ALL COUNTY
SURVEYING | PLANNING | ENGINEERING

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Memorandum

To: City of Sandy, Planning Department
Attention: Kelly O'Neil

From: Ray Moore, PE, PLS

Date: 7-8-25

Subject: US Metal Works - Building D Expansion - Stormwater Report

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The purpose of this report is to analyze the stormwater impacts due to the proposed Building D expansion at the US Metals Works (USMW) site located at 36370 Industrial Way, Sandy OR.

The existing Building D is approximately 109' long and 50' wide (5,450 sf) The new building expansion is 100' long x 60' wide (6,000 sf). There is currently compacted gravel and an existing building that will be removed, where the new building is being placed.

The plan will be to remove 60' of the existing building (3,000 sf) and place compacted gravel at that location. There are also some minor adjustments to the landscape areas to provide paved access to the new building. There are also other structures being removed as shown on the plans.

See the attached drainage basin sketch maps for a detailed breakdown of areas. As shown on the maps the total site area is broken down into Basin A and Basin B. The new improvements are located in Basin A. This basin drains west to an existing detention tank and water quality manhole. The system discharges to a public storm pipe in 362nd Avenue that flows south to Tickle Creek.

The USMW site currently has a DEQ 1200-Z permit and tests and monitors its stormwater discharge in accordance with the permit. Attached to this Memo are the most recent testing results from April 2025.

To complete this analysis, hydrographs were created based on the existing and proposed conditions using the area tables shown below.

EXISTING AREA CALCULATIONS (BASIN A)

TOTAL AREA: 285,051 SQUARE FT.

PAVEMENT AND BUILDINGS: 216,910 SQUARE FT.

LANDSCAPING/OPEN AREA: 27,356 SQUARE FT.

GRAVEL: 40,785 SQUARE FT.

PROPOSED AREA CALCULATIONS (BASIN A)

TOTAL AREA: 285,051 SQUARE FT.

PAVEMENT AND BUILDINGS: 216,767 SQUARE FT.

LANDSCAPING/OPEN AREA: 29,455 SQUARE FT.

GRAVEL: 38,829 SQUARE FT.

See the attached Hydrograph Analysis Summary for detailed results.

Conclusion:

Stormwater Detention: No additional stormwater detention will be needed for these improvements. The peak flows for the required design storms are the same in the pre-developed conditions and the developed conditions, when rounding to the nearest 100th.

		Pre-Developed Hydrographs					Developed Hydrographs				
Year	=======>	**2**	**5**	**10**	**25**	**100**	**2**	**5**	**10**	**25**	**100**
Qpeak	cfs =>	**5.1**	**6.7**	**7.2**	**8.3**	**0.0**	**5.1**	**6.7**	**7.2**	**8.3**	**0.0**
Tpeak	min =>	480	480	480	480	10	480	480	480	480	10
Tpeak	hr =>	8.00	8.00	8.00	8.00	0.17	8.00	8.00	8.00	8.00	0.17

Water quality: No additional water quality facilities are needed, the existing water quality manhole is currently treating the stormwater in accordance with the DEQ 1200-Z permit requirements. The proposed improvements will slightly decrease the gravel area and increase the roof area. The gravel areas are more susceptible to pollutants than the roof areas; therefore, a decrease in pollutants would be expected. With the ongoing testing required by DEQ, if pollutants are discovered, additional water quality devices will be installed as needed to target pollutants.

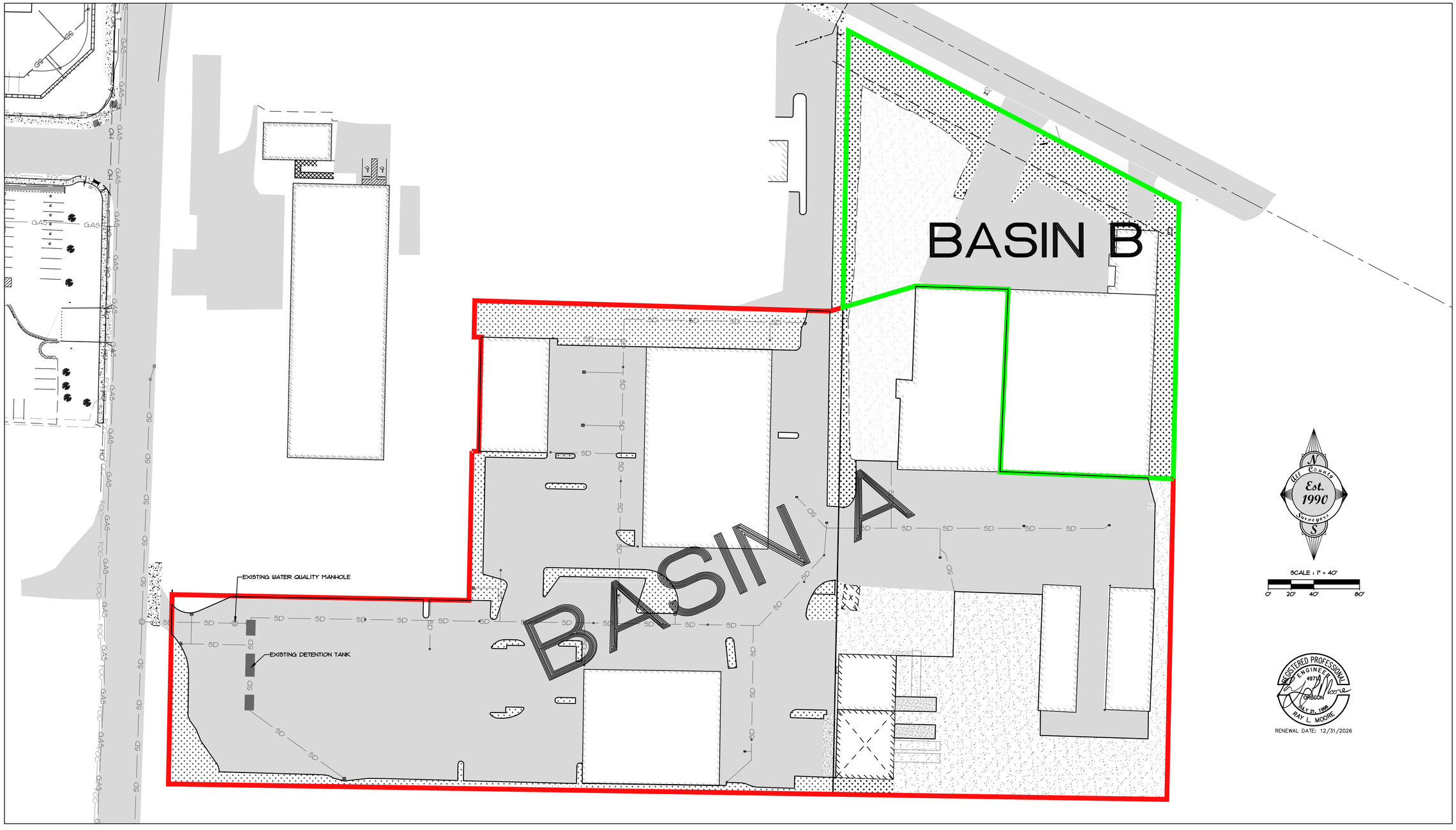
Feel free to give me a call if you have any questions.

Sincerely,
All County Surveyors & Planners, Inc.

Ray L. Moore, PE, PLS
Engineering Division

RENEWAL DATE: 12/31/2026

DRAINAGE BASIN SKETCH MAP
EXISTING IMPROVEMENTS



EXISTING AREA CALCULATIONS (BASIN A)

TOTAL AREA: 285,051 SQUARE FT.
PAVEMENT AND BUILDINGS: 215,951 SQUARE FT.
LANDSCAPING/OPEN AREA: 28,399 SQUARE FT.
GRAVEL: 40,698 SQUARE FT.

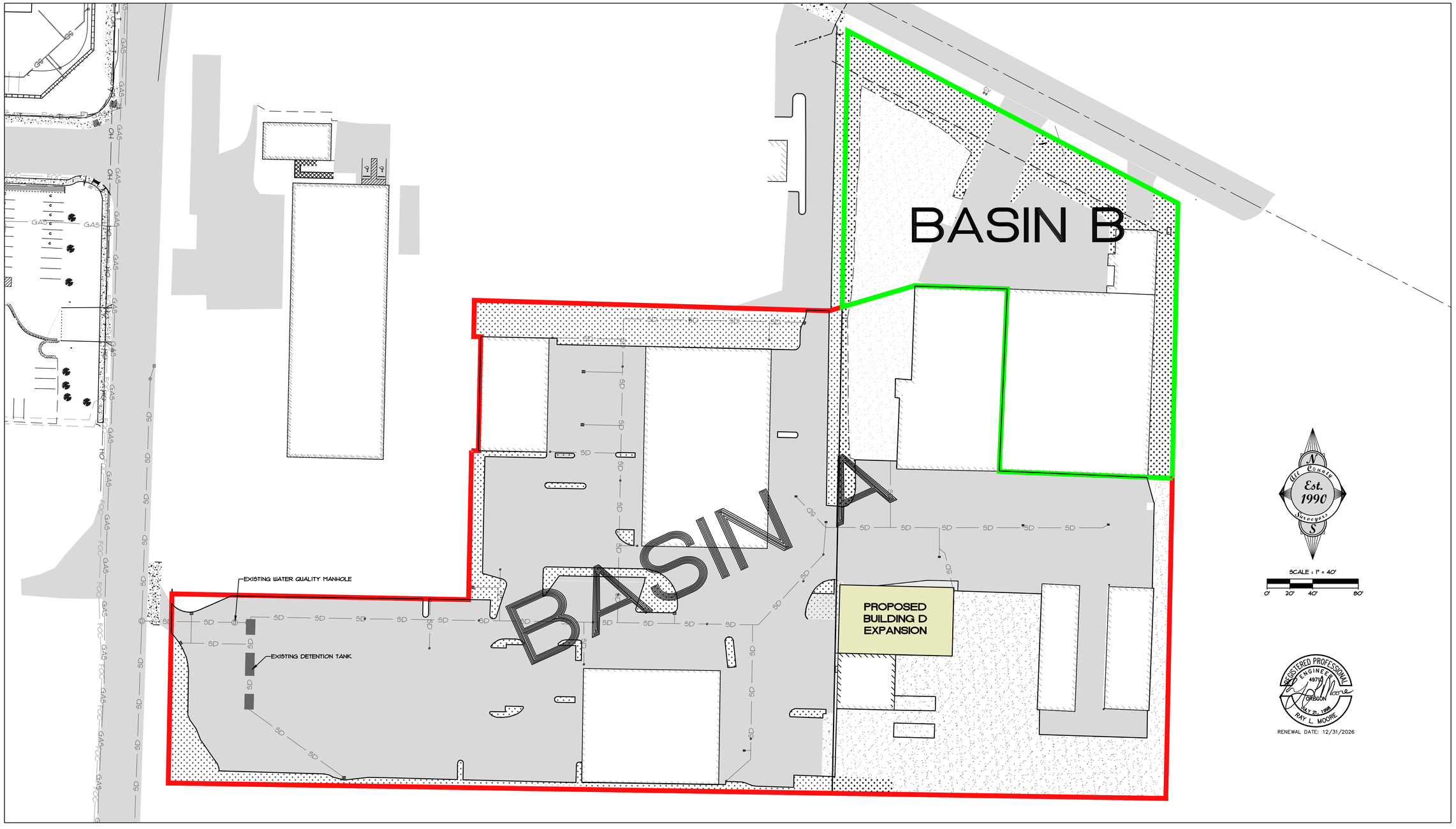
AREA CALCULATIONS (BASIN B)

TOTAL AREA: 68,809 SQUARE FT.
PAVEMENT AND BUILDINGS: 37,982 SQUARE FT.
LANDSCAPING/OPEN AREA: 18,035 SQUARE FT.
GRAVEL: 12,792 SQUARE FT.

REGISTERED PROFESSIONAL ENGINEER
49710
OREGON
JULY 21, 1989
RAY L. MOORE
RENEWAL DATE: 12/31/2026

ALL COUNTY
SURVEYING | PLANNING | ENGINEERING
ALL COUNTY SURVEYORS & PLANNERS, INC
CONTACT: RAY MOORE, PE, PLS
P.O. BOX 955 SANDY, OR 97055
PHONE: 503.668.3151
DATE OF PLOT: 5-12-25 25-051 - PLANNING.dwg

DRAINAGE BASIN SKETCH MAP
PROPOSED IMPROVEMENTS



SCALE : 1" = 40'

0' 20' 40' 80'

REGISTERED PROFESSIONAL ENGINEER
49710
OREGON
JULY 21, 1998
RAY L. MOORE

RENEWAL DATE: 12/31/2026

PROPOSED AREA CALCULATIONS (BASIN A)

TOTAL AREA: 285,051 SQUARE FT.
PAVEMENT AND BUILDINGS: 217,836 SQUARE FT.
LANDSCAPING/OPEN AREA: 27,675 SQUARE FT.
GRAVEL: 39,540 SQUARE FT.

AREA CALCULATIONS (BASIN B)

TOTAL AREA: 68,809 SQUARE FT.
PAVEMENT AND BUILDINGS: 37,982 SQUARE FT.
LANDSCAPING/OPEN AREA: 18,035 SQUARE FT.
GRAVEL: 12,792 SQUARE FT.

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DATE OF PLOT: 5-12-25 25-051 - PLANNING.dwg

Project Name: US Metal Works Building D Expansikon
Hydrograph Analysis Summary

Job # 25-051
Date: 7/8/2025

Rainfall (year)	Rainfall (inches)
2	3.50
5	4.50
10	4.80
25	5.50
100	0.00

Pre-Developed
Pervious
Area = 0.65 acres
CN = 86.00 na
Impervious
Area = 5.89 acres
CN = 97.68 na
Tc = 10.00 min
Total A = 6.54 acres

Developed
Pervious
Area = 0.64 acres
CN = 86.00 na
Impervious
Area = 5.91 acres
CN = 97.69 na
Tc = 10.00 min
Total A = 6.54 acres

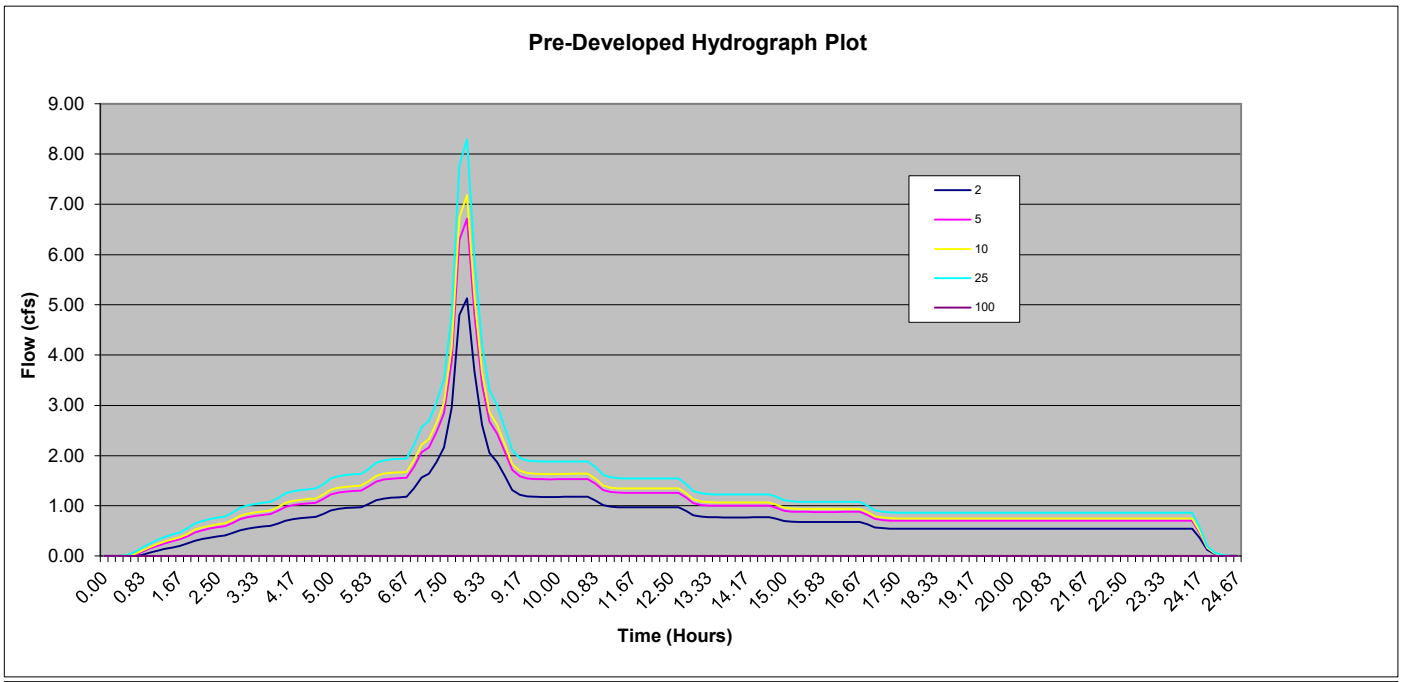
Note: The hydrographs shown are based on the S.C.S. Type - 1A, 24 hour storm using the SBUH method based on the King County Model.

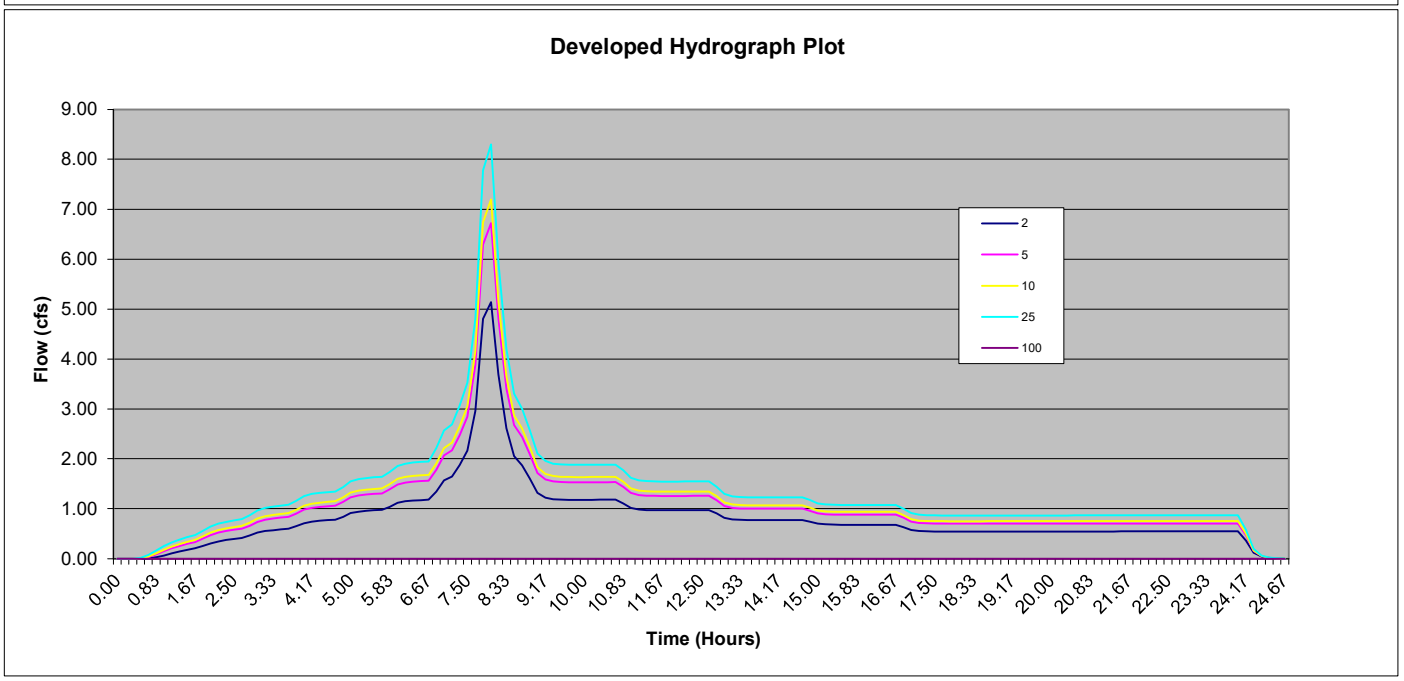
		Pre-Developed Hydrographs					Developed Hydrographs				
Year	=======>	2	5	10	25	100	2	5	10	25	100
Qpeak	cfs =>	5.1	6.7	7.2	8.3	0.0	5.1	6.7	7.2	8.3	0.0
Tpeak	min =>	480	480	480	480	10	480	480	480	480	10
Tpeak	hr =>	8.00	8.00	8.00	8.00	0.17	8.00	8.00	8.00	8.00	0.17
Hydrograph Name=>		2	5	10	25	100	2	5	10	25	100
Time (min)	Time (hr)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.50	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.02	0.00
40	0.67	0.00	0.03	0.04	0.08	0.00	0.00	0.03	0.04	0.08	0.00
50	0.83	0.02	0.08	0.11	0.16	0.00	0.03	0.09	0.11	0.17	0.00
60	1.00	0.06	0.15	0.18	0.25	0.00	0.06	0.15	0.18	0.25	0.00
70	1.17	0.10	0.20	0.24	0.32	0.00	0.10	0.21	0.24	0.32	0.00
80	1.33	0.14	0.25	0.29	0.38	0.00	0.14	0.26	0.29	0.38	0.00
90	1.50	0.17	0.30	0.33	0.43	0.00	0.17	0.30	0.34	0.43	0.00
100	1.67	0.20	0.33	0.37	0.47	0.00	0.20	0.33	0.37	0.47	0.00
110	1.83	0.25	0.40	0.44	0.55	0.00	0.25	0.40	0.44	0.55	0.00
120	2.00	0.30	0.47	0.52	0.64	0.00	0.31	0.47	0.52	0.65	0.00
130	2.17	0.34	0.52	0.57	0.70	0.00	0.34	0.52	0.57	0.70	0.00
140	2.33	0.37	0.55	0.60	0.73	0.00	0.37	0.55	0.61	0.74	0.00
150	2.50	0.39	0.58	0.63	0.76	0.00	0.39	0.58	0.63	0.77	0.00
160	2.67	0.41	0.60	0.65	0.79	0.00	0.41	0.60	0.66	0.79	0.00
170	2.83	0.46	0.66	0.72	0.87	0.00	0.46	0.66	0.72	0.87	0.00
180	3.00	0.52	0.73	0.80	0.96	0.00	0.52	0.74	0.81	0.97	0.00
190	3.17	0.55	0.77	0.84	1.01	0.00	0.55	0.78	0.85	1.01	0.00
200	3.33	0.57	0.80	0.87	1.04	0.00	0.57	0.80	0.87	1.04	0.00
210	3.50	0.58	0.82	0.89	1.06	0.00	0.59	0.82	0.89	1.06	0.00
220	3.67	0.60	0.84	0.91	1.08	0.00	0.60	0.84	0.91	1.08	0.00
230	3.83	0.65	0.90	0.97	1.15	0.00	0.65	0.90	0.98	1.16	0.00
240	4.00	0.71	0.98	1.06	1.25	0.00	0.71	0.98	1.06	1.25	0.00
250	4.17	0.74	1.01	1.10	1.29	0.00	0.74	1.02	1.10	1.29	0.00
260	4.33	0.75	1.03	1.12	1.31	0.00	0.76	1.04	1.12	1.32	0.00
270	4.50	0.77	1.05	1.13	1.33	0.00	0.77	1.05	1.14	1.33	0.00
280	4.67	0.78	1.06	1.14	1.34	0.00	0.78	1.06	1.15	1.34	0.00
290	4.83	0.84	1.13	1.22	1.43	0.00	0.84	1.14	1.22	1.43	0.00
300	5.00	0.91	1.23	1.32	1.54	0.00	0.91	1.23	1.32	1.55	0.00
310	5.17	0.94	1.26	1.36	1.59	0.00	0.94	1.27	1.36	1.59	0.00
320	5.33	0.95	1.28	1.38	1.61	0.00	0.96	1.29	1.38	1.61	0.00
330	5.50	0.97	1.29	1.39	1.62	0.00	0.97	1.30	1.40	1.63	0.00
340	5.67	0.97	1.30	1.40	1.63	0.00	0.98	1.31	1.41	1.64	0.00
350	5.83	1.03	1.38	1.49	1.73	0.00	1.04	1.38	1.49	1.73	0.00
360	6.00	1.11	1.48	1.60	1.85	0.00	1.12	1.49	1.60	1.86	0.00
370	6.17	1.14	1.52	1.64	1.90	0.00	1.15	1.53	1.64	1.90	0.00
380	6.33	1.16	1.54	1.66	1.92	0.00	1.16	1.54	1.66	1.93	0.00
390	6.50	1.17	1.55	1.67	1.93	0.00	1.17	1.55	1.67	1.94	0.00
400	6.67	1.18	1.56	1.67	1.94	0.00	1.18	1.56	1.68	1.94	0.00
410	6.83	1.34	1.78	1.91	2.21	0.00	1.35	1.78	1.91	2.21	0.00
420	7.00	1.56	2.06	2.21	2.57	0.00	1.56	2.07	2.22	2.57	0.00
430	7.17	1.64	2.17	2.32	2.69	0.00	1.64	2.17	2.33	2.69	0.00
440	7.33	1.87	2.47	2.65	3.06	0.00	1.88	2.47	2.65	3.07	0.00
450	7.50	2.16	2.84	3.05	3.52	0.00	2.16	2.84	3.05	3.53	0.00
460	7.67	2.95	3.88	4.16	4.80	0.00	2.96	3.88	4.16	4.81	0.00
470	7.83	4.80	6.29	6.73	7.77	0.00	4.80	6.29	6.74	7.78	0.00
480	8.00	5.13	6.71	7.19	8.29	0.00	5.14	6.72	7.19	8.30	0.00
490	8.17	3.69	4.82	5.15	5.94	0.00	3.69	4.82	5.16	5.95	0.00
500	8.33	2.61	3.41	3.65	4.20	0.00	2.61	3.41	3.65	4.21	0.00
510	8.50	2.05	2.68	2.86	3.30	0.00	2.05	2.68	2.87	3.30	0.00
520	8.67	1.87	2.44	2.61	3.00	0.00	1.87	2.44	2.61	3.00	0.00

		Pre-Developed Hydrographs					Developed Hydrographs				
Year =======>		2	5	10	25	100	2	5	10	25	100
Qpeak cfs =>		5.1	6.7	7.2	8.3	0.0	5.1	6.7	7.2	8.3	0.0
Tpeak min =>		480	480	480	480	10	480	480	480	480	10
Tpeak hr =>		8.00	8.00	8.00	8.00	0.17	8.00	8.00	8.00	8.00	0.17
Hydrograph Name=>		2	5	10	25	100	2	5	10	25	100
Time (min)	Time (hr)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)
530	8.83	1.61	2.09	2.24	2.58	0.00	1.61	2.09	2.24	2.58	0.00
540	9.00	1.32	1.71	1.83	2.11	0.00	1.32	1.71	1.83	2.11	0.00
550	9.17	1.22	1.59	1.70	1.95	0.00	1.22	1.59	1.70	1.96	0.00
560	9.33	1.19	1.55	1.65	1.90	0.00	1.19	1.55	1.65	1.90	0.00
570	9.50	1.18	1.53	1.64	1.89	0.00	1.18	1.53	1.64	1.89	0.00
580	9.67	1.18	1.53	1.64	1.88	0.00	1.18	1.53	1.64	1.88	0.00
590	9.83	1.18	1.53	1.63	1.88	0.00	1.18	1.53	1.64	1.88	0.00
600	10.00	1.18	1.53	1.63	1.88	0.00	1.18	1.53	1.64	1.88	0.00
610	10.17	1.18	1.53	1.64	1.88	0.00	1.18	1.53	1.64	1.88	0.00
620	10.33	1.18	1.53	1.64	1.88	0.00	1.18	1.53	1.64	1.88	0.00
630	10.50	1.18	1.53	1.64	1.88	0.00	1.18	1.53	1.64	1.88	0.00
640	10.67	1.18	1.53	1.64	1.88	0.00	1.18	1.53	1.64	1.88	0.00
650	10.83	1.11	1.44	1.54	1.77	0.00	1.11	1.44	1.54	1.77	0.00
660	11.00	1.01	1.32	1.41	1.62	0.00	1.01	1.32	1.41	1.62	0.00
670	11.17	0.98	1.28	1.36	1.57	0.00	0.98	1.28	1.36	1.57	0.00
680	11.33	0.97	1.26	1.35	1.55	0.00	0.97	1.26	1.35	1.55	0.00
690	11.50	0.97	1.26	1.34	1.55	0.00	0.97	1.26	1.35	1.55	0.00
700	11.67	0.97	1.26	1.34	1.55	0.00	0.97	1.26	1.34	1.55	0.00
710	11.83	0.97	1.26	1.34	1.54	0.00	0.97	1.26	1.34	1.55	0.00
720	12.00	0.97	1.26	1.34	1.55	0.00	0.97	1.26	1.34	1.55	0.00
730	12.17	0.97	1.26	1.34	1.55	0.00	0.97	1.26	1.34	1.55	0.00
740	12.33	0.97	1.26	1.34	1.55	0.00	0.97	1.26	1.35	1.55	0.00
750	12.50	0.97	1.26	1.34	1.55	0.00	0.97	1.26	1.35	1.55	0.00
760	12.67	0.97	1.26	1.35	1.55	0.00	0.97	1.26	1.35	1.55	0.00
770	12.83	0.90	1.17	1.25	1.44	0.00	0.90	1.17	1.25	1.44	0.00
780	13.00	0.81	1.06	1.13	1.30	0.00	0.81	1.06	1.13	1.30	0.00
790	13.17	0.78	1.02	1.09	1.25	0.00	0.78	1.02	1.09	1.25	0.00
800	13.33	0.77	1.00	1.07	1.23	0.00	0.78	1.00	1.07	1.23	0.00
810	13.50	0.77	1.00	1.07	1.23	0.00	0.77	1.00	1.07	1.23	0.00
820	13.67	0.77	1.00	1.07	1.23	0.00	0.77	1.00	1.07	1.23	0.00
830	13.83	0.77	1.00	1.07	1.23	0.00	0.77	1.00	1.07	1.23	0.00
840	14.00	0.77	1.00	1.07	1.23	0.00	0.77	1.00	1.07	1.23	0.00
850	14.17	0.77	1.00	1.07	1.23	0.00	0.77	1.00	1.07	1.23	0.00
860	14.33	0.77	1.00	1.07	1.23	0.00	0.77	1.00	1.07	1.23	0.00
870	14.50	0.77	1.00	1.07	1.23	0.00	0.77	1.00	1.07	1.23	0.00
880	14.67	0.77	1.00	1.07	1.23	0.00	0.77	1.00	1.07	1.23	0.00
890	14.83	0.74	0.96	1.02	1.18	0.00	0.74	0.96	1.02	1.18	0.00
900	15.00	0.70	0.90	0.97	1.11	0.00	0.70	0.90	0.97	1.11	0.00
910	15.17	0.68	0.89	0.95	1.09	0.00	0.68	0.89	0.95	1.09	0.00
920	15.33	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
930	15.50	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
940	15.67	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
950	15.83	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
960	16.00	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
970	16.17	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
980	16.33	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
990	16.50	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
1000	16.67	0.68	0.88	0.94	1.08	0.00	0.68	0.88	0.94	1.08	0.00
1010	16.83	0.63	0.82	0.88	1.01	0.00	0.63	0.82	0.88	1.01	0.00
1020	17.00	0.57	0.74	0.79	0.91	0.00	0.57	0.74	0.79	0.91	0.00
1030	17.17	0.55	0.72	0.76	0.88	0.00	0.55	0.72	0.76	0.88	0.00
1040	17.33	0.55	0.71	0.76	0.87	0.00	0.55	0.71	0.76	0.87	0.00
1050	17.50	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1060	17.67	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1070	17.83	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1080	18.00	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1090	18.17	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1100	18.33	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1110	18.50	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1120	18.67	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1130	18.83	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1140	19.00	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1150	19.17	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1160	19.33	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1170	19.50	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1180	19.67	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1190	19.83	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1200	20.00	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1210	20.17	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1220	20.33	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1230	20.50	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00

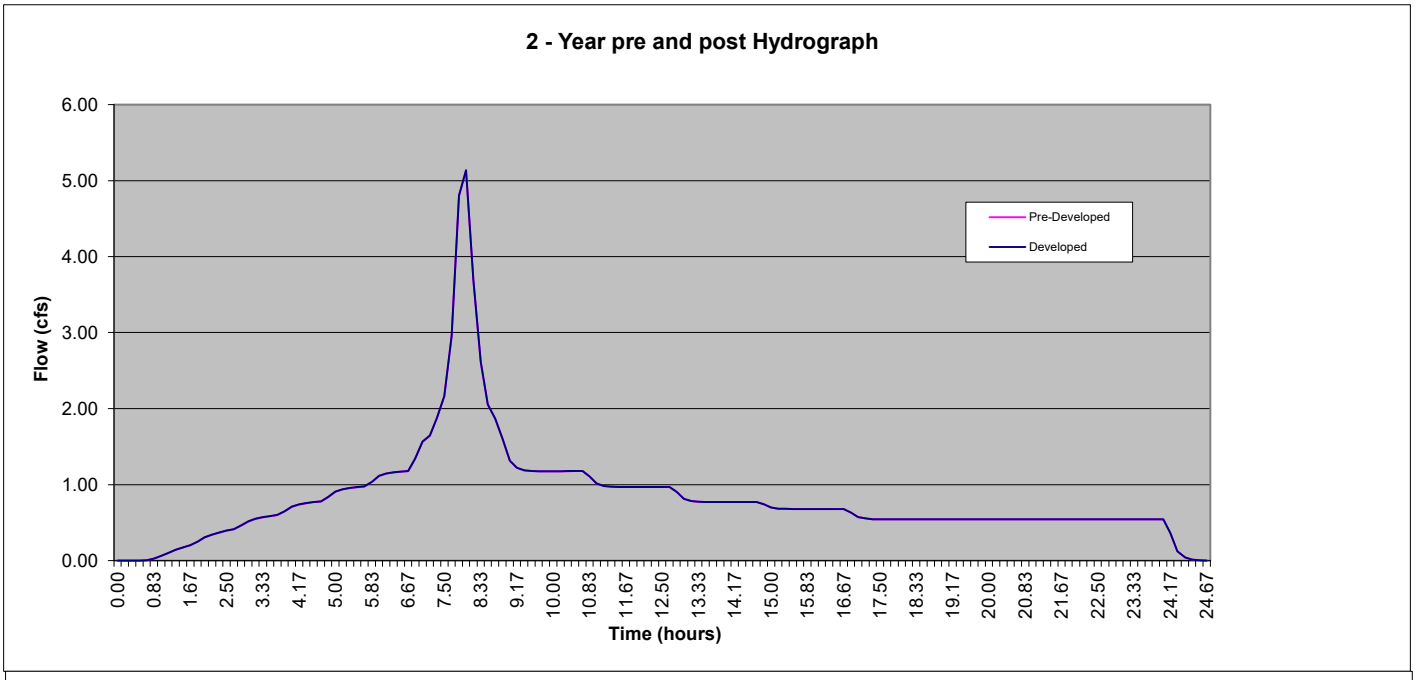
		Pre-Developed Hydrographs					Developed Hydrographs				
Year =======>		**2**	**5**	**10**	**25**	**100**	**2**	**5**	**10**	**25**	**100**
Qpeak	cfs =>	**5.1**	**6.7**	**7.2**	**8.3**	**0.0**	**5.1**	**6.7**	**7.2**	**8.3**	**0.0**
Tpeak	min =>	480	480	480	480	10	480	480	480	480	10
Tpeak	hr =>	8.00	8.00	8.00	8.00	0.17	8.00	8.00	8.00	8.00	0.17
Hydrograph Name=>		2	5	10	25	100	2	5	10	25	100
Time (min)	Time (hr)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)	Hyd (cfs)
1240	20.67	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1250	20.83	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1260	21.00	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1270	21.17	0.54	0.70	0.75	0.86	0.00	0.54	0.70	0.75	0.86	0.00
1280	21.33	0.54	0.70	0.75	0.86	0.00	0.55	0.70	0.75	0.86	0.00
1290	21.50	0.54	0.70	0.75	0.86	0.00	0.55	0.70	0.75	0.86	0.00
1300	21.67	0.54	0.70	0.75	0.86	0.00	0.55	0.70	0.75	0.86	0.00
1310	21.83	0.55	0.70	0.75	0.86	0.00	0.55	0.70	0.75	0.86	0.00
1320	22.00	0.55	0.70	0.75	0.86	0.00	0.55	0.70	0.75	0.86	0.00
1330	22.17	0.55	0.70	0.75	0.86	0.00	0.55	0.70	0.75	0.86	0.00
1340	22.33	0.55	0.70	0.75	0.86	0.00	0.55	0.70	0.75	0.86	0.00
1350	22.50	0.55	0.70	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1360	22.67	0.55	0.70	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1370	22.83	0.55	0.70	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1380	23.00	0.55	0.71	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1390	23.17	0.55	0.71	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1400	23.33	0.55	0.71	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1410	23.50	0.55	0.71	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1420	23.67	0.55	0.71	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1430	23.83	0.55	0.71	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1440	24.00	0.55	0.71	0.75	0.86	0.00	0.55	0.71	0.75	0.86	0.00
1450	24.17	0.36	0.47	0.50	0.58	0.00	0.36	0.47	0.50	0.58	0.00
1460	24.33	0.12	0.16	0.17	0.19	0.00	0.12	0.16	0.17	0.19	0.00
1470	24.50	0.04	0.05	0.06	0.06	0.00	0.04	0.05	0.06	0.06	0.00
1480	24.67	0.01	0.02	0.02	0.02	0.00	0.01	0.02	0.02	0.02	0.00
1490	24.67	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00
1500	24.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

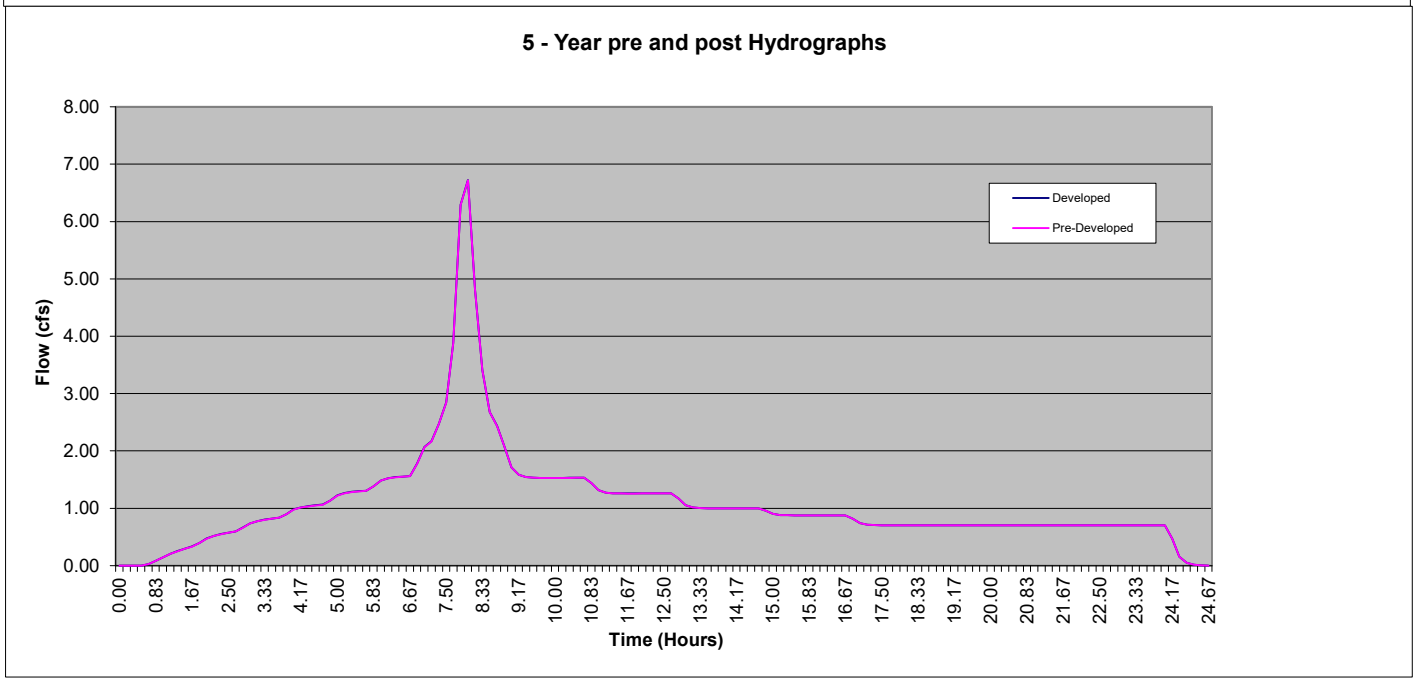
	Pre-Developed Hydrographs					Developed Hydrographs				
Year =======>	2	5	10	25	100	2	5	10	25	100
Qpeak cfs =>	5.1	6.7	7.2	8.3	0.0	5.1	6.7	7.2	8.3	0.0
Tpeak min =>	480	480	480	480	10	480	480	480	480	10
Tpeak hr =>	8.00	8.00	8.00	8.00	0.17	8.00	8.00	8.00	8.00	0.17
Hydrograph Name=>	2	5	10	25	100	2	5	10	25	100
Time Time	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd
(min) (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)



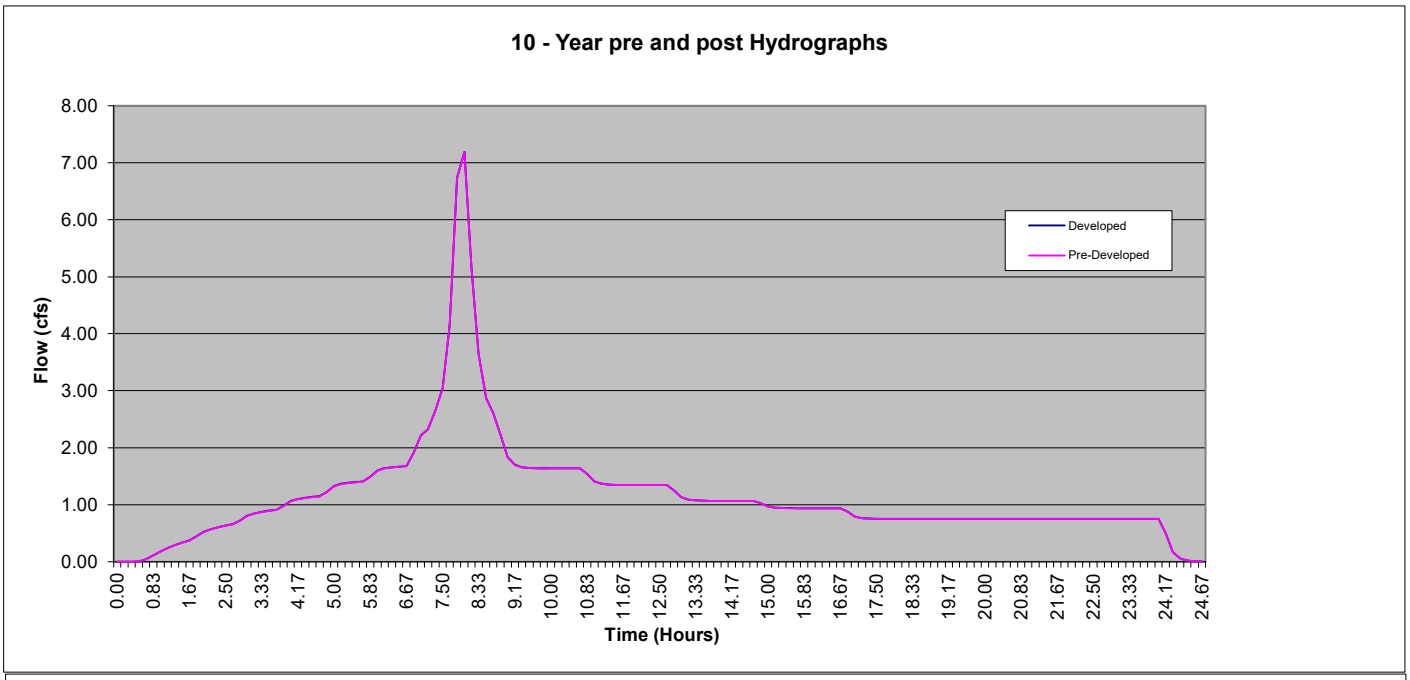


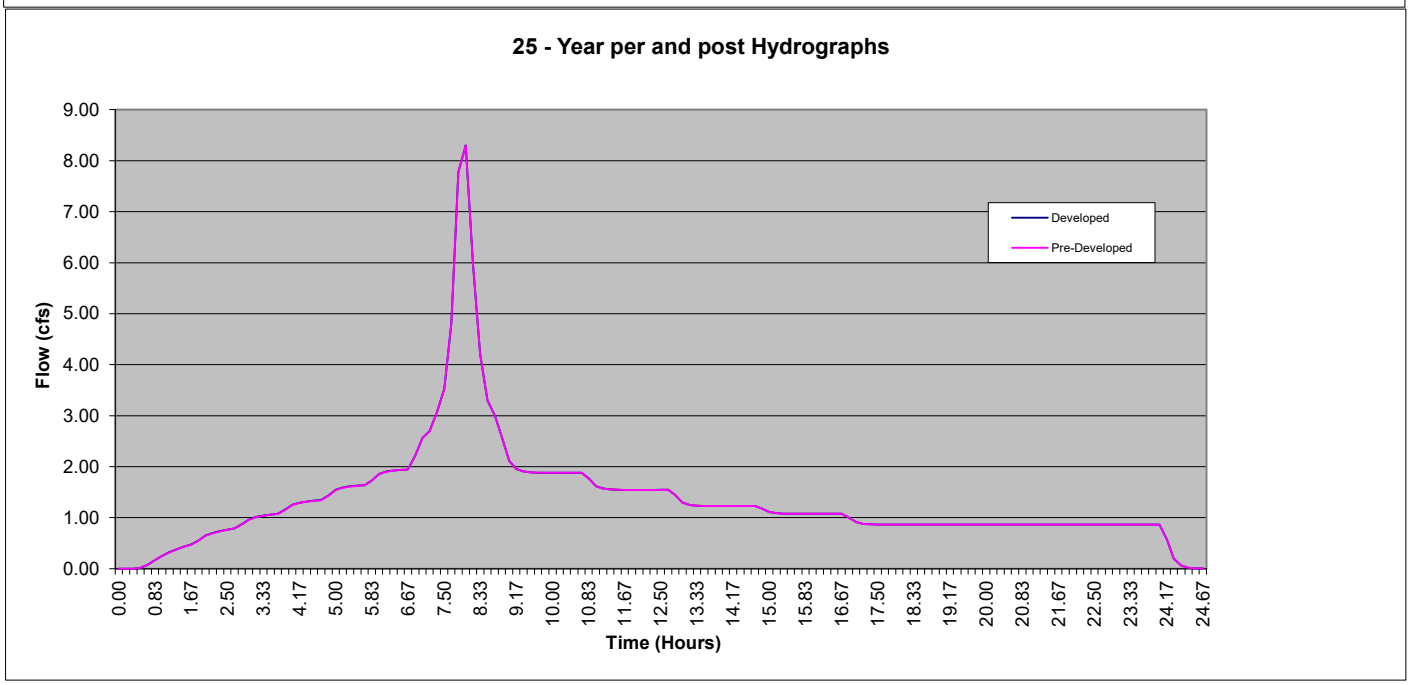
	Pre-Developed Hydrographs					Developed Hydrographs				
Year =======>	2	5	10	25	100	2	5	10	25	100
Qpeak cfs =>	5.1	6.7	7.2	8.3	0.0	5.1	6.7	7.2	8.3	0.0
Tpeak min =>	480	480	480	480	10	480	480	480	480	10
Tpeak hr =>	8.00	8.00	8.00	8.00	0.17	8.00	8.00	8.00	8.00	0.17
Hydrograph Name=>	2	5	10	25	100	2	5	10	25	100
Time Time	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd
(min) (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)





	Pre-Developed Hydrographs					Developed Hydrographs				
Year =======>	**2**	**5**	**10**	**25**	**100**	**2**	**5**	**10**	**25**	**100**
Qpeak cfs =>	**5.1**	**6.7**	**7.2**	**8.3**	**0.0**	**5.1**	**6.7**	**7.2**	**8.3**	**0.0**
Tpeak min =>	480	480	480	480	10	480	480	480	480	10
Tpeak hr =>	8.00	8.00	8.00	8.00	0.17	8.00	8.00	8.00	8.00	0.17
Hydrograph Name=>	2	5	10	25	100	2	5	10	25	100
Time Time	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd	Hyd
(min) (hr)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)





Specialty Analytical

9011 SE Jannsen Rd
Clackamas, OR 97015
TEL: (503) 607-1331
Website: www.specialtyanalytical.com

April 02, 2025

Steve Peeden
US Metal Works
36370 Industrial Way
Sandy, OR 97055
TEL: (503) 668-8036
FAX:

RE: US Metal Works Order No.: 2503256

Dear Steve Peeden:

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

Marty French
Lab Director

Specialty Analytical

WO#: **2503256**
Date Reported: **4/2/2025**

CLIENT: US Metal Works
Project: US Metal Works
Lab ID: 2503256-001
Client Sample ID Discharge Drain 1

Collection Date: 3/21/2025 11:00:00 AM
Matrix: STORM WATER

Analyses	CAS	Result	RL	Qual	Units	DF	Date Analyze
ICP/MS METALS- TOTAL RECOVERABLE					**E200.8**	**E200.8**	Analyst: **AC**
Aluminum	7429-90-5	0.133	0.0100		mg/L	1	04/01/2025 18:05
Copper	7440-50-8	0.00205	0.000500		mg/L	1	03/26/2025 17:54
Iron	7439-89-6	0.258	0.0500		mg/L	1	03/26/2025 17:54
Lead	7439-92-1	ND	0.00100		mg/L	10	03/27/2025 16:22
Zinc	7440-66-6	0.175	0.0200		mg/L	10	03/27/2025 16:22
NITRATE AND NITRITE					**SM4500-NO3-F**	**SM4500-NO**	Analyst: **NK**
Nitrogen, Nitrate+Nitrite (As N)		0.0520	0.0150		mg/L	1	03/28/2025 12:21
AMMONIA AS NITROGEN					**SM4500-NH3 H**	**SM4500-NH3**	Analyst: **NK**
Nitrogen, Ammonia (As N)	7727-37-9	0.0710	0.0200		mg/L	1	03/25/2025 12:15
TOTAL SUSPENDED SOLIDS					**M2540 D**		Analyst: **AM**
Total Suspended Solids	9004-34-6	10.0	10.0		mg/L	1	03/25/2025 15:18
HEM/SGT PER EPA 1664					**E1664**		Analyst: **CA**
HEM (Total Hexane Extractable Material)		ND	4.94		mg/L	1	03/27/2025 9:50
SGT (Non-Polar Extractable Material)		ND	4.94		mg/L	1	03/27/2025 9:50
FIELD PARAMETERS					**FLD**		Analyst: **Clien**
pH, SM4500H+ B		6.75			S.U.		03/21/2025 11:05

Specialty Analytical

WO#: **2503256**
Date Reported: **4/2/2025**

CLIENT: US Metal Works
Project: US Metal Works
Lab ID: 2503256-002
Client Sample ID Discharge Drain 2

Collection Date: 3/21/2025 11:15:00 AM
Matrix: STORM WATER

Analyses	CAS	Result	RL	Qual	Units	DF	Date Analyze
ICP/MS METALS- TOTAL RECOVERABLE					**E200.8**	**E200.8**	Analyst: **AC**
Aluminum	7429-90-5	0.178	0.0100		mg/L	1	04/01/2025 18:19
Copper	7440-50-8	0.00424	0.000500		mg/L	1	03/26/2025 17:57
Iron	7439-89-6	1.38	0.0500		mg/L	1	03/26/2025 17:57
Lead	7439-92-1	0.000336	0.000100		mg/L	1	03/27/2025 16:23
Zinc	7440-66-6	0.0153	0.00200		mg/L	1	03/27/2025 16:23
NITRATE AND NITRITE					**SM4500-NO3-F**	**SM4500-NO**	Analyst: **NK**
Nitrogen, Nitrate+Nitrite (As N)		0.0370	0.0150		mg/L	1	03/28/2025 12:27
AMMONIA AS NITROGEN					**SM4500-NH3 H**	**SM4500-NH3**	Analyst: **NK**
Nitrogen, Ammonia (As N)	7727-37-9	0.0880	0.0200		mg/L	1	03/25/2025 12:25
TOTAL SUSPENDED SOLIDS					**M2540 D**		Analyst: **AM**
Total Suspended Solids	9004-34-6	10.0	10.0		mg/L	1	03/25/2025 15:18
HEM/SGT PER EPA 1664					**E1664**		Analyst: **CA**
HEM (Total Hexane Extractable Material)		ND	4.87		mg/L	1	03/27/2025 9:50
SGT (Non-Polar Extractable Material)		ND	4.87		mg/L	1	03/27/2025 9:50
FIELD PARAMETERS					**FLD**		Analyst: **Clien**
pH, SM4500H+ B		6.82			S.U.		03/21/2025 11:20

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works
Project: US Metal Works **TestCode:** **1664_SPE**

Sample ID: **MB-R58232** SampType: **MBLK** TestCode: **1664_SPE** Units: **mg/L** Prep Date: RunNo: **58232**
Client ID: **PBW** Batch ID: **R58232** TestNo: **E1664** Analysis Date: **3/27/2025** SeqNo: **759026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
HEM (Total Hexane Extractable Material)	ND	5.00									
SGT (Non-Polar Extractable Material)	ND	5.00									

Sample ID: **LCSD-R58232** SampType: **LCSD** TestCode: **1664_SPE** Units: **mg/L** Prep Date: RunNo: **58232**
Client ID: **LCSS02** Batch ID: **R58232** TestNo: **E1664** Analysis Date: **3/27/2025** SeqNo: **759028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
HEM (Total Hexane Extractable Material)	37.1	5.00	40.00	0	92.8	78	114	37.90	2.13	20	
SGT (Non-Polar Extractable Material)	25.0	5.00	20.00	0	125	64	132	23.80	4.92	20	

Sample ID: **LCS-2** SampType: **LCS** TestCode: **1664_SPE** Units: **mg/L** Prep Date: RunNo: **58232**
Client ID: **LCSW** Batch ID: **R58232** TestNo: **E1664** Analysis Date: **3/27/2025** SeqNo: **759047**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
HEM (Total Hexane Extractable Material)	37.9	5.00	40.00	0	94.8	78	114				
SGT (Non-Polar Extractable Material)	23.8	5.00	20.00	0	119	64	132				

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **ICV**	SampType: **ICV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **ICV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.497	0.0100	0.500	0	99.4	90	110				
Copper	0.0510	0.000500	0.0500	0	102	90	110				
Iron	4.93	0.0500	5.00	0	98.6	90	110				
Lead	0.0451	0.000100	0.0500	0	90.2	90	110				
Zinc	0.0504	0.00200	0.0500	0	101	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758606**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									
Copper	ND	0.000500									
Iron	ND	0.0500									
Lead	ND	0.000100									
Zinc	ND	0.00200									

Sample ID: **MB-25717**	SampType: **MBLK**	TestCode: **200.8**	Units: **mg/L**	Prep Date: **3/24/2025**	RunNo: **58201**
Client ID: **PBW**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758610**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **MB-25717**	SampType: **MBLK**	TestCode: **200.8**	Units: **mg/L**	Prep Date: **3/24/2025**	RunNo: **58201**
Client ID: **PBW**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758610**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									
Copper	ND	0.000500									
Iron	ND	0.0500									
Lead	ND	0.000100									
Zinc	ND	0.00200									

Sample ID: **LCS-25717**	SampType: **LCS**	TestCode: **200.8**	Units: **mg/L**	Prep Date: **3/24/2025**	RunNo: **58201**
Client ID: **LCSW**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758611**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.472	0.0100	0.500	0	94.5	85	115				
Copper	0.0495	0.000500	0.0500	0	99.0	85	115				
Iron	4.70	0.0500	5.00	0	94.0	85	115				
Lead	0.0456	0.000100	0.0500	0	91.2	85	115				
Zinc	0.0480	0.00200	0.0500	0	96.0	85	115				

Sample ID: **2503227-001ADUP**	SampType: **DUP**	TestCode: **200.8**	Units: **mg/L**	Prep Date: **3/24/2025**	RunNo: **58201**
Client ID: **BatchQC**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **2503227-001ADUP**	SampType: **DUP**	TestCode: **200.8**	Units: **mg/L**	Prep Date: **3/24/2025**	RunNo: **58201**
Client ID: **BatchQC**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.0398	0.0100						0.0398	0.0364	20	
Copper	0.00308	0.000500						0.00310	0.578	20	
Iron	0.0632	0.0500						0.0599	5.47	20	
Lead	0.000212	0.000100						0.000174	20.0	20	RMI
Zinc	0.0337	0.00200						0.0337	0.0782	20	

Sample ID: **2503227-001AMS**	SampType: **MS**	TestCode: **200.8**	Units: **mg/L**	Prep Date: **3/24/2025**	RunNo: **58201**
Client ID: **BatchQC**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.525	0.0100	0.500	0.0398	97.0	70	130				
Copper	0.0532	0.000500	0.0500	0.00310	100	70	130				
Iron	4.79	0.0500	5.00	0.0599	94.7	70	130				
Lead	0.0510	0.000100	0.0500	0.000174	102	70	130				
Zinc	0.0836	0.00200	0.0500	0.0337	99.7	70	130				

Sample ID: **2503227-001AMSD**	SampType: **MSD**	TestCode: **200.8**	Units: **mg/L**	Prep Date: **3/24/2025**	RunNo: **58201**
Client ID: **BatchQC**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **2503227-001AMSD**	SampType: **MSD**	TestCode: **200.8**	Units: **mg/L**	Prep Date: **3/24/2025**	RunNo: **58201**
Client ID: **BatchQC**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.511	0.0100	0.500	0.0398	94.2	70	130	0.525	2.74	20	
Copper	0.0513	0.000500	0.0500	0.00310	96.5	70	130	0.0532	3.51	20	
Iron	4.67	0.0500	5.00	0.0599	92.2	70	130	4.79	2.60	20	
Lead	0.0514	0.000100	0.0500	0.000174	102	70	130	0.0510	0.636	20	
Zinc	0.0812	0.00200	0.0500	0.0337	95.1	70	130	0.0836	2.83	20	

Sample ID: **CCV**	SampType: **CCV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.490	0.0100	0.500	0	97.9	90	110				
Copper	0.0505	0.000500	0.0500	0	101	90	110				
Iron	4.77	0.0500	5.00	0	95.4	90	110				
Lead	0.0476	0.000100	0.0500	0	95.3	90	110				
Zinc	0.0499	0.00200	0.0500	0	99.8	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758618**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758618**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									
Copper	ND	0.000500									
Iron	ND	0.0500									
Lead	0.000174	0.000100									
Zinc	ND	0.00200									

Sample ID: **CCV**	SampType: **CCV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758638**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.505	0.0100	0.500	0	101	90	110				
Copper	0.0504	0.000500	0.0500	0	101	90	110				
Iron	4.92	0.0500	5.00	0	98.4	90	110				
Zinc	0.0486	0.00200	0.0500	0	97.2	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758639**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/26/2025**	SeqNo: **758639**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.000500									
Iron	ND	0.0500									
Lead	ND	0.000100									
Zinc	ND	0.00200									

Sample ID: **ICV**	SampType: **ICV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **ICV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/27/2025**	SeqNo: **758935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0500	0.000100	0.0500	0	99.9	90	110				
Zinc	0.0517	0.00200	0.0500	0	103	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/27/2025**	SeqNo: **758936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.000100									
Zinc	ND	0.00200									

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **CCV**	SampType: **CCV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/27/2025**	SeqNo: **758955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0503	0.000100	0.0500	0	101	90	110				
Zinc	0.0508	0.00200	0.0500	0	102	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/27/2025**	SeqNo: **758956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.000100									
Zinc	ND	0.00200									

Sample ID: **ICV**	SampType: **ICV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **ICV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/28/2025**	SeqNo: **759094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.500	0.0100	0.500	0	100	90	110				

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works
Project: US Metal Works **TestCode:** **200.8**

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/28/2025**	SeqNo: **759097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									

Sample ID: **CCV**	SampType: **CCV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/28/2025**	SeqNo: **759101**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.521	0.0100	0.500	0	104	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **3/28/2025**	SeqNo: **759102**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									

Sample ID: **ICV**	SampType: **ICV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **ICV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.502	0.0100	0.500	0	100	90	110				

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works
Project: US Metal Works **TestCode:** **200.8**

Sample ID: **ICV**	SampType: **ICV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **ICV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									

Sample ID: **CCV**	SampType: **CCV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.500	0.0100	0.500	0	99.9	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									

Qualifiers:

E Value above quantitation range
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **CCV**	SampType: **CCV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.531	0.0100	0.500	0	106	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759937**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									

Sample ID: **CCV**	SampType: **CCV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.530	0.0100	0.500	0	106	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **200.8**

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **CCV**	SampType: **CCV**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCV**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.541	0.0100	0.500	0	108	90	110				

Sample ID: **CCB**	SampType: **CCB**	TestCode: **200.8**	Units: **mg/L**	Prep Date:	RunNo: **58201**
Client ID: **CCB**	Batch ID: **25717**	TestNo: **E200.8**	**E200.8**	Analysis Date: **4/1/2025**	SeqNo: **759944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.0100									

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works
Project: US Metal Works **TestCode:** **N2N3_CWA**

Sample ID: **ICV-R58236**	SampType: **ICV**	TestCode: **N2N3_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58236**
Client ID: **ICV**	Batch ID: **25761**	TestNo: **SM4500-NO3-** **SM4500-NO3-**		Analysis Date: **3/28/2025**	SeqNo: **759071**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate+Nitrite (As N)	0.251	0.0150	0.2500	0	100	90	110				

Sample ID: **ICB-R58236**	SampType: **ICB**	TestCode: **N2N3_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58236**
Client ID: **ICB**	Batch ID: **25761**	TestNo: **SM4500-NO3-** **SM4500-NO3-**		Analysis Date: **3/28/2025**	SeqNo: **759072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate+Nitrite (As N)	ND	0.0150									

Sample ID: **MB-R58236**	SampType: **MBLK**	TestCode: **N2N3_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58236**
Client ID: **PBW**	Batch ID: **25761**	TestNo: **SM4500-NO3-** **SM4500-NO3-**		Analysis Date: **3/28/2025**	SeqNo: **759074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate+Nitrite (As N)	ND	0.0150									

Sample ID: **LCS-R58236**	SampType: **LCS**	TestCode: **N2N3_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58236**
Client ID: **LCSW**	Batch ID: **25761**	TestNo: **SM4500-NO3-** **SM4500-NO3-**		Analysis Date: **3/28/2025**	SeqNo: **759075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate+Nitrite (As N)	0.495	0.0150	0.5000	0	99.0	90	110				

Qualifiers:
E Value above quantitation range
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works
Project: US Metal Works

TestCode: **N2N3_CWA**

Sample ID:	**LCS-R58236**	SampType:	**LCS**	TestCode:	**N2N3_CWA**	Units:	**mg/L**	Prep Date:		RunNo:	**58236**
Client ID:	**LCSW**	Batch ID:	**25761**	TestNo:	**SM4500-NO3-**	**SM4500-NO3-**		Analysis Date:	**3/28/2025**	SeqNo:	**759075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID:	**2503256-001DMS**	SampType:	**MS**	TestCode:	**N2N3_CWA**	Units:	**mg/L**	Prep Date:	**3/28/2025**	RunNo:	**58236**
Client ID:	**Discharge Drain 1**	Batch ID:	**25761**	TestNo:	**SM4500-NO3-**	**SM4500-NO3-**		Analysis Date:	**3/28/2025**	SeqNo:	**759077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate+Nitrite (As N)	0.561	0.0150	0.5000	0.05200	102	75	120				

Sample ID:	**2503256-001DMSD**	SampType:	**MSD**	TestCode:	**N2N3_CWA**	Units:	**mg/L**	Prep Date:	**3/28/2025**	RunNo:	**58236**
Client ID:	**Discharge Drain 1**	Batch ID:	**25761**	TestNo:	**SM4500-NO3-**	**SM4500-NO3-**		Analysis Date:	**3/28/2025**	SeqNo:	**759078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate+Nitrite (As N)	0.561	0.0150	0.5000	0.05200	102	75	120	0.5610	0	20	

Sample ID:	**CCV3-R58236**	SampType:	**CCV**	TestCode:	**N2N3_CWA**	Units:	**mg/L**	Prep Date:		RunNo:	**58236**
Client ID:	**CCV**	Batch ID:	**25761**	TestNo:	**SM4500-NO3-**	**SM4500-NO3-**		Analysis Date:	**3/28/2025**	SeqNo:	**759092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate+Nitrite (As N)	0.507	0.0150	0.5000	0	101	90	110				

Qualifiers:

E Value above quantitation range
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **N2N3_CWA**

Sample ID: **CCB3-R58236** SampType: **CCB** TestCode: **N2N3_CWA** Units: **mg/L** Prep Date: RunNo: **58236**

Client ID: **CCB** Batch ID: **25761** TestNo: **SM4500-NO3- SM4500-NO3-** Analysis Date: **3/28/2025** SeqNo: **759093**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrate+Nitrite (As N)	ND	0.0150									

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works
Project: US Metal Works **TestCode:** **NH3-N_CWA**

Sample ID: **ICV-R58172**	SampType: **ICV**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **ICV**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.476	0.0200	0.5000	0	95.2	90	110				

Sample ID: **ICB-R58172**	SampType: **ICB**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **ICB**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758069**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	ND	0.0200									

Sample ID: **MB-R58172**	SampType: **MBLK**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **PBW**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758071**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	ND	0.0200									

Sample ID: **LCS-R58172**	SampType: **LCS**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **LCSW**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.955	0.0200	1.000	0	95.5	80	120				

Qualifiers:

E Value above quantitation range
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **NH3-N_CWA**

Sample ID: **LCS-R58172**	SampType: **LCS**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **LCSW**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **2503256-001DMS**	SampType: **MS**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date: **3/25/2025**	RunNo: **58172**
Client ID: **Discharge Drain 1**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.07	0.0200	1.000	0.07100	100	68.7	124				

Sample ID: **2503256-001DMSD**	SampType: **MSD**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date: **3/25/2025**	RunNo: **58172**
Client ID: **Discharge Drain 1**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.07	0.0200	1.000	0.07100	100	68.7	124	1.073	0	20	

Sample ID: **CCV1-R58172**	SampType: **CCV**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **CCV**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	0.970	0.0200	1.000	0	97.0	90	110				

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works
Project: US Metal Works **TestCode:** **NH3-N_CWA**

Sample ID: **CCB1-R58172**	SampType: **CCB**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **CCB**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	ND	0.0200									

Sample ID: **CCV3-R58172**	SampType: **CCV**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **CCV**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	1.01	0.0200	1.000	0	101	90	110				

Sample ID: **CCB3-R58172**	SampType: **CCB**	TestCode: **NH3-N_CWA**	Units: **mg/L**	Prep Date:	RunNo: **58172**
Client ID: **CCB**	Batch ID: **25731**	TestNo: **SM4500-NH3**	**SM4500-NH3**	Analysis Date: **3/25/2025**	SeqNo: **758087**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia (As N)	ND	0.0200									

Qualifiers:

E Value above quantitation range
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works
Project: US Metal Works **TestCode:** **TSS_WW**

Sample ID: **MB-R58181**	SampType: **MBLK**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **58181**
Client ID: **PBW**	Batch ID: **R58181**	TestNo: **M2540 D**		Analysis Date: **3/25/2025**	SeqNo: **758254**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	ND	10.0									

Sample ID: **LCS-R58181**	SampType: **LCS**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **58181**
Client ID: **LCSW**	Batch ID: **R58181**	TestNo: **M2540 D**		Analysis Date: **3/25/2025**	SeqNo: **758255**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	103	10.0	100.0	0	103	80	120				

Sample ID: **2503246-001ADUP**	SampType: **DUP**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **58181**
Client ID: **BatchQC**	Batch ID: **R58181**	TestNo: **M2540 D**		Analysis Date: **3/25/2025**	SeqNo: **758259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	15.0	10.0						11.00	30.8	20	RRF

Sample ID: **2503258-001ADUP**	SampType: **DUP**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **58181**
Client ID: **BatchQC**	Batch ID: **R58181**	TestNo: **M2540 D**		Analysis Date: **3/25/2025**	SeqNo: **758271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	24.0	10.0						20.00	18.2	20	

Qualifiers:

E Value above quantitation range
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: **2503256**

4/2/2025

Client: US Metal Works

Project: US Metal Works **TestCode:** **TSS_WW**

Sample ID: **2503258-001ADUP**	SampType: **DUP**	TestCode: **TSS_WW**	Units: **mg/L**	Prep Date:	RunNo: **58181**
Client ID: **BatchQC**	Batch ID: **R58181**	TestNo: **M2540 D**		Analysis Date: **3/25/2025**	SeqNo: **758271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

E Value above quantitation range

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Name: US_METAL Work Order Number 2503256

RcptNo: 1 Date and Time Received: 3/21/2025 12:53:48 PM Received by: Mandy Wehe

Completed by: Reviewed by:

Completed Date: 3/21/2025 Reviewed Date: 3/24/2025 10:05:08 AM

Carrier name: Client

Chain of custody present?	Yes	☑	No	☐			
Chain of custody signed when relinquished and received?	Yes	☑	No	☐			
Chain of custody agrees with sample labels?	Yes	☑	No	☐	Not Present	☐	
Are matrices correctly identified on Chain of custody?	Yes	☑	No	☐			
Is it clear what analyses were requested?	Yes	☑	No	☐			
Custody seals intact on sample bottles?	Yes	☐	No	☐	Not Present	☑	
Samples in proper container/bottle?	Yes	☑	No	☐			
Were correct preservatives used and noted?	Yes	☑	No	☐	NA	☐	
Sample containers intact?	Yes	☑	No	☐			
Sufficient sample volume for indicated test?	Yes	☑	No	☐			
Were container lables complete (ID, Pres, Date)?	Yes	☑	No	☐			
All samples received within holding time?	Yes	☑	No	☐			
Was an attempt made to cool the samples?	Yes	☑	No	☐	NA	☐	
All samples received at a temp. of > 0° C to 6.0° C?	Yes	☑	No	☐	NA	☐	
Response when temperature is outside of range:							
Preservative added to bottles:							
Sample Temp. taken and recorded upon receipt?	Yes	☑	No	☐	To	4.9 ºC	
Water - Were bubbles absent in VOC vials?	Yes	☐	No	☐	No Vials	☑	
Water - Was there Chlorine Present?	Yes	☐	No	☐	NA	☑	
Water - pH acceptable upon receipt?	Yes	☑	No	☐	NA	☐	
Are Samples considered acceptable?	Yes	☑	No	☐			
Custody Seals present?	Yes	☐	No	☑			
Traffic Report or Packing Lists present?	Yes	☐	No	☑			
Airbill or Sticker?	Air Bill	☐	Sticker	☐	Not Present	☑	
Airbill No:							
Sample Tags Present?	Yes	☐	No	☑			
Sample Tags Listed on COC?	Yes	☐	No	☑			
Tag Numbers:							
Sample Condition?	Intact	☑	Broken	☐	Leaking	☐	

Case Number: SDG: SAS:

Adjusted? _____ Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section below.

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Sample Receipt Checklist

Client Contacted? ☐ Yes ☑ No ☐ NA Person Contacted: Comments:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

Chain of Custody Record

Specialty Analytical
9011 SE Jannsen Rd
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Date: 3-21-25 | Page: 1 of: 1 | Laboratory Project No (internal): 2503256

Client: U.S. Metal Wporks, Inc. | Project Name: US Metal Works | Temperature on Receipt: 4.9°C ice

Address: 36370 Industrial way | Project No: | PO No: | Custody Seal: Y (N)

City, State, Zip: Sandy, Oregon 97055 | Collected by: Steve Peeden | Notes:

Telephone: 503-668-8036 | State Collected: OR ☑ WA ☐ OTHER | Shipped Via: Client

Invoice To: | Report To (PM): Steve Peeden | Sample Disposal: ☐ Return to client ☑ Disposal by lab (after 60 days)

PM Email: steve.peeden@usmetalworks.com

Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	TSS	Cu,FE,Pb,Zn,Al	1664	NH3	N2N3	Requested Tests							Comments
1 Discharge Drain 1	3-21	11:00a		4													PH 6.75 at 11:05 am
2																	
3 Discharge Drain 2	3-21	11:15a		4													PH 6.82 at 11:20 am
4																	
5																	
6																	
7																	
8																	
9																	
10																	

*Matrix: A = Air, AQ = Aqueous, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water **Metals

Turn-around Time: Standard (5-7 Business): ☑ 3 Day: ☐ 2 Day: ☐ Next Day: ☐ Same Day: ☐

Relinquished	Date/Time	Received	Date/Time
x [signature]	3-21-25 12:44	x [signature]	3/21/25 12:44
Relinquished	Date/Time	Received	Date/Time
x		x	

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Definition Only

WO#: **2503256**
Date: **4/2/2025**

Definitions:

KEY TO FLAGS

A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.

A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.

A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.

A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.

A4: The product appears to be aged or degraded.

B: The blank exhibited a positive result greater than the reporting limit for this compound.

BC: Sample concentration is >10x positive result in blank. Data is considered acceptable.

CL: Sample was found to contain chlorine and was treated with sodium thiosulfate.

CN: See Case Narrative.

E: Result exceeds the calibration range for this compound. The result should be considered an estimate.

F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.

FS: Follow-up testing is suggested.

G: Result may be biased high due to biogenic interferences. Clean up is recommended.

H: Sample was analyzed outside recommended holding time.

HT: □At client's request, samples was analyzed outside of recommended holding time.

Definitions:

HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.

J: The results for this analyte is between the MDL and the PQL and should be considered an estimated concentration.

K: Diesel result is biased high due to amount of Oil contained in the sample.

L: Diesel result is biased high due to amount of Gasoline contained in the sample.

M: Oil result is biased high due to amount of Diesel contained in the sample.

N: Gasoline result is biased high due to amount of Diesel contained in the sample.

MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.

MI: Result is outside control limits due to matrix interference.

NH: Sample matrix is non-homogeneous

MSA: Value determined by Method of Standard Addition.

O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.

Q: Detection levels elevated due to sample matrix.

R: RPD control limits were exceeded

RF: Duplicate failed due to result being at or near the method-reporting limit.

RP: Matrix spike values exceed established QC limits; post digestion spike is in control.

S: Recovery is outside control limits.

SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data

Definitions:

meets EPA requirements.

SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.

SV: CCV exceded low recovery control limits. ND as reported evaluated using EPA method 8260D section 11.4.3.2

TA: Sample treated with ascorbic acid for the removal of thiocyanates.

TS: Sample treated with Sodium Sulfite for the removal of chlorine.