

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

August 16, 2011

Enbridge Energy, Limited Partnership
c/o Mr. Rich Adams
Vice President, Operations
Superior City Centre
Second Floor
1409 Hammond Ave.
Superior, Wisconsin 54880

Re: U.S. EPA Authorization to Discontinue Weekly Surface Water and Bi-Weekly Sediment Sampling Requirement pursuant to the Administrative Order issued by U.S. EPA on July 27, 2010, pursuant to §311(c) of the Clean Water Act (Docket No. CWA 1321-5-10-001) and Supplement to the Administrative Order issued by U.S. EPA on September 23, 2010

Dear Mr. Adams:

The United States Environmental Protection Agency (U.S. EPA) has directed Enbridge Energy, Limited Partnership, Enbridge Pipelines (Lakehead) L.L.C., Enbridge Pipelines (Wisconsin), and Enbridge Energy Partners, L.P. (herein collectively referred to as "Enbridge") to perform surface water and sediment sampling during the response and recovery of oil released from Enbridge Line 6B. U.S. EPA approved the requirements for surface water and sediment sampling in the Enbridge Sampling and Analysis Plan, August 18, 2010.

On October 22, 2010, U.S. EPA and MDEQ agreed that reductions in the surface water and sediment sampling may be appropriate (See Attachment 1) and that MDEQ should enter into a long-term surface water and sediment sampling program with Enbridge.

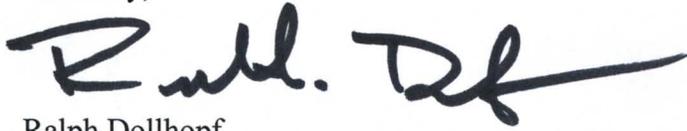
On Thursday, August 4, 2011 U.S. EPA determined that the State of Michigan and Enbridge have not yet agreed to a Sampling and Analysis Plan or a Surface Water and Sediment sampling program. Therefore, Enbridge has continued to conduct the surface water and sediment sampling pursuant to the U.S. EPA Order.

After review of the results obtained to date and the data objectives, Enbridge may discontinue the surface water and sediment sampling currently being conducted as outlined in Attachment 1.

By way of a copy of this letter, U.S. EPA will inform MDEQ of this decision and if MDEQ would like Enbridge to continue a surface water and sediment sampling program, MDEQ will direct you accordingly.

If you have any questions regarding this letter, please contact me immediately at (231) 301-0559.

Sincerely,



Ralph Dollhopf
Federal On-Scene Coordinator and Incident Commander
U.S. EPA, Region 5

Attachment

cc: L. Kirby-Miles, U.S. EPA, ORC
J. Cahn, U.S. EPA, ORC
J. Kimble, U.S. EPA
M. Durno, U.S. EPA
T. Edwards, U.S. EPA
S. Wolfe, U.S. EPA
Records Center, U.S. EPA, Reg. V
M. Ducharme, MDEQ
M. Alexander, MDEQ

Attachment 1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
MEMORANDUM

October 22, 2010

To: Ralph Dollhopf, U.S. EPA Incident Commander *for RD*
From: Steve Wolfe, U.S. EPA Monitoring Branch Director *SAW*
Brian Schlieger, U.S. EPA Monitoring Branch Director *BS*
Thru: Brian Kelly, Operations Section Chief *BK*
RE: Recommendation for reduction in Surface Water and Sediment Sampling for the Enbridge Pipeline Release, Marshall, Calhoun County, Michigan

After review of the surface water (see attached pages for surface water summaries) and sediment sampling results and under consultation with the Michigan Department of Natural Resources and Environment (MDNRE), Water Resources Division, the following recommendations are made concerning surface water and sediment sampling (effective immediately):

SURFACE WATER SAMPLING DOWNSTREAM MORROW LAKE

On a weekly basis, Enbridge shall collect 1 surface water sample at the point nearest the Morrow Lake Dam (location SW-126). If oil-related compounds are detected, the next sampling event will include a sample from SW-126 and the next downstream location (SW-010).

This sample is being collected to show that oil from the Enbridge pipeline release has not gone past Morrow Dam.

SURFACE WATER SAMPLING MORROW LAKE

The every other day sampling of the former U.S. EPA "Mud Puppy" locations will be discontinued (locations ML-1 through ML-10).

Weekly sampling of 20 other locations within Morrow Lake are sufficient coverage for the Lake.

The Daily Mud Puppy sample results have not shown any changes over time during the course of 3 months of sampling. Enbridge has chosen 20 locations throughout Morrow Lake that will be sampled and provides ample coverage as discussed with MDNRE. All of the chosen locations (which includes the 10 former Mudpuppy locations) have historical data associated with them to show trends over time.

SURFACE WATER SAMPLING KALAMAZOO RIVER

Weekly sampling of 11 locations co-located with the collection/containment structures related to O&M will replace the current 23 sampling locations. The samples will be collected immediately downriver of the collection/containment points.



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Co-locating the sample points with the O&M structures were chosen as these areas have petroleum contamination still associated with them and pose the greatest chance of ongoing petroleum releases into the environment.

SEDIMENT SAMPLING MORROW LAKE

The former U.S. EPA "Mud Puppy" locations will be discontinued (locations ML-1 through ML-10). Bi-weekly sampling of two locations will be sufficient coverage for Morrow Lake. The two locations will be one at the entrance to the lake from the Kalamazoo River and one near the Lake Morrow Dam from the deeper part of the lake.

These locations are recommended by MDNRE as the most likely to have deposition.

SEDIMENT SAMPLING KALAMAZOO RIVER

Sediment samples will be collected on a Bi-weekly basis along the Kalamazoo River. The sediment samples will be co-located with the 11 new surface water sampling locations.

The sediment sample locations were co-located with the surface water sampling locations in order to continue to monitor for submerged oil effects due to containing petroleum in discreet areas.

Enbridge will provide a map annotating all of the new sampling locations.

ANALYTES

All samples will be analyzed for the following analytes:

TPH- DRO, GRO, ORO	Benzene	o- xylene	Naphthalene
1,2,3-Trimethylbenzene	Cyclohexane	n-propylbenzene	Phenanthrene
1,2,4-Trimethylbenzene	Ethylbenzene	p-Isopropyl toluene	Mercury
1,3,5 Trimethylbenzene	Isopropylbenzene	Sec-Butylbenzene	Beryllium
2-Methylnaphthalene	m & p Xylene	Toluene	Iron
Molybdenum	Nickel	Titanium	Vanadium

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DURATION

This recommendation is being made with the understanding that Enbridge will enter into a long-term surface water and sediment sampling/monitoring program with MDNRE. New sampling plans for surface water and sediment sampling developed by Enbridge and approved by MDNRE will replace these recommendations.

NOTE: These recommendations do not affect any additional sampling that is being performed for the dredging project, aeration projects, or any other submerged oil project.

**Surface Water Sampling Detections and Screening Summary
Monitoring Program Sample Locations
Enbridge Energy Pipeline 6B
Marshall, MI**

Geographic Zone	Sample Location	Date	Sample ID	Analyte	Result µg/L	Source of Lowest Screening Criterion	Lowest Screening Criterion µg/L
Downstream of Morrow Lake							
	SW-205	07-Aug-10	WS08071541GFG1	Lead	26	HNV-DW	14
	SW-201	16-Aug-10	WS08161122GAH1	Mercury	0.15	GSI	0.0013
	SW-009	17-Aug-10	WS08171225RTV1	Mercury	0.26	GSI	0.0013
	SW-202	11-Sep-10	WSF09111037JLS1	Mercury	0.16	GSI	0.0013
	SW-201	11-Sep-10	WSF09111314JLS1	Mercury	0.047	GSI	0.0013
	SW-131	13-Sep-10	WSF09131055RTV1	Mercury	0.13	GSI	0.0013
	SW-205	13-Sep-10	WSF09131204RRD1	Mercury	0.028	GSI	0.0013
	SW-200	21-Sep-10	WSF09211245JPN1	Mercury	0.01	GSI	0.0013
	SW-200	25-Sep-10	WSF09251015SDD1	Mercury	0.009	GSI	0.0013
	SW-008	27-Sep-10	WSF09270930RTV1	Mercury	0.012	GSI	0.0013
	SW-131	27-Sep-10	WSF09271035RTV1	Mercury	0.022	GSI	0.0013
	SW-205	27-Sep-10	WSF09271205RRD1	Mercury	0.016	GSI	0.0013
	SW-206	27-Sep-10	WSF09271310RRD1	Mercury	0.011	GSI	0.0013
	SW-206	27-Sep-10	WSF09271335RRD1	Mercury	0.01	GSI	0.0013
<i>Zone Total Number of Exceedances</i>					= 14		
Morrow Lake							
	SW-111	01-Aug-10	WS08012000PDS1	Vanadium	98	FCV/GSI	12
	SW-111	02-Aug-10	WS08021550PDS1	Vanadium	37	FCV/GSI	12
	SW-111	17-Aug-10	WS08170728RCM1	Mercury	0.079	GSI	0.0013
	ML-1	01-Sep-10	WSE09010950PML1	Mercury	0.06	GSI	0.0013
	SW-933	05-Sep-10	WSE09050915MHS1	Mercury	0.064	GSI	0.0013
	SW-934	07-Sep-10	WSE09071020JRP1	Mercury	0.022	GSI	0.0013
	SW-933	10-Sep-10	WSE09101433RCM1	Mercury	0.43	GSI	0.0013
	SW-938	15-Sep-10	WSE09151435JRP1	Lead	15	HNV-DW	14
	SW-935	22-Sep-10	WSE09220833RCM1	Mercury	0.096	GSI	0.0013
	SW-934	25-Sep-10	WSE09250930ARM1	Mercury	0.14	GSI	0.0013
	SW-937	27-Sep-10	WSE09271048RCM1	Mercury	0.025	GSI	0.0013
<i>Zone Total Number of Exceedances</i>					= 12		

**Surface Water Sampling Detections and Screening Summary
Monitoring Program Sample Locations
Enbridge Energy Pipeline 6B
Marshall, MI**

Geographic Zone	Sample Location	Date	Sample ID	Analyte	Result µg/L	Source of Lowest Screening Criterion	Lowest Screening Criterion µg/L
Talmadge Creek							
	SW-107	27-Sep-10	WS009271100PMB1	Mercury	0.019 J	GSI	0.0013
<i>Zone Total Number of Exceedances</i>					= 1		
Upstream of Morrow Lake							
	SW-001	27-Jul-10	WS07270935TJV1	Benzene	27	HNV-DW	19
	SW-002	27-Jul-10	WS07271000TJV1	Benzene	39	HNV-DW	19
	SW-003	27-Jul-10	WS07271030TJV1	Benzene	32	HNV-DW	19
	SW-004	27-Jul-10	WS07271100TJV1	Benzene	28	HNV-DW	19
	SW-100	28-Jul-10	WS07282040TED1	Phenanthrene	2.4	FCV	1.4
	SW-116	03-Aug-10	WS08031510PDS1	Vanadium	24	FCV/GSI	12
	SW-115	03-Aug-10	WS08031600PDS1	Vanadium	140	FCV/GSI	12
	SW-108	17-Aug-10	WS08171455JRP1	Mercury	0.063 J	GSI	0.0013
	SW-103	25-Sep-10	WSB09251121JLS2	Mercury	0.023 J	GSI	0.0013
	SW-104	27-Sep-10	WSB09271230PMB1	Mercury	0.009 J	GSI	0.0013
	SW-002	02-Sep-10	WSC09021505JLS3	Mercury	0.2	GSI	0.0013
	SW-003	17-Sep-10	WSC09171616TDF1	Mercury	0.092 J	GSI	0.0013
	SW-003	27-Sep-10	WSC09271351JLS1	Mercury	0.01 J	GSI	0.0013
	SW-108	03-Sep-10	WSE09030905SWA1	Mercury	0.017 J	GSI	0.0013
<i>Zone Total Number of Exceedances</i>					= 14		

Notes:

µg/L = micrograms per liter

GSI = Groundwater Surface Water Interface Criterion (Table 2 of Attachment 1 of the RRD Op Memo No. 1, January 2006).

FCV = Final Chronic Value Criterion (Rule 57 Water Quality Values, December 2009).

HNV-DW = Human Noncancer Value Drinking Water Criterion (Rule 57 Water Quality Values, December 2009).

NA - criterion or value is not available, or not applicable

**Surface Water Sampling Detections and Screening Summary
Monitoring Program Sample Locations
Enbridge Energy Pipeline 6B
Marshall, MI**

Compound	Analysis Summary			Screening Summary				
	Maximum Detected Value	Number of Detects	Number of Results	Source of Lowest Screening Criteria	Lowest Screening Criterion	Number of Exceedances	Date of Last Exceedance	Geographic Zone of Last Exceedance
Volatile Organics (µg/L):								
1,2,4-Trimethylbenzene	4.7	28	1546	FCV/GSI	17			
1,3,5-Trimethylbenzene	0.83	9	1546	FCV/GSI	45			
2-Methylnaphthalene	3.6	3	1546	FCV	19			
Benzene	39	28	1546	HNV-DW	19	4	7/27/2010	Upstream of Morrow Lake
Ethylbenzene	2.7	18	1546	FCV/GSI	18			
Isopropylbenzene	0.5	2	1143	FCV	28			
m,p-Xylene	14	36	1258	GSI	35			
Naphthalene	0.66	5	1449	FCV	11			
n-Propylbenzene	0.45	2	1305	NA	—			
o-Xylene	5.5	24	1546	GSI	35			
Toluene	34	170	1546	GSI	140			
Xylenes, Total	4.3	37	1402	GSI	35			
Semi-Volatile Organics (µg/L):								
2-Methylnaphthalene	4.4	6	1546	FCV	19			
Naphthalene	2.1	7	1546	FCV	11			
Phenanthrene	2.4	5	1546	FCV	1.4	1	28-Jul-10	Upstream of Morrow Lake
Metals (µg/L):								
Beryllium	1.7	88	1329	GSI	33			
Iron	11000	1306	1329	NA	—			
Lead	26	943	1167	HNV-DW	14	2	9/15/2010	Morrow Lake
Mercury	0.43	29	1329	GSI	0,0013	29	9/27/2010	Morrow Lake
Molybdenum	5.7	484	1010	HNV-DW	120			
Nickel	72	1021	1513	FCV	125			
Vanadium	140	749	1513	FCV/GSI	12	4	8/3/2010	Upstream of Morrow Lake

Notes:

µg/L = micrograms per liter

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