Foth & Van Dyke

Memorandum

August 1, 2006

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RE: Vic Vac Dredge Test Area Results and Evaluation

The objectives of this memorandum are to present results of the Vic Vac dredge test that was conducted in Lower Fox River OU1, Sub-area POG3 South, during June 2006 and to evaluate the effectiveness of the Vic Vac.

Introduction

The Vic Vac dredge does not use a conventional horizontal auger or cutterhead technology, but rather a suction assembly that provides focused suction directly below the assembly. Attachment 1 includes a diagram of the Vic Vac (patent pending) dredge head. The Vic Vac was designed by JF Brennan Co. to target removal of thin layers of soft sediment above a firm substrate. Of particular interest was a design that would remove soft sediment atop a clay substrate without agitating the clay and avoiding clay plumes in the river, and unwanted clay at the dewatering and water treatment facilities.

On June 12th, 2006, a Vic Vac dredge head was installed on the Grand Calumet dredge. Between June 13th, 2006 and June 16, 2006 two Vic Vac dredge test areas were dredged and the dredge performance was monitored as described below.

Scope of Study

Two areas within Sub-area POG3 South were selected for Vic Vac dredge testing, shown on Figure 1. The two areas were selected based on having a thin proposed sediment cut with less than 4 inches of soft sediment anticipated below the GMS modeled 1 ppm PCB RAL surface.

The first area was located in DMU-17POG3 (Vic Vac North), which provided approximately 16,630 square feet of dredge area with an average sediment thickness of approximately 3.6 inches (average of eight 2 inch diameter pre-dredge cores). The second area was located in DMU-11POG3 (Vic Vac South), which provided approximately 13,760 square feet of dredge

area with an average sediment thickness of approximately 4.6 inches (average of seven 2 inch diameter pre-dredge cores).

In order to determine the effectiveness of the Vic Vac Dredge the following activities were completed:

1. A pre- and post-dredge bathymetric survey was completed in each test area to assess the volume of sediment removed.
2. Pre-and post-dredge sediment cores were collected from each of the areas to assess dredge residuals.
3. The dredged operated in each of the identified areas for at least 24-hours
4. Turbidity monitoring was conducted both upstream and down stream of the Vic Vac to assess the Vic Vac's ability to control dredge-induced turbidity.

Field Activities

Prior to commencing dredging activities in the test areas, a pre-dredge survey was conducted using the same protocol as QA surveys for the OU1 RA. Two inch diameter pre-dredge sediment cores were then collected from the locations shown on Figure 2 for the purpose of establishing a baseline for sediment thickness and PCB concentration in the test areas. PCB results are provided in Table 1 and shown on Figure 3. Soft-sediment thicknesses are summarized in Table 2 and shown on Figure 4. At the completion of dredging activities a post-dredge survey was conducted following the same protocol as QA surveys. Consistent with normal QA procedures for OU1, Vic Vac test areas identified as being above target elevation at the completion of dredging were cored with small diameter cores (mini-cores) to assess if the areas above target elevation had less than 4 inches of soft sediment remaining. No areas cored with mini-cores had greater than 4 inches of soft sediment present.

On June 13, 2006, the Grand Calumet began dredging with the Vic Vac dredge head. The dredge production rate, as reported by JF Brennan, for DMU 11 (Vic Vac South) and DMU 17 (Vic Vac North) was approximately 868 sq. ft/ gross operational hour (goh) or approximately 20,000 sq. ft/ day. Based on pre- and post-dredge survey data, approximately 63 cubic yards of sediment was removed from the Vic Vac Areas.

During dredging activities in the test areas, in situ surface water turbidity readings were recorded using a hand-held field meter and surface water samples were collected from each of the turbidity rafts. Surface water samples were submitted to Pace Analytical for analysis of total suspended solids. In addition, real-time turbidity meters, located on each turbidity raft, collected turbidity data on 15-minute intervals during the study. Results from the lab analyses and hand-held meters are presented in Table 3 and real-time turbidity data is shown on Figure 5.

Upon completion of dredging activities in the test areas, 2 inch diameter post-dredge sediment cores were collected from the approximate same locations as the pre-dredge cores as shown on Figure 2. Results of the post-dredge sediment thickness and PCB residuals resulting from these core samples are provided in Tables 1 and 2, respectively.

Evaluation

Sediment Thickness

In reviewing Table 2, it is clear that the Vic Vac dredge was effective in removing the thin veneer of sediment present in the two test areas. The North and South test areas had pre-dredge soft sediment thicknesses of 3.6 inches and 4.6 inches, respectively. Following dredging, the average sediment thickness in the North and South areas was 2.4 and 0.8 inches, respectively. Overall, an average 60% reduction in sediment thickness was observed, with a 100% reduction occurring in one third of the locations. Worth noting is the physical observation of the post-dredge 2 inch cores which typically showed little mixing of the underlying clay with the overlying soft sediment, unlike the cutterhead dredged areas which often reveal mixing of soft sediment with the underlying clay substrate.

PCB Residuals

Table 4 summarizes the pre- and post-dredge PCB results within the test areas. Since the results from both the North and South test areas are similar they will not be evaluated separately. PCB reductions in both areas were in the range of 95 to 100%. The one anamoly was at sample location 48VV5 where the post-dredge result was actually slightly higher than the pre-dredge sample, but still well below the 1.0 ppm PCB RAL (0.068 ppm).

Turbidity/TSS

The turbidity/total suspended solids (TSS) results are presented in Table 3 and Figure 5. Table 5 summarizes the minimum, maximum and average nephelometric turbidity unit (NTU) values for hand-held and real-time turbidity meters as well as TSS values. Since extensive data collection, outside of normal QA monitoring, was not conducted for turbidity or TSS during the Vic Vac test period, the effect of the Vic Vac on turbidity/TSS is not as easy to discern as the positive impacts on sediment thickness and PCB residuals.

The turbidity results are similar for both the cutterhead and Vic Vac during the test period. However visual observations by both the Foth & Van Dyke QA Team and Agencies/Oversight Team during operation of the Vic Vac indicated noticeably less dredge induced turbidity in near proximity to the Vic Vac than with the cutterhead. Since the turbidity monitoring points are typically hundreds of feet from the dredging operations, it is not totally unexpected that the results do not differ significantly for the two dredge types. The ambient turbidity typically masks differences in dredge induced turbidity the farther from the dredge the monitoring points are.

Dredge Production

A meaningful measure of production with thin dredge cuts is square feet covered per day. As reported by JF Brennan Co., with the cutterhead dredge operating in OU1 this year the average production rate through June 2006 was 603 sq. feet/ goh or 14,082 sq. feet per day in POG3 South. During the Vic Vac test period, the Vic Vac averaged, 868 sq. feet/goh or 20,000 sq. feet/day. The Vic Vac has been used in a production dredging mode since the completion of the Vic Vac test areas and has averaged approximately 698 sq. feet/ goh or 16,752 sq. ft per day,

including DMU 22 POG3 (TSCA area). This production rate is lower than during the test period due to recent major repairs to the dredge and differences in normal operating mode versus test operating mode.

Dredge volume is another measure of dredge production. Based on pre-dredge and post-dredge QA surveys, the Vic Vac removed 44 cubic yards in the Vic Vac North area and 19 cubic yards in the Vic Vac South area. While these volumes are low, the sediment thickness in these areas was very thin to start with. The post-dredge residual results obviously indicate that the Vic Vac was very effective in managing residuals.

Conclusions

Based on the results of the Vic Vac test areas, the Vic Vac has demonstrated that it is an efficient tool to dredge in circumstances with thin layers of soft sediment above a clay layer or other firm substrate.

The advantages of the Vic Vac are:

1. Reduction in the mixing of soft sediment with underlying clay substrate, thereby reducing dredge induced turbidity and the need to handle excessive clay in the dewatering and water treatment operation.

2. Low PCB residual concentrations in areas similar to those used in the Vic Vac test.

3. Production levels similar to cutterhead dredges in similar environments.

The performance of the Vic Vac will continue to be monitored as the dredge performs in a production mode during the remainder of 2006. If the ability of the Vic Vac to reach target elevation (with consideration for confirmed high subgrade) and to produce low PCB residuals continues as was witnessed in the Vic Vac test areas, the Vic Vac will be the preferred method of dredging in OU1 where conditions similar to POG3 South exist. The Vic Vac may also be utilized in areas of thicker cuts with performance continually monitored by routine QA activities.

Table 1
Vic Vac Test Area Pre- and Post-Dredge PCB Results
GW Partners Lower Fox River - OU-1 (04G007)
Vic Vac Results Memo

ID		Sample ID	Sample Type (P/S/NSS)	Collection Date	Actual Y (SPS)	Actual X (SPS)	DMU	Percent Solids	PCB Results (ppm)
POG3-Vic Vac Test Areas									
Primary Samples									
30P	pre	1-RA-06-POG3-SC-30P(0-4)	P	6/19/2006	807106	2371513	11	31.2	10
30P	post	No Recovery	P	6/22/2006			11	NA	0.0168
31P	pre	1-RA-06-POG3-SC-31P(0-4)	P	6/19/2006	807156	2371628	11	63.1	4.8
31P	post	No Recovery	p	6/22/2006					0.0168
38VV1	pre	1-RA-06-POG3-SC-VV1(0-4)	P	6/19/2006	807184	2371464	11	49.5	3.4
38VV1	post	1-RA-06-POG3-PS-VV1(0-4)	P	6/29/2006	807188	2371487	11	73.1	0.17
48VV2	pre	1-RA-06-POG3-SC-VV2(0-4)	P	6/19/2006	807149	2371559	11	43.2	3.6
48VV2	post	No Recovery	P	6/22/2006			11	NA	0.0168
48P	pre	1-RA-06-POG3-SC-48P(0-4)	P	6/19/2006	807434	2371620	17	39.1	140
48P	pre	1-RA-06-POG3-SC-48P(4-8)	P	06/23/06	807434	2371620	17	67.2	80
48P	post	1-RA-06-POG3-PS-48P(0-4)	P	6/29/2006	807434	2371618	17	68.6	0.045
48VV3	pre	1-RA-06-POG3-SC-VV3(0-4)	P	6/19/2006	807358	2371531	17	35.1	8.8
48VV3	post	No Recovery	P	6/22/2006			17	NA	0.0168
48VV4	pre	1-RA-06-POG3-SC-VV4(0-4)	P	6/19/2006	807430	2371532	17	30.9	40
48VV4	pre	1-RA-06-POG3-SC-VV4(4-8)	P	06/23/06	807430	2371532	17	71.6	160
48VV4	post	1-RA-06-POG3-PS-VV4(0-4)	P	6/29/2006	807436	2371543	17	65.9	0.032
48VV5	pre	No Recovery	P	6/13/2006			17	NA	0.0168
48VV5	post	1-RA-06-POG3-PS-VV5(0-4)	P	6/29/2006	807403	2371605	17	84.6	0.068
48VV6	pre	1-RA-06-POG3-SC-VV6(0-4)	P	6/19/2006	807436	2371673	17	52.3	4.8
48VV6	pre	1-RA-06-POG3-SC-VV6(0-4)(DUP)	P/DUP	6/19/2006	807436	2371673	17	53.3	1.7
48VV6	pre	1-RA-06-POG3-SC-VV6(4-8)	P	06/23/06	807436	2371673	17	68.1	0.039
48VV6	post	1-RA-06-POG3-PS-VV6(0-4)	P	6/29/2006	807431	2371680	17	75.8	<0.027
Discrete Secondary Samples									
30B	pre	1-RA-06-POG3-SC-30B(0-4)	S	6/19/2006	807149	2371559	11	35.1	8
30C	pre	1-RA-06-POG3-SC-30C(0-4)	S	6/19/2006	807106	2371513	11	30.2	9.3
38D	pre	1-RA-06-POG3-SC-38D(0-4)	S	6/19/2006	807180	2371585	11	43.7	5.8
39B	pre	1-RA-06-POG3-SC-39B(0-4)	S	6/19/2006	807156	2371628	17	60.1	13
39B	pre	1-RA-06-POG3-SC-39B(4-8)	S	06/23/06	807156	2371628	17	68.8	0.031
48B	pre	1-RA-06-POG3-SC-48B(0-4)	S	6/19/2006	807406	2371558	17	55.3	5.1
48B	pre	1-RA-06-POG3-SC-48B(4-8)	S	06/23/06	807406	2371558	17	68.9	0.046
48D	pre	1-RA-06-POG3-SC-48D(0-4)	S	6/19/2006	807402	2371658	17	49.3	53
48D	pre	1-RA-06-POG3-SC-48D(4-8)	S	06/23/06	807402	2371658	17	75.0	0.048

Table 2
Vic Vac Test Area Pre- and Post-Dredge Soft Sediment Thicknesses and Poling Depths
GW Partners Lower Fox River - OU-1 (04G007)
Vic Vac Results Memo

	Pre-dredge	Post-dredge	Pre-Dredge			Post-Dredge			Summary		
Location ID	Collection Date	Collection Date	Soft Sediment Coring Thickness (Feet)	Poling Depth (Light Effort) (Feet)	Poling Depth (To Refusal) (Feet)	Soft Sediment Coring Thickness (Feet)	Poling Depth (Light Effort) (Feet)	Poling Depth (To Refusal) (Feet)	Soft Sediment Coring Thickness Change (Percent)	Poling Depth Change (Light Effort) (Percent)	Poling Depth Change (To Refusal) (Percent)
Vic Vac North Area											
VV-3	6/13/2006	6/22/2006	0.44	0.51	0.71	0.21	0.20	1.20	**52%**	**61%**	**-69%**
VV-4	6/13/2006	6/22/2006	0.44	0.44	0.64	0.00	0.55	0.35	**100%**	**-25%**	**45%**
VV-5	6/13/2006	6/22/2006	0.27	0.52	1.62	0.23	0.60	1.50	**15%**	**-15%**	**7%**
VV-6	6/13/2006	6/22/2006	0.44	0.48	1.58	0.00	0.15	1.15	**100%**	**69%**	**27%**
POG3-39B	6/13/2006	6/22/2006	0.23	0.60	1.70	0.29	0.45	1.50	**-26%**	**25%**	**12%**
POG3-48P	6/13/2006	6/22/2006	0.25	0.48	1.48	0.31	0.30	1.30	**-24%**	**38%**	**12%**
POG3-48B	6/13/2006	6/22/2006	0.38	0.62	1.42	0.25	0.70	1.30	**34%**	**-13%**	**8%**
POG3-48D	6/13/2006	6/22/2006	0.23	0.66	1.66	0.33	0.10	0.70	**-43%**	**85%**	**58%**
North Area Averages			**0.34**	**0.54**	**1.35**	**0.20**	**0.38**	**1.13**	**40%**	**29%**	**17%**
Vic Vac South Area											
VV-1	6/13/2006	6/22/2006	0.29	0.30	0.78	0.21	0.00	1.10	**28%**	**100%**	**-41%**
VV-2	6/13/2006	6/22/2006	0.40	0.30	1.00	0.00	0.15	0.45	**100%**	**50%**	**55%**
POG3-30P	6/13/2006	6/22/2006	0.66	0.42	0.92	0.00	0.75	0.95	**100%**	**-79%**	**-3%**
POG3-30B	6/13/2006	6/22/2006	0.42	0.28	1.28	0.00	0.25	0.75	**100%**	**11%**	**41%**
POG3-30C	6/13/2006	6/22/2006	0.40	0.42	1.32	0.10	0.50	1.40	**75%**	**-19%**	**-6%**
POG3-31P	6/13/2006	6/22/2006	0.10	0.22	0.72	0.00	0.05	1.05	**100%**	**77%**	**-46%**
POG3-38D	6/13/2006	6/22/2006	0.42	0.30	1.20	0.21	0.15	1.55	**50%**	**50%**	**-29%**
South Area Averages			**0.38**	**0.32**	**1.03**	**0.07**	**0.26**	**1.04**	**81%**	**17%**	**0%**
Total Vic Vac Area Averages			**0.36**	**0.44**	**1.20**	**0.14**	**0.33**	**1.08**	**60%**	**25%**	**10%**

Prepared By: SVF
Checked By: DMR

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Table 3
Vic Vac Test Area Downstream Surface Water Results
Actual Surface Turbidity and TSS Data and Locations (Hand Held NTU Meter)
GW Partners Lower Fox River - OU-1 (04G007)
Vic Vac Results Memo

Sample ID	Sample Type (P/S/NSS)	Collection Date	Actual X (Lat)	Actual Y (Long)	TSS (mg/L)	Turbidity Reading (NTUs)
1-RA-06-C/D2S-SW-54-912-RINSE	--	6/5/2006	44 12 05.1	88 28 15.1	<0.24	NA
1-RA-06-POG3-SW-56-902-DUP	--	6/5/2006	44 12 14.1	88 28 14.9	8.0	NA
1-RA-06-C/D2S-SW-67-912-RINSE	--	6/14/2006	44 12 10.8	88 27 56.1	<0.24	NA
1-RA-06-C/D2S-SW-48-905	Fox River - cutter head	5/31/2006	44 12 14.1	88 28 14.9	10	7.0
1-RA-06-C/D2S-SW-51-905	Fox River - cutter head	6/2/2006	44 12 14.1	88 28 14.9	13	7.8
1-RA-06-C/D2S-SW-55-905	Fox River - cutter head	6/5/2006	44 12 14.1	88 28 14.9	12	7.6
1-RA-06-C/D2S-SW-58-905	Fox River - cutter head	6/7/2006	44 12 14.1	88 28 14.9	15	9.8
1-RA-06-C/D2S-SW-61-905	Fox River - cutter head	6/9/2006	44 12 14.1	88 28 14.9	25	21.0
1-RA-06-C/D2S-SW-64-905	Fox River - cutter head	6/12/2006	44 12 14.1	88 28 14.9	15	8.3
1-RA-06-C/D2S-SW-68-905	Fox River - cutter head	6/14/2006	44 12 17.8	88 27 47.4	12	8.4
1-RA-06-C/D2S-SW-71-905	Fox River - cutter head	6/16/2006	44 12 22.0	88 27 47.7	7.1	5.0
1-RA-06-POG3-SW-49-902	Grand Calumet - vic vac	5/31/2006	44 12 14.6	88 27 45.9	9.8	7.1
1-RA-06-POG3-SW-52-902	Grand Calumet - vic vac	6/2/2006	44 12 14.6	88 27 45.9	8.5	32.2
1-RA-06-POG3-SW-56-902	Grand Calumet - vic vac	6/5/2006	44 12 14.1	88 28 14.9	8.3	7.2
1-RA-06-POG3-SW-59-902	Grand Calumet - vic vac	6/7/2006	44 12 14.6	88 27 45.9	18	12.8
1-RA-06-POG3-SW-62-902	Grand Calumet - vic vac	6/9/2006	44 12 14.6	88 27 45.9	36	27.4
1-RA-06-POG3-SW-65-902	Grand Calumet - vic vac	6/12/2006	44 12 14.6	88 27 45.9	7.0	14.0
1-RA-06-POG3-SW-69-902	Grand Calumet - vic vac	6/14/2006	44 12 14.7	88 27 45.9	12	9.4
1-RA-06-POG3-SW-69-902-DUP	Grand Calumet - vic vac	6/14/2006	44 12 14.7	88 27 45.9	12	NA
1-RA-06-POG3-SW-72-902	Grand Calumet - vic vac	6/16/2006	44 12 14.7	88 27 45.9	10	9.4
1-RA-06-C/D2S-SW-47-912	upstream	5/31/2006	44 12 06.6	88 28 14.0	8.8	5.8
1-RA-06-C/D2S-SW-50-912	upstream	6/2/2006	44 12 06.6	88 28 14.0	7.6	10.3
1-RA-06-C/D2S-SW-53-912	upstream	6/5/2006	44 12 05.1	88 28 15.1	9.1	6.0
1-RA-06-C/D2S-SW-57-912	upstream	6/7/2006	44 12 05.1	88 28 15.1	15	10.2
1-RA-06-C/D2S-SW-60-912	upstream	6/9/2006	44 12 05.1	88 28 15.1	10	6.9
1-RA-06-C/D2S-SW-63-912	upstream	6/12/2006	44 12 05.1	88 28 15.1	11	5.3
1-RA-06-C/D2S-SW-66-912	upstream	6/14/2006	44 12 10.8	88 27 56.1	6.5	4.2
1-RA-06-C/D2S-SW-70-912	upstream	6/16/2006	44 12 10.8	88 27 56.1	16	15.2

Table 4
Vic Vac Test Area PCB Result Summary
GW Partners Lower Fox River - OU-1 (04G007)
Vic Vac Results Memo

ID	PCB Result (ppm) - Pre (0-4")	PCB Result (ppm) - Pre (4-8")	PCB Result (ppm) - Post (0-4")	Percent change in PCB Concentration
Primary Samples				
30P	10	-	0.0168	99.8%
31P	4.8	-	0.0168	99.7%
38VV1	3.4	-	0.170	95.0%
48VV2	3.6	-	0.0168	99.5%
48P	140	80	0.045	100.0%
48VV3	8.8	-	0.0168	99.8%
48VV4	40	160	0.032	99.9%
48VV5	0.0168	-	0.068	-304.8%
48VV6	4.8	0.039	0.013	99.7%
Discrete Secondary Samples				
30B	8			
30C	9.3			
38D	5.8			
39B	13	0.031		
48B	5.1	0.046		
48D	53	0.048		

Average PCB Concentration Reduction **54.3%***

*** Excluding 48VV5 Sample, Average PCB Concentration Reduction** **99.2%**

Average pre-dredge PCB Concentration		Average post-dredge PCB Concentration
0-4"	**4-8"**	**0-4"**
21	**40**	**0.044**

Prepared By: SVF
Checked By: DMR

Table 5
Vic Vac Test Area TSS and Turbidity Summary
GW Partners Lower Fox River - OU-1 (04G007)
Vic Vac Results Memo

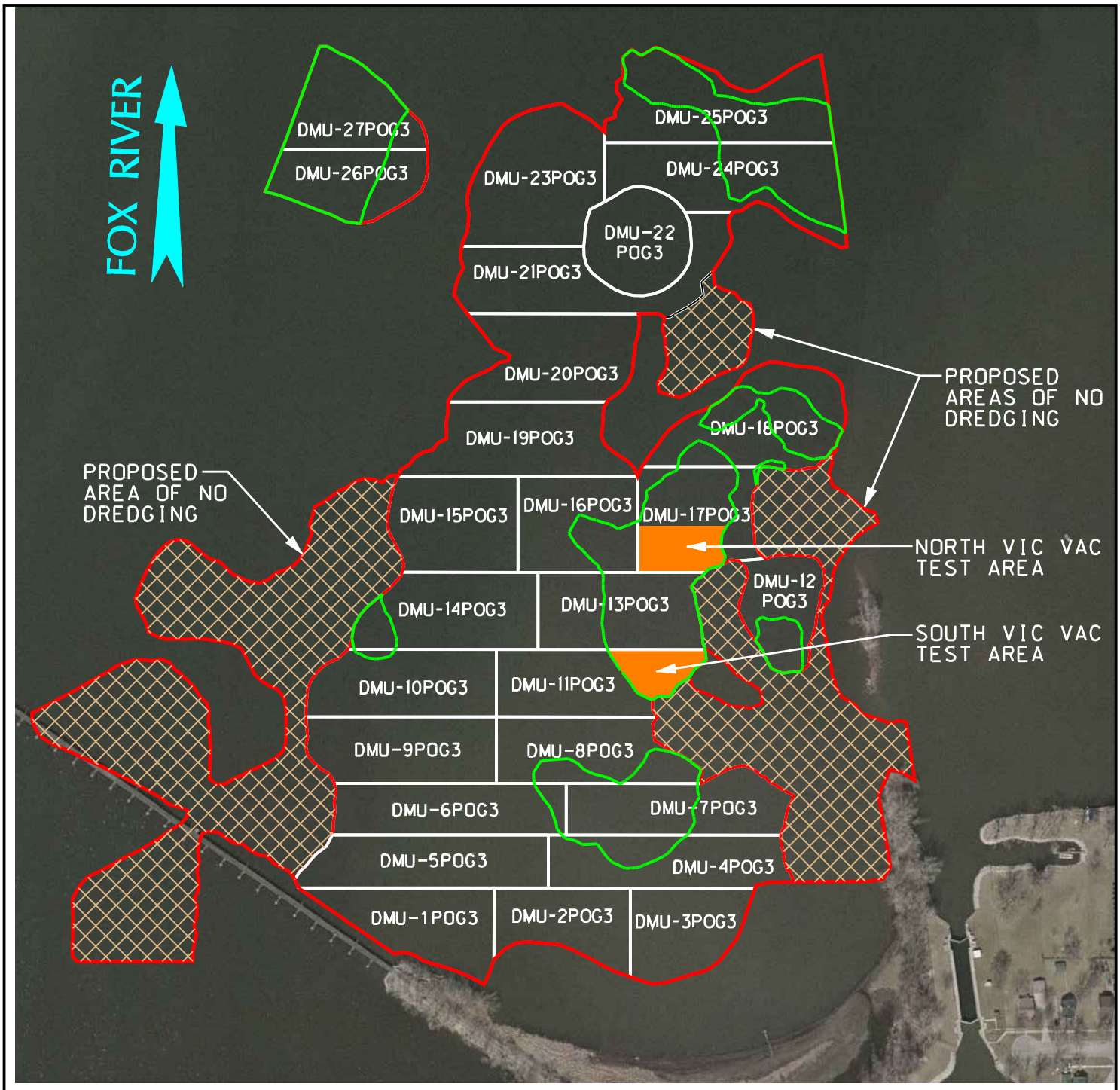
Real Time Turbidity[1] (NTU)						
	Upstream of Dredging Activities		Downstream of Grand Calumet (Vic Vac)		Downstream of Fox River (cutter head)	
	6/6 - 6/12	6/13 - 6/16	6/6 - 6/12	6/13 - 6/16	6/13 - 6/16	6/13 - 6/16
Average	6.5	4.7	19.0	9.5	11.5	8.2
Minimum	0.3	1.0	5.5	0.0	0.9	0.0
Maximum	19.2	29.0	65.0	52.5	23.2	29.8

Handheld Turbidity (NTU)						
	Upstream of Dredging Activities		Downstream of Grand Calumet (Vic Vac)		Downstream of Fox River (cutter head)	
	6/5 - 6/12	6/12 - 6/16	6/5 - 6/12	6/13 - 6/16	6/5 - 6/12	6/13 - 6/16
Average	7.8	8.2	16.8	9.4	10.25	6.7
Minimum	5.8	4.2	7.1	9.4	7	5
Maximum	10.3	15.2	32.2	9.4	21	8.4

Laboratory TSS (mg/L)						
	Upstream of Dredging Activities		Downstream of Grand Calumet (Vic Vac)		Downstream of Fox River (cutter head)	
	6/5 - 6/12	6/12 - 6/16	6/5 - 6/12	6/13 - 6/16	6/5 - 6/12	6/13 - 6/16
Average	10.1	11.2	14.6	11.3	15.0	9.6
Minimum	7.6	6.5	7.0	10.0	10.0	7.1
Maximum	15.0	16.0	36.0	12.0	25.0	12.0

Notes:
1 = Anomolous spikes caused by equipment interferences were removed when determining average, minimum, and maximum values.
NTU = Nephelometric turbidity units
mg/L = milligrams/liter

Prepared By: SVF
Checked By: DAT



LEGEND

- SUB-AREA POG3 BOUNDARY (SEDIMENT > 1.0 ppm PCB)
- AREAS OF LOW SOFT SEDIMENT THICKNESS (< 4'' BELOW 1PPM RAL)
- AREAS OF PROPSED VIC VAC TEST DREDGING

N

NOTES:

1. THE HORIZONTAL CONTROL IS REFERENCED TO THE NAD83 WISCONSIN STATE PLANE COORDINATE SYSTEM (WISCONSIN SOUTHERN ZONE).
2. SUB-AREA AREA POG3 BOUNDARY BY CH2MHILL.

0 150' 300'
BAR SCALE

Foth & Van Dyke

GW PARTNERS

FIGURE 1

LOWER FOX RIVER - SUB AREA POG3
PROPOSED VIC VAC DREDGE TEST AREAS

Date: JUNE 2006	Revision Date:
Drawn By: JRB2	Checked By: DMR	Scope: 04G007

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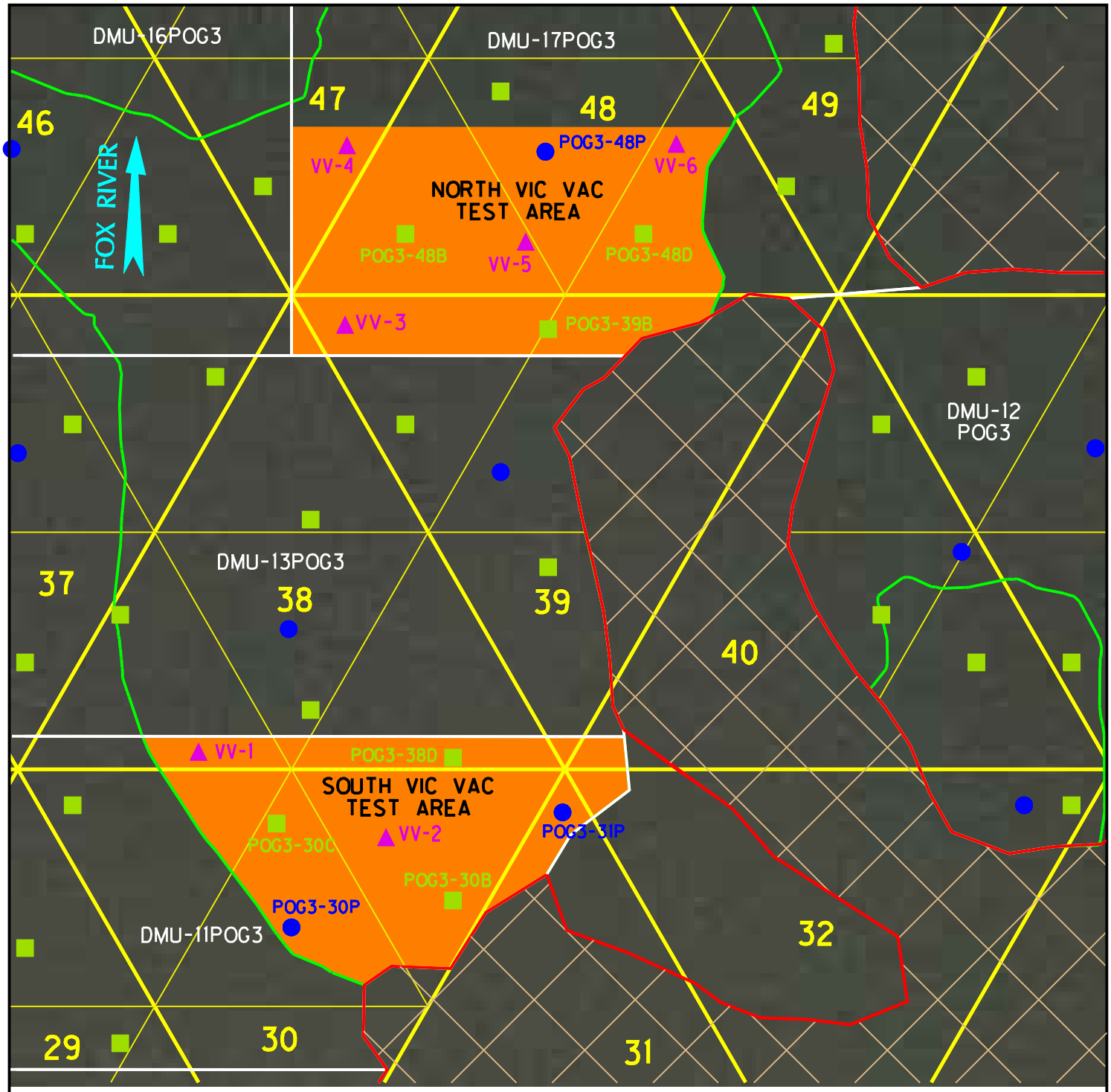

LEGEND

- SUB-AREA POG3 BOUNDARY (SEDIMENT > 1.0 ppm PCB)
- AREAS OF LOW SOFT SEDIMENT THICKNESS
- AREAS OF PROPSED VIC VAC TEST DREDGING
- ADDITIONAL PRE AND POST DREDGE CORE SAMPLE LOCATIONS
- PRIMARY POST DREDGE CORE SAMPLE LOCATION
- SECONDARY POST DREDGE CORE SAMPLE LOCATION

N

0 30' 60'
BAR SCALE

NOTES:

1. THE HORIZONTAL CONTROL IS REFERENCED TO THE NAD83 WISCONSIN STATE PLANE COORDINATE SYSTEM (WISCONSIN SOUTHERN ZONE).
2. SUB-AREA AREA POG3 BOUNDARY BY CH2MHILL.

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FIGURE 2

LOWER FOX RIVER - SUB AREA POG3 PROPOSED PRE & POST DREDGE CORE SAMPLE LOCATIONS IN THE VIC VAC DREDGE TEST AREAS

Date: JUNE, 2006	Revision Date:
Drawn By: JRB2	Checked By: DMR	Scope: 04G007

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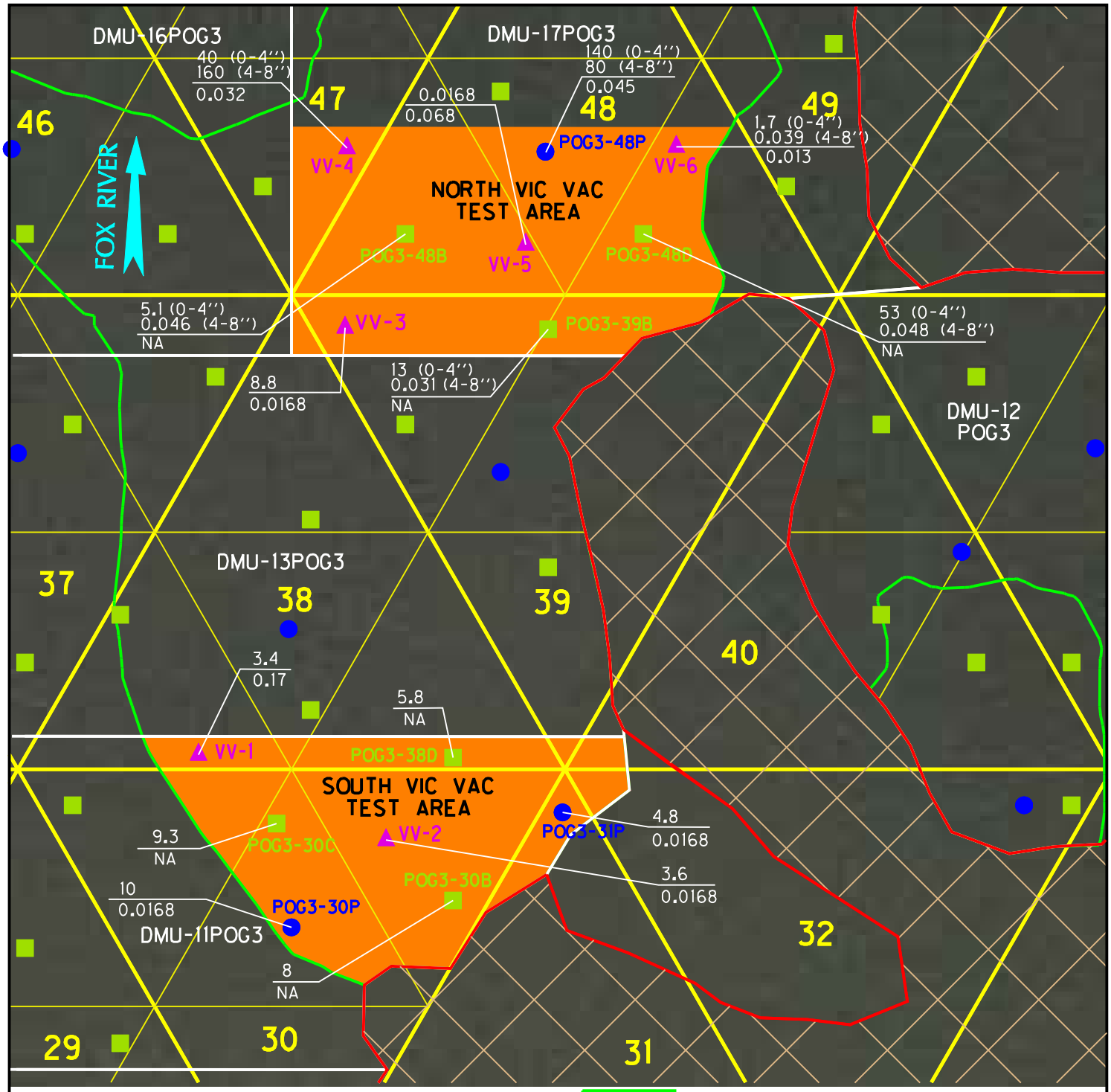
8/1/2006 dat



LEGEND

- SUB-AREA POG3 BOUNDARY (SEDIMENT > 1.0 ppm PCB)
- AREAS OF LOW SOFT SEDIMENT THICKNESS
- AREAS OF PROPSED VIC VAC TEST DREDGING
- PREDREDGE RESULT / POSTDREDGE RESULT — PRIMARY POST DREDGE CORE SAMPLE LOCATION
- PREDREDGE RESULT / POSTDREDGE RESULT — SECONDARY POST DREDGE CORE SAMPLE LOCATION AND PCB RESULT
- PREDREDGE RESULT / POSTDREDGE RESULT — ADDITIONAL PRE AND POST DREDGE CORE SAMPLE LOCATIONS AND PCB RESULT

NOTES:

1. THE HORIZONTAL CONTROL IS REFERENCED TO THE NAD83 WISCONSIN STATE PLANE COORDINATE SYSTEM (WISCONSIN SOUTHERN ZONE).
2. SUB-AREA AREA POG3 BOUNDARY BY CH2MHILL.
3. A VALUE OF 0.0168 PPM IS ASSIGNED TO SAMPLE LOCATIONS WHERE SOFT SEDIMENT SAMPLES COULD NOT BE RETRIEVED AFTER 2 ATTEMPTS.

N

0 30' 60'
BAR SCALE

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FIGURE 3

LOWER FOX RIVER - SUB AREA POG3 PRE & POST DREDGE CORE SAMPLE LOCATIONS AND PCB RESULTS

Date: JULY, 2006	Revision Date:
Drawn By: DAT	Checked By: DMR	Scope: 04G007

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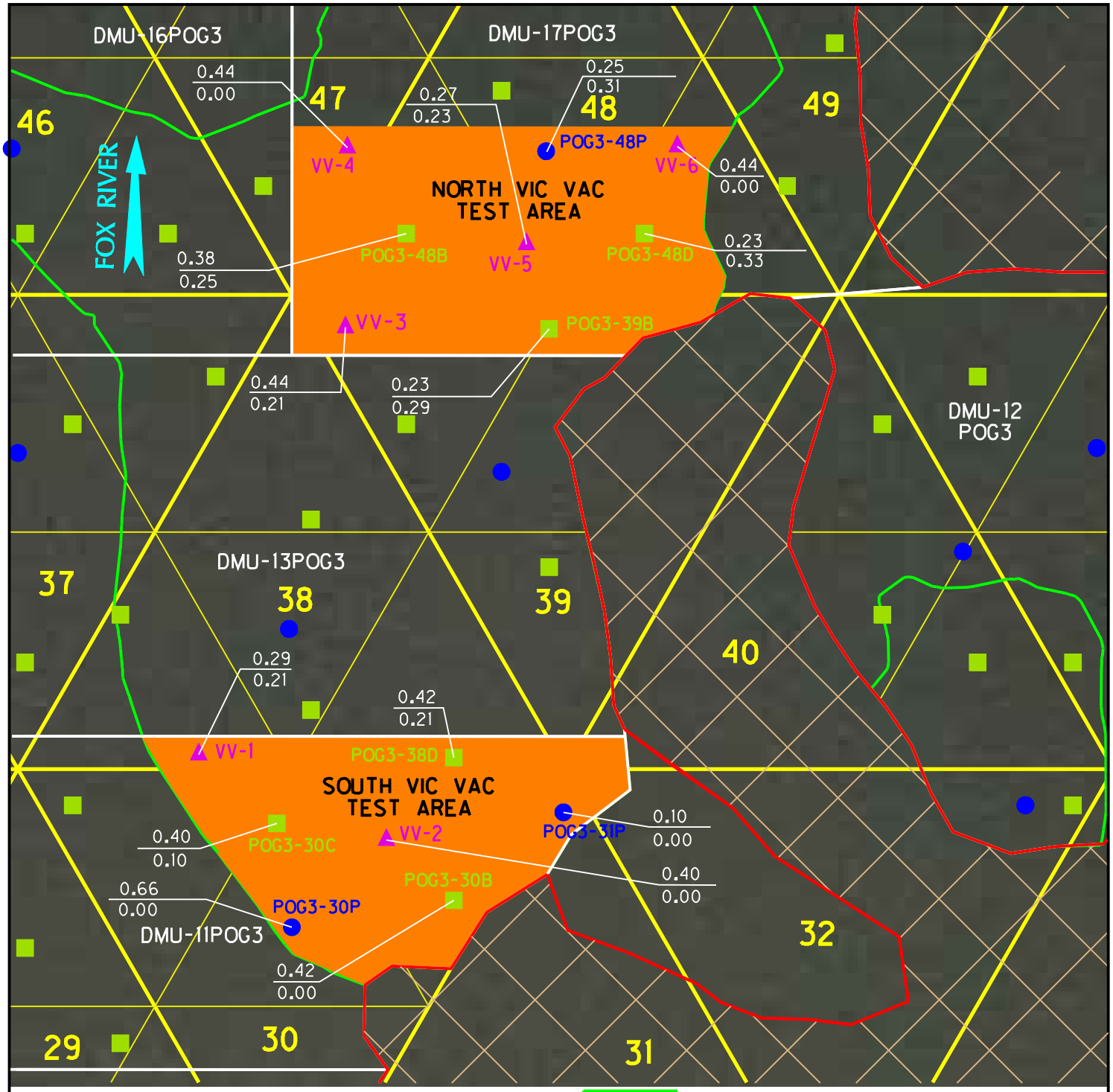
8/1/2006 dat



LEGEND

- SUB-AREA POG3 BOUNDARY (SEDIMENT > 1.0 ppm PCB)
- PREDREDGE RESULT / POSTDREDGE RESULT — PRIMARY POST DREDGE CORE SAMPLE LOCATION
- PREDREDGE RESULT / POSTDREDGE RESULT — SECONDARY POST DREDGE CORE SAMPLE LOCATION AND PCB RESULT
- PREDREDGE RESULT / POSTDREDGE RESULT — ADDITIONAL PRE AND POST DREDGE CORE SAMPLE LOCATIONS AND PCB RESULT
- AREAS OF LOW SOFT SEDIMENT THICKNESS
- AREAS OF PROPSED VIC VAC TEST DREDGING

NOTES:

1. THE HORIZONTAL CONTROL IS REFERENCED TO THE NAD83 WISCONSIN STATE PLANE COORDINATE SYSTEM (WISCONSIN SOUTHERN ZONE).
2. SUB-AREA AREA POG3 BOUNDARY BY CH2MHILL.
3. A VALUE OF ND IS ASSIGNED TO SAMPLE LOCATIONS WHERE SOFT SEDIMENT SAMPLES COULD NOT BE RETRIEVED AFTER 2 ATTEMPTS.

N

0 30′ 60′
BAR SCALE

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FIGURE 4

LOWER FOX RIVER - SUB AREA POG3 PRE & POST DREDGE CORE SAMPLE LOCATIONS AND SEDIMENT THICKNESS RESULTS

Date: JULY, 2006	Revision Date:
Drawn By: DAT	Checked By: DMR	Scope: 04G007

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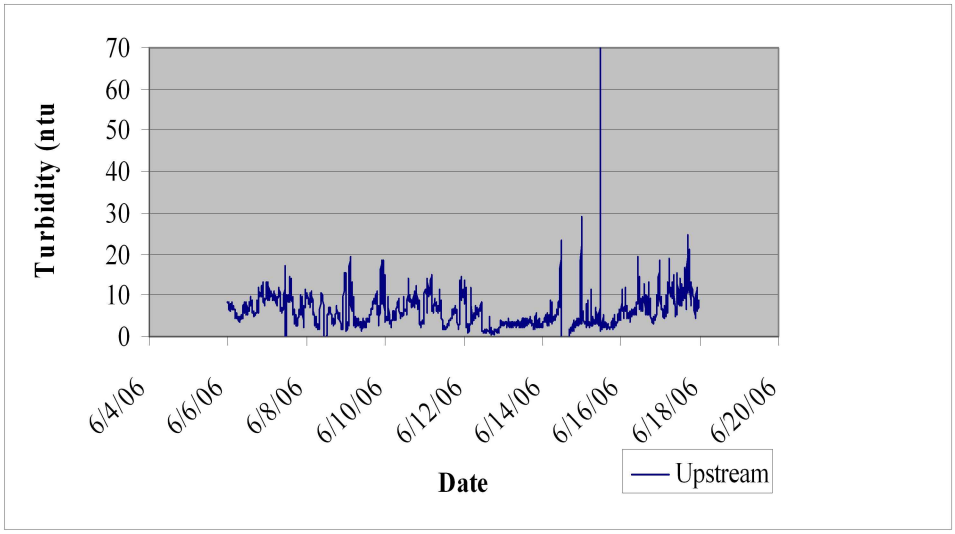
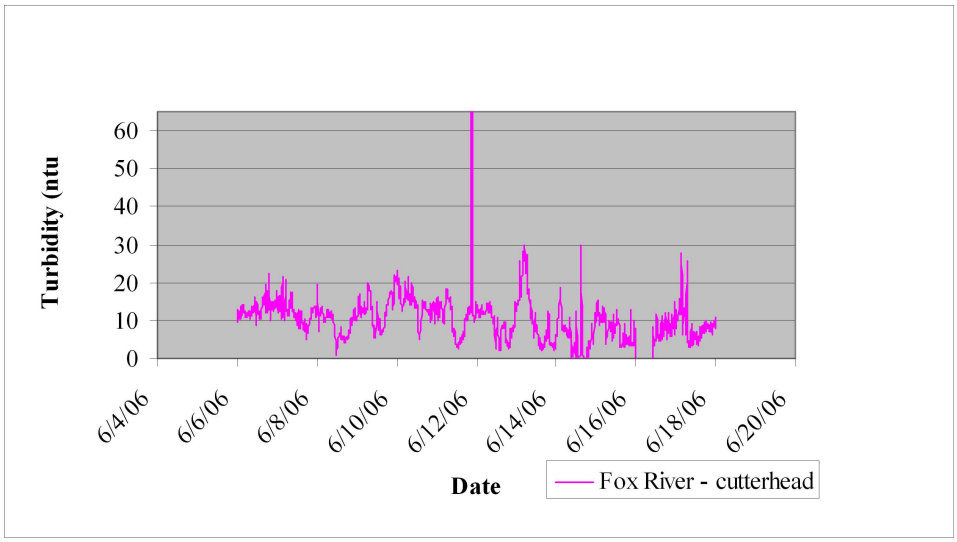
8/1/2006 dat





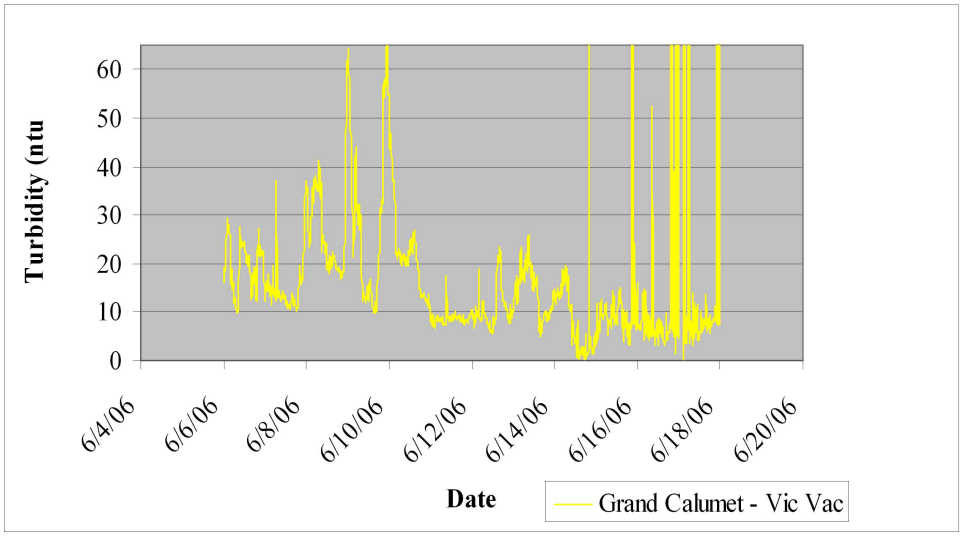


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FIGURE 5

LOWER FOX RIVER - SUB AREA POG3
VIC VAC TEST AREAS PRE &
POST DREDGE TURBIDITY RESULTS

Date: JULY, 2006	Revision Date:	
Drawn By: DAT	Checked By: DMR	Scope: 04G007

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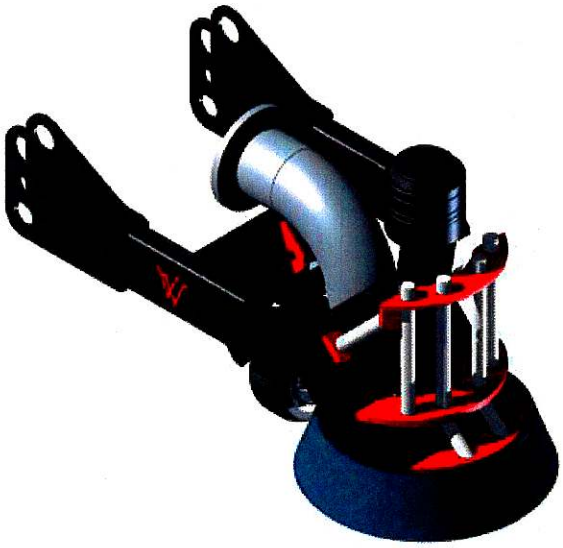
8/1/2006 dat

Attachment 1

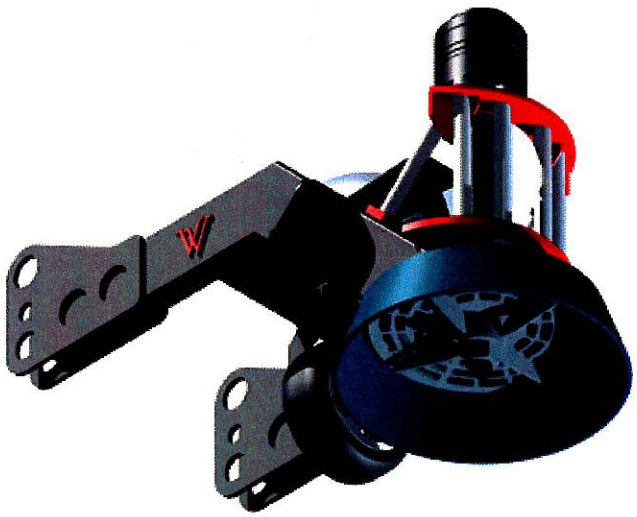
J.F. BRENNAN CO., INC.

820 BAINBRIDGE · BOX 2557 · LA CROSSE, WI 54602-2557 PHONE: 608 / 784-7173 FAX: 608 / 785-2090

Open Suction Attachment Concept Model



Isometric View From Top



Isometric View From Bottom