.02	1.80	<0.005	1.20
Minimum	<0.005	0.00	<0.05	0.00	<0.02	1.80	<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
2	0.19	40.8	<0.1	0	<0.0002	0	<0.04	2.4
10	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	0.190	40.8	NA	0	NA	0	NA	2.4
Maximum	0.190	40.8	<0.1	0	<0.0002	0	<0.04	2.4
Minimum	0.190	40.8	<0.1	0	<0.0002	0	<0.04	2.4

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

August, 1993

Page 3 of 3

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
2	<1	0	<0.2	0.03	0.026	5.58	<0.002	0
10	1	320	<0.2	0	NM	-	NM	-
15	3	912	<0.2	0	NM	-	NM	-
21	5.3	1434	<0.2	0	NM	-	NM	-
27	0.5	104	<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	554	NA	0.006	0.026	5.58	NA	0
Maximum	5.3	1434	<0.2	0.03	0.026	5.58	<0.002	0
Minimum	<1	0	<0.2	0	0.026	5.58	<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^
2	<0.01	0	NM	-	9.11	299	0.028	5.98
10	<0.01	0	0.009	1.03	55.06	13,503	<0.005	1
15	<0.01	0	NM	-	7.3	178	<0.005	0
21	<0.01	0.01	0.005	1.43	9.19	0	<0.005	0
27	<0.01	0	NM	-	3.88	69	0.007	1.3
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	0.002	0.007	1.23	16.908	2810	NA	1.656
Maximum	<0.01	0.01	0.009	1.43	55.06	13,503	0.028	5.98
Minimum	<0.01	0	0.005	1.03	3.88	0	<0.005	0

SYMBOL

DESCRIPTION

- NM Indicates that a sample was not collected.
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- < Less than the value (detection limit) reported.
- NS Not sampled due to flood.
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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
4	8	1.0	<0.05	<0.005	5	0.02
10	16	1.1	<0.05	0	<1	0.026
16	11	1.0	<0.05	<0.005	<1	0.044
22	12	1.0	<0.05	<0.005	1	0.023
Average	11.8	1.025	NA	.001	3.000	0.028
Maximum	16	1.1	<0.05	.005	5.000	0.044
Minimum	8	1.0	<0.05	<0.005	<1	.020

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	*	*	*	4.049	*	25.793	*	*	*	74	*	84	*	*	*	7.45	*	7.47
10	.912	*	*	3.093	*	21.519	*	*	*	67	*	75	*	*	*	7.64	*	7.04
16	*	*	*	5.203	.996	18.186	63	*	*	77	*	80	7.68	*	*	8.03	7.73	7.73
22	*	*	*	3.554	*	24.103	*	*	*	65	*	79	*	*	*	8.02	*	7.52
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	.912	NA	NA	3.975	.996	22.400	63	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum	.912	*	*	5.203	.996	25.793	63	*	*	77	*	84	7.68	*	*	8.03	7.73	7.73
Minimum	.912	*	*	3.093	.996	18.186	63	*	*	65	*	75	7.68	*	*	7.45	7.73	7.04

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NPDES Monthly Report
Permit No. 7167099
September, 1993

Page 2 of 3

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
4	20,724	29.843	1.4	93	<0.002	0	0.1	24
10	17,725	25.524	1.2	33	NM	-	0.1	23.8
16	16,934	24.385	0.8	0	NM	-	0.1	24.7
22	19,206	27.657	1.1	20	NM	-	0.2	46.1
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	18,647	26.852	1.10	37	NA	0.00	0.13	29.7
Maximum	20,724	29.843	1.40	93	<0.002	0.00	0.20	46.1
Minimum	16,934	24.385	0.80	0	<0.002	0.00	0.10	24
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
4	<0.005	0	<0.05	0	<0.02	7.4	<0.005	0.3
10	NM	-	<0.05	0	NM	-	<0.005	0
16	NM	-	<0.05	0	NM	-	<0.005	0
22	NM	-	<0.05	0	NM	-	0.005	1.21
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	7.40	0.001	0.38
Maximum	<0.005	0.00	<0.05	0.00	<0.02	7.40	0.005	1.21
Minimum	<0.005	0.00	<0.05	0.00	<0.02	7.40	<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
4	.187	46.5	<0.1	15.5	<0.0002	0	<0.04	0
10	NM	-	NM	-	NM	-	NM	-
16	NM	-	NM	-	NM	-	NM	-
22	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	0.187	46.5	NA	15.5	NA	0	NA	0
Maximum	0.187	46.5	<0.1	15.5	<0.0002	0	<0.04	0
Minimum	0.187	46.5	<0.1	15.5	<0.0002	0	<0.04	0

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Davenport Works NPDES Monthly Report

Permit No. 7167099

September, 1993

Page 3 of 3

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	3.7	540	<0.005	0	0.031	7.76	<0.002	0
10	1.7	359	1.04	0	NM	-	NM	-
16	<1	0	<0.005	0	NM	-	NM	-
22	<1	0	<0.005	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	1.4	225	NA	0	0.031	7.76	NA	0
Maximum	3.7	540	1.04	0	0.031	7.76	<0.002	0
Minimum	<1	0	<0.005	0	0.031	7.76	<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	0.007	0.98	16	1768	0.031	2.9
10	<0.01	1.79	NM		20	921	0.048	4.79
16	<0.01	0	0.006	1.3	11	130	0.019	0
22	<0.01	0	NM		16	1034	0.054	7.1
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	0.4475	0.0065	1.14	15.75	963.25	0.038	3.6975
Maximum	<0.01	1.79	0.007	1.3	20	1768	0.054	7.1
Minimum	<0.01	0	0.006	0.98	11	130	0.019	0

SYMBOL

DESCRIPTION

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- < 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 October, 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
2	12	0.9	<0.05	<0.005	2	<.005
8	7	1.2	<0.05	<0.005	<1	0.007
14	7	1.1	<0.05	<0.005	2	<.005
20	9	1.3	<0.05	<0.005	3	<.005
26	11	1.1	0	.000	<1	<.005
Average	9.2	1.120	.000	.000	1.000	0.001
Maximum	12	1.3	<0.05	<0.005	3.000	0.007
Minimum	7	0.9	<0.05	<0.005	<1	<.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
2	*	*	*	3.900	*	18.955	*	*	*	72	*	75	*	*	*	7.39	*	7.41
8	*	*	*	8.001	*	29.244	*	*	*	65	*	75	*	*	*	7.80	*	7.33
14	*	*	*	2.451	.282	25.471	*	*	*	63	78	73	*	*	*	7.86	6.71	7.46
20	*	*	*	4.224	*	20.439	*	*	*	62	*	66	*	*	*	8.05	*	7.67
26	*	*	*	2.848	*	27.027				70		62				7.47		7.82
Permit Limit	None						110° F Maximum Apr-Oct 85° F Maximum Nov-Mar						6.0 Minimum 9.0 Maximum					
Average	NA	NA	NA	NA	.282	24.227	NA	NA	NA	NA	78	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	8.001	.282	29.244	*	*	*	72	78	75	*	*	*	8.05	6.71	7.82
Minimum	*	*	*	2.451	.282	18.955	*	*	*	62	78	62	*	*	*	7.39	6.71	7.33

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

Page 2 of 3

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
2	15,871	22.854	0.9	3	<0.002	0	<0.1	0
8	25,864	37.244	1.7	151	NM	-	<0.1	6.7
14	19,586	28.204	1.3	36	NM	-	0.2	47
20	17,127	24.663	1.8	97	NM	-	0.2	41.1
26	20,747	29.876	1.8	237			0.200	52.2
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	19,839	28.568	1.50	105	NA	0.00	0.12	29.4
Maximum	25,864	37.244	1.80	237	<0.002	0.00	0.20	52.2
Minimum	15,871	22.854	0.90	3	<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	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
2	<0.005	0	<0.05	0	<0.02	0.9	0.012	2.25
8	NM	-	<0.05	0	NM	-	<0.005	1.46
14	NM	-	<0.05	0	NM	-	<0.005	0
20	NM	-	<0.05	0	NM	-	<0.005	0
26							0.006	1.49
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	0.009	1.04
Maximum	<0.005	0.00	<0.05	0.00	<0.02	0.90	0.012	2.25
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	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
2	0.15	28.3	<0.1	0	<0.0002	0	<0.04	6.3
8	NM	-	NM	-	NM	-	NM	-
14	NM	-	NM	-	NM	-	NM	-
20	NM	-	NM	-	NM	-	NM	-
26								
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	0.149	28.3	NA	0	NA	0	NA	6.3
Maximum	0.149	28.3	<0.1	0	<0.0002	0	<0.04	6.3
Minimum	0.149	28.3	<0.1	0	<0.0002	0	<0.04	6.3

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

October, 1993

Page 3 of 3

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
2	2	65	<0.2	0	0.018	3.51	<0.002	0
8	4	1241	<0.2	0	NM	-	NM	-
14	8	1296	<0.2	0	NM	-	NM	-
20	1.7	0	0.79	0.43	NM	-	NM	-
26	4.5	1115	0.1	0.014				
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	4	743	NA	0.0888	0.018	3.51	NA	0
Maximum	7.5	1296	0.79	0.43	0.018	3.51	<0.002	0
Minimum	1.7	0	<0.2	0	0.018	3.51	<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^
2	<0.01	0	0.005	1.04	13	255	0.008	1.58
8	<0.01	0	NM		22	4589	0.044	11.63
14	<0.01	0	0.1	2.21	18	2519	0.028	6.67
20	<0.01	1.42	NM		20	2248	0.024	4.94
26			<0.005	1.19	31	5044	<0.005	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	0.355	0.002	1.48	20.8	2931	0.026	5.196
Maximum	<0.01	1.42	0.1	2.21	31	5044	0.044	11.63
Minimum	<0.01	0	<0.005	1.04	13	255	<0.005	1.16

SYMBOL

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Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 November, 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
6	11	1.2	<0.05	<0.005	<1	0.008
11	8	1.0	<0.05	<0.005	<1	0.012
19	9	1.1	<0.05	<0.005	<1	0.031
23	20	1.4	<0.05	<0.005	<1	0.017
Average	12.0	1.175	NA	NA	NA	0.017
Maximum	20	1.4	<0.05	<0.005	<1	0.031
Minimum	8	1.0	<0.05	<0.005	<1	.008

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	*	*	*	4.000	*	22.321	*	*	*	68	*	63	*	*	*	7.66	*	7.42
11	*	*	*	2.186	*	18.166	*	*	*	63	*	61	*	*	*	8.28	*	7.12
19	*	*	*	0.940	*	18.180	*	*	*	65	*	64	*	*	*	7.87	*	7.86
23	*	*	*	2.281	*	21.750	*	*	*	63	*	67	*	*	*	7.49	*	7.48
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	20.104	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	4.000	*	22.321	*	*	*	68	*	67	*	*	*	8.28	*	7.86
Minimum	*	*	*	0.940	*	18.166	*	*	*	63	*	61	*	*	*	7.49	*	7.12

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

Page 2 of 3

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	18,279	26.322	1.4	47	<0.002	0	0.3	65.8
11	14,133	20.352	1.3	49	NM	-	0.2	33.9
19	13,278	19.120	1.1	22	<0.002	0	<0.1	0.8
23	16,688	24.031	1.1	0	NM	-	0.2	40.1
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	15,595	22.456	1.23	30	NA	0.00	0.23	35.2
Maximum	18,279	26.322	1.40	49	<0.002	0.00	0.300	65.8
Minimum	13,278	19.120	1.10	0	<0.002	0.00	<0.1	1
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	<0.05	0	<0.02	1.3	<0.005	0
11	NM	-	<0.05	0	NM	-	<0.005	0
19	NM	-	<0.05	0	NM	-	<0.005	0.91
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	1.30	NA	0.23
Maximum	<0.005	0.00	<0.05	0.00	<0.02	1.30	<0.005	0.91
Minimum	<0.005	0.00	<0.05	0.00	<0.02	1.30	<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
6	0.171	37.4	<0.1	0	<0.0002	0	<0.04	0
11	NM	-	NM	-	NM	-	NM	-
19	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	0.171	37.4	NA	0	NA	0	NA	0
Maximum	0.171	37.4	<0.1	0	<0.0002	0	<0.04	0
Minimum	0.171	37.4	<0.1	0	<0.0002	0	<0.04	0

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

November, 1993

Page 3 of 3

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	2.5	558	0.87	0.192	0.011	2.39	<0.002	0
11	7.8	1320	0.1	0.009	NM	-	NM	-
19	<1	39	<0.2	0	NM	-	NM	-
23	1.8	362	<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	570	NA	0.05025	0.011	2.39	NA	0
Maximum	7.8	1320	0.87	0.192	0.011	2.39	<0.002	0
Minimum	<1	39	<0.2	0	0.011	2.39	<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	0.33	NM	-	26	3392	0.012	0.82
11	<0.01	0	<0.005	0.4	26	3095	0.059	7.89
19	<0.01	0	NM	-	20	1740	0.054	3.73
23	<0.01	0	<0.005	0.36	10	0	0.02	0.72
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	0.0825	NA	0.38	20.5	2056.75	0.03625	3.29
Maximum	<0.01	0.33	<0.005	0.4	26	3392	0.059	7.89
Minimum	<0.01	0	<0.005	0.36	10	0	0.012	0.72

SYMBOL

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Hawkeye Aluminum Company (HALCO) Davenport Works NPDES Monthly Report and Signatory Page Permit No. 7167099 December, 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
4	12	1.4	<0.05	<0.005	<1	0.014
10	14	2.0	<0.05	<0.005	<1	<.005
16	36	1.5	<0.05	<0.005	3	<.005
22	11	1.7	<0.05	<0.005	<1	0.008
28	16	2.8	<0.05	<0.005	<1	<.005
Average	17.8	1.880	NA	NA	.600	0.004
Maximum	36	2.8	<0.05	<0.005	3.000	0.014
Minimum	11	1.4	<0.05	<0.005	<1	<.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
4	*	*	*	*	*	19.058	*	*	*	*	*	54	*	*	*	*	*	6.88
10	*	*	*	*	*	22.092	*	*	*	*	*	55	*	*	*	*	*	7.56
16	*	*	*	2.077	*	18.918	*	*	*	58	*	62	*	*	*	7.46	*	7.23
22	*	*	*	*	*	13.145	*	*	*	*	*	47	*	*	*	*	*	6.89
28	*	*	*	*	*	12.498	*	*	*	*	*	50	*	*	*	*	*	7.75
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	17.142	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum	*	*	*	2.077	*	22.092	*	*	*	58	*	62	*	*	*	7.46	*	7.75
Minimum	*	*	*	2.077	*	12.498	*	*	*	58	*	47	*	*	*	7.46	*	6.88

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

Page 2 of 3

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
4	13,234	19.058	2.1	111	<0.002	0	0.2	32
10	15,341	22.092	1.9	0	NM	-	0.2	37
16	14,578	20.995	1.6	0	NM	-	<0.1	0
22	9,128	13.145	2.4	77	NM	-	0.2	22
28	8,679	12.498	2.6	0	NM	-	0.200	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	12,192	17.558	2.12	38	NA	0.00	NA	22.4
Maximum	15,341	22.092	2.60	111	<0.002	0.00	0.200	37.0
Minimum	8,679	12.498	1.60	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	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
4	<0.005	0	<0.05	0	0.09	0.9	<0.005	0
10	NM	-	<0.05	0	NM	-	<0.005	0
16	NM	-	<0.05	0	NM	-	<0.005	0
22	NM	-	<0.05	5.2	NM	-	<0.005	0
28	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	1.04	0.09	0.90	NA	0.00
Maximum	<0.005	0.00	<0.05	5.20	0.09	0.90	<0.005	0.00
Minimum	<0.005	0.00	<0.05	0.00	0.09	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	
	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS	MG/L	POUNDS
4	0.15	23.8	<0.1	0	<0.0002	0	<0.04	0
10	NM	-	NM	-	NM	-	NM	-
16	NM	-	NM	-	NM	-	NM	-
22	NM	-	NM	-	NM	-	NM	-
28	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	23.8	NA	0	NA	0	NA	0
Maximum	0.150	23.8	<0.1	0	<0.0002	0	<0.04	0
Minimum	0.150	23.8	<0.1	0	<0.0002	0	<0.04	0

Hawkeye Aluminum Company (HALCO)

Davenport Works NPDES Monthly Report

Permit No. 7167099

December, 1993

Page 3 of 3

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	0.064	<0.005	0	<0.002	0
10	1	184	<0.2	0	NM	-	NM	-
16	3	490	<0.2	0.003	NM	-	NM	-
22	<1	0	<0.2	0	NM	-	NM	-
28	3.0	312	<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	197	NA	0.0134	NA	0	NA	0
Maximum	3.0	490	<0.2	0.064	<0.005	0	<0.002	0
Minimum	<1	0	<0.2	0	<0.005	0	<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	-	14	318	0.0076	9.85
10	<0.01	0	0.007	1.29	14	0	0.01	1.84
16	<0.01	0	NM	-	37	52	>0.005	0
22	<0.01	0	0.006	0.66	22	1205	0.018	1.1
28	<0.01	0	NM	-	19	312	0.02	2.08
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	0.0065	0.975	21.2	377.4	0.0139	2.974
Maximum	<0.01	0	0.007	1.29	37	1205	0.02	9.85
Minimum	<0.01	0	0.006	0.66	14	0	>0.005	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.