



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

October 5, 2010

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

**Re: U.S. EPA Notice of Conditional Approval with Modifications of Enbridge Energy, Limited Partnership's September 27, 2010, submittal in response to the Removal Administrative Order issued by U.S. EPA on July 27, 2010, pursuant to §311(c) of the Clean Water Act in Docket No. CWA 1321-5-10-001; and the Supplement to the Removal Administrative Order issued by the U.S. EPA on September 23, 2010**

Dear Mr. Adams:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the following documents submitted by Enbridge Energy, Limited Partnership; Enbridge Pipelines (Lakehead) L.L.C.; Enbridge Pipelines (Wisconsin); and Enbridge Energy Partners, L.P. (herein collectively identified as and referred to as "Enbridge") on September 27, 2010, pursuant to Paragraph 18.m of the above-referenced Supplemental Order:

- 1. Air Sampling and Monitoring Plan, Ceresco Dam Dredging Operations Ceresco, Michigan, September 27, 2010;*
- 2. Supplement to the Sampling and Analysis Plan, Sampling During Ceresco Dam River Dredging, Enbridge Energy Oil Spill, Marshall, Michigan, September 27, 2010;*
- 3. Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Supplement to the Sampling and Analysis (including Appendix C) Plan Referred to as Work Plan for Evaluating the Potential Impact of Released Oil on Groundwater used for Drinking Water, September 27, 2010;*
- 4. Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Work Plan (including Appendix A) for Permanent Recovery of Submerged Oil and Oil-Contaminated Sediments at Priority Locations and Ceresco Dam Dredging, as an*

*Attachment to the Supplemental Modification of the Response Plan for Downstream Impact Area and the Source Area Response Plan, Strategy and Tactics for Permanent Recovery of Submerged Oil & Oil-Contaminated Sediment, September 27, 2010;*

5. *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Drinking Water Well Supplement to the Sampling and Analysis Plan, September 27, 2010; and*
6. *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Quality Assurance Project Plan Addendum to the approved Quality Assurance Project Plan Enbridge Line 6B MP 608, Marshall, Michigan: August 2, 2010 (Revised August 15, 2010 per U.S. EPA August 15, 2010 Letter).*

Pursuant to Paragraph 19 of the above-referenced Order, the following Enbridge documents are hereby approved with the modifications set forth herein:

1. *Air Sampling and Monitoring Plan, Ceresco Dam Dredging Operations Ceresco, Michigan, September 27, 2010;*
2. *Supplement to the Sampling and Analysis Plan, Sampling During Ceresco Dam River Dredging, Enbridge Energy Oil Spill, Marshall, Michigan, September 27, 2010;*
3. *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Supplement to the Sampling and Analysis (including Appendix C) Plan Referred to as Work Plan for Evaluating the Potential Impact of Released Oil on Groundwater used for Drinking Water, September 27, 2010;*
4. *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Work Plan (including Appendix A) for Permanent Recovery of Submerged Oil and Oil-Contaminated Sediments at Priority Locations and Ceresco Dam Dredging, as an Attachment to the Supplemental Modification of the Response Plan for Downstream Impact Area and the Source Area Response Plan, Strategy and Tactics for Permanent Recovery of Submerged Oil & Oil-Contaminated Sediment, September 27, 2010;*
5. *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Drinking Water Well Supplement to the Sampling and Analysis Plan, September 27, 2010; and*
6. *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Quality Assurance Project Plan Addendum to the approved Quality Assurance Project Plan Enbridge Line 6B MP 608, Marshall, Michigan: August 2, 2010 (Revised August 15, 2010 per U.S. EPA August 15, 2010 Letter).*

Collectively, the above-referenced documents are referred to herein as the “Supplements.” Enbridge shall implement the Supplements, as modified, in accordance with the schedule set forth in Paragraphs 18 and 19 of the above-referenced Order (as supplemented on September 23, 2010) and as modified herein.

Five bound copies of each of the six revised Supplements, as modified, shall be submitted to U.S. EPA no later than 12:00 hours Eastern, October 7, 2010. Additionally, Enbridge is directed to submit the Supplements in Microsoft Word format to allow for corrections or modifications to the electronic documents.

**Specific Modifications Required: *Air Sampling and Monitoring Plan, Ceresco Dam Dredging Operations Ceresco, Michigan, September 27, 2010***

1. Include Table and Figure names in the Table of Contents.
2. Section 2.1 (second paragraph): “Elevated air concentrations” are referenced, but not quantified. Please quantify the referenced levels. Once quantified, revise Table 4 accordingly by adding a column with the protective limits.
3. Section 4:
  - a. Last sentence of the second paragraph: Please replace “dateable” with “detectable.”
  - b. Please add a table with the metals analyses being performed.
  - c. Please describe how the referenced NIOSH 7301 method is being modified.
4. Section 9: “Appendix D” is referenced, but not included. Please provide Appendix D.
5. Quality assurance (e.g., blank samples, duplicates, etc.) are not referenced. Please provide a detailed description of the Quality Assurance (QA) protocol for this monitoring program and/or provide a detailed referenced to the specific existing approved plan which will be followed for QA.
6. Based on the information contained in Figure 2, it appears that air monitoring locations are limited to upwind locations (assuming a prevailing wind from the west-southwest). Please revise the program and Figure 2 to include upgradient and downgradient air sampling locations during all possible prevailing wind directions.

**Specific Modifications Required: *Supplement to the Sampling and Analysis Plan, Sampling During Ceresco Dam River Dredging, Enbridge Energy Oil Spill, Marshall, Michigan, September 27, 2010***

1. Please add section numbers to the report components and add a Table of Contents.
2. Background Section:
  - a. Explain the dredging method including equipment used (e.g., Amphibex, pumps, carbon, geo-tubes, filter bed, etc.). Provide a figure showing equipment areas.
  - b. Please determine if VOC and/or TPH analysis required for NPDES discharge permit, and if so, provide the regulatory levels.
  - c. List the NPDES discharge permit levels.
3. Purpose Section: Show sampling locations on a figure.

4. Water Sampling Section:
  - a. Last sentence of the first paragraph: Attach the Sampling Plan referenced.
  - b. Please replace the second paragraph with the following:  
 “A total of three sample locations will include one sample 500 feet upstream of dredging operations, one sample downstream of operations but upstream of the dam, and one sample downstream of the dam just west of final containment measures. Samples will be collected at stream mid-depth from boat or other means amenable to collection.”
  - c. Please replace the first sentence of the last paragraph with the following:  
 “Samples will be collected at mid-operational shift during days 1 through 7 while active dredging activities are occurring.”
5. Analysis Section: Define all terms used (e.g., Diesel Range Organics as DRO).
6. Water Quality Monitoring Section:
  - a. First paragraph: State that the 'hand sampled' parameters will be subject to the same actionable levels as the Mantas parameters listed in paragraph 2/Table 2.
  - b. Table 2 - change '--' to NA and add foot note defining NA.
  - c. Please confirm that the Manta can be used in the water depths (e.g., shallow water) of the planned work.
7. Figure 1: Add a legend, North arrow, title block (Title, Date, etc.). Show the updated HDPE pipeline location and add the Amphibex launch location.
8. Air Monitoring Section: “Appendix A” is referenced, but is not included. Provide Appendix A and all other referenced appendices.
9. Samples of the crude oil from the release were analyzed by the Michigan Department of Natural Resources and Environment (DNRE). Constituents detected in the oil sample analyzed by the DNRE are summarized in the table below. Therefore, it is recommended that Enbridge consider analyzing sediment, surface water and water collected from the sediment for these constituents.

Constituent	Sample 1 (mg/kg)	Sample 2 (mg/kg)
<b>Volatile Organic Compounds (VOCs)</b>		
Benzene	910	1100
Ethylbenzene	220	260
Total Xylenes	1410	1650
Toluene	1700	2000
1,2,3-Trimethylbenzene	44	58
1,2,4-Trimethylbenzene	340	410

Constituent	Sample 1 (mg/kg)	Sample 2 (mg/kg)
1,3,5-Trimethylbenzene	170	190
Cyclohexane	1900	2200
Isopropylbenzene	51	57
n-Propylbenzene	91	100
p-Isopropyl alcohol	35	40
Sec-Butylbenzene	33	35
<b>Metals</b>		
Mercury	0.0003	0.0003
Beryllium	0.4	0.8
Iron	30	7.7
Molybdenum	ND	9.3
Nickel	59	67
Titanium	2.8	3.2
Vanadium	130	140
<b>Semi-Volatile Organic Compounds (SVOCs)</b>		
2-Methylnaphthlene	130	150
Naphthalene	63	72
Phenanthrene	82	86

10. The actionable value for dissolved oxygen in Table 2 is 5.0 mg/L, as opposed to the 4.0 mg/L included in the existing approved SAP. Please provide detailed rationale for this adjustment, or revise the value to 4.0 mg/L.
11. Please add a procedure for monitoring and documenting oil sheen observed and/or generated during the dredging activity observations should be recorded.
12. Please provide calibration procedures, or explicitly referenced existing approved methods, for water quality monitoring instruments.

**Specific Modifications Required: *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Supplement to the Sampling and Analysis (including Appendix C) Plan Referred to as Work Plan for Evaluating the Potential Impact of Released Oil on Groundwater used for Drinking Water, September 27, 2010***

1. Section 3.3.1:
  - a. In locations designed to evaluate bends in the river, increase the number of wells installed to 3 (rather than 2) per area. The same three-well monitoring system (e.g., two shallow wells and one deeper well) designed to confirm the conceptual model shall be used.

- b. Please add the section of river miles 23-23.75 as a Target Area due to the significant bend feature in this area.
2. Section 3.3.2:
  - a. Replace “hallow” with “hollow” in the second paragraph.
  - b. Second paragraph: The screen shall be in the groundwater table, and not estimated. Please explain how the screen depth will be selected.
  - c. Third paragraph, please provide more explanation on the use of direct push methods and the use of drive point piezometers. Specifically, when and why they will be used. Also, if they are to be used, please state that a well log will be created.
  - d. While general areas for the monitoring well installations have been proposed, the specific detailed location of the monitoring wells shall be identified and submitted to the U.S. EPA and DNRE for approval prior to installation of the monitoring wells.
3. Section 3.3.3: Please state that the water level measurements of surface water and location of surface water samples will be surveyed using the same coordinate system as the monitoring wells.
4. Section 3.3.4:
  - a. Please reference Appendix C for the slug test procedures to be used.
  - b. Please explain how the 25% of wells that slug testing will be performed will be chosen. The 25% shall be distributed among the areas and representative of all types of areas. Specifically, at least one slug test shall be performed in each of the 8 Target Areas.
5. Section 3.3.5:
  - a. First paragraph: Please replace “conducted” with “collected” in the last sentence.
  - b. Page 10, Second paragraph: Provide an explanation of how, where and at what depth the river water samples will be taken.
6. Section 3.4: Please provide the specific methods and databases searched to identify industrial high production wells.
7. Section 3.5: Please add the following statements “Data will be added to a scribe project routinely. Updated as samples are collected and validated date is received. Local project will be uploaded to scribe.net.”
8. Table 1: Please define footnote 7.

9. Appendix C:

- a. Section 1: Please renumber the subsections so they are sequential, or provide the missing Section 1.3
- b. Section 2.3, General Procedures: provide a general description of the drilling method and technology, similar to that provided in Section 1.4 for sonic drilling.
- c. Section 3.3, General Procedures: provide a general description of the drilling method and technology, similar to that provided in Section 1.4 for sonic drilling.
- d. Section 4, Schedule: The sampling schedule will only give a snap-shot of groundwater conditions at that time and will not take into effect climatic cycles and potential flood conditions. Therefore, Enbridge shall consult with the DNRE to determine if subsequent periodic/quarterly sampling will be required to provide cumulative information about changing conditions to assure that drinking water wells remain protected. Additionally, water measurements for the wells in the sampling/monitoring program shall be performed in the shortest and most contiguous time possible to provide comparable information for a given time.
- e. Section 4.3: Please indicate that development will occur by pumping, surging, “and/or” jetting. Also, provide quantifiable metrics for determining when groundwater is “clear” or ready to be sampled.
- f. Section 4.3: Add a statement that all purge water and other wastes generated will be containerized and handled in accordance with the approved Transportation and Disposal Plan.
- g. Section 5.3: Depth to water surface and total well depth shall be measured using an interface probe, or similar device, capable of detecting petroleum hydrocarbons and have an accuracy of  $\pm 0.01$  foot.
- h. Section 6.3 (last main bullet):
  - i. Step 1: Please replace the first sentence with:  
“Step 1 – Lower the Interface Probe (Keck or Heron) slowly down the well until the signals activate and then read the measurement at the top of the well casing at the location surveyed or other marked reference point on the casing. In the absence of a marked reference point, the north edge of the well casing shall be used as the reference mark and notation of such shall be included in the field notes.”
  - ii. Step 2: make the references to the top of casing elevation consistent with that of Step 1 above.

- iii. The procedure specified is for light non-aqueous phase liquid (LNAPL). Please provide procedures for detecting and measuring dense non-aqueous phase liquid (DNAPL) as well.
- i. Section 7.3:
  - i. Provide procedures for detecting and measuring LNAPL and DNAPL, or revise the 6<sup>th</sup> and 8<sup>th</sup> bullets to reflect a “fluid level” rather than “water level.”
  - ii. Item 1: Please verify that the flow rate of between 100 and 500 mL/min is consistent with the methods specified. Typically, low-flow sampling is performed at a maximum flow rate of 150 mL/min.

**Specific Modifications Required: *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Work Plan (including Appendix A) for Permanent Recovery of Submerged Oil and Oil-Contaminated Sediments at Priority Locations and Ceresco Dam Dredging, as an Attachment to the Supplemental Modification of the Response Plan for Downstream Impact Area and the Source Area Response Plan, Strategy and Tactics for Permanent Recovery of Submerged Oil & Oil-Contaminated Sediment, September 27, 2010***

1. Section 2.1: In addition to the 18 currently identified priority sites, please add a description of the process for adding new sites (such as MP-5.8, below the Ceresco Dam). This section shall clearly identify that the plan shall provide an umbrella description of how the submerged oil sites are deemed appropriate targets for oil recovery. This is partially addressed in Section 3.9, but not adequately.
2. Section 2.2: RMP-36.5 to 37.5 (also known as the Morrow Lake Delta) should not be referenced in the first paragraph of this section. Please remove this reference in the first paragraph and then insert reference to RMP-36.5 to 37.5 (also known as the Morrow Lake Delta) in the fourth paragraph of this Section.
3. Section 3.7:
  - a. The referenced Standard Operating Procedure (SOP) was originally developed for a specific set of priority sites. Please clearly state that the existing SOP is now intended to cover work beyond the original ten sites referenced. For example, whether Enbridge will be aerating parts of the Ceresco Dam area and whether the referenced SOP will provide the guidance on how this will be done.
  - b. Add flexibility for the development of new techniques as necessary and as approved by the U.S. EPA to facilitate the recovery of submerged oil.
4. Section 3.9: This section implies that newly identified sites will only be addressed as operation and maintenance issues. Please provide a clarification that, if deemed necessary, new sites will be addressed through the removal of submerged oil and/or oil-containing sediment. For new sites identified, “Site Summaries” as found for the 18 priority sites shall be developed.

5. Section 5.2: Please define the dates associated with “Winter 2010.”
6. Section 6.2:
  - a. Revise the first sentence as follows:

“Forty-eight hours after the completion of the recovery efforts Agency inspections will be conducted following these procedures. These inspections will be documented using the Submerged Oil Remediation Closure Form in Appendix D.”
  - b. Insert the following sentence:

“EPA has developed a written inspection/clearance procedure to guide the evaluation of the effectiveness of permanent oil recovery efforts.”
7. Section 7.2: Please replace the second paragraph with the following:

“This portion of the Work Plan covers the area (as shown on Figure 1) along the left descending bank (also referred to as south shore) of the Kalamazoo River starting at the Ceresco Dam SE for approximately 1,000 feet upstream in length by 200 feet in width. The potential dredging scope of the project could include up to 6.75 acres of area as shown in Figure 1. Attempts will be made to reduce the potential dredging footprint and thus volume thru the use of alternative techniques such as aeration and raking. It is expected that newer improved versions of these techniques may develop and it is the intent of the lead EPAOSC to incorporate them as needed in consult with the SOTF. Additional dredging scope and/or the use of alternative techniques will be determined as appropriate by the lead EPA OSC for the Ceresco Dredging Operation in consult with the SOTF.”
8. Section 7.10: Please add the following paragraph at the end of the section:

“The potential dredging scope of the project could include up to 6.75 acres of area as shown in Figure 1. Attempts will be made to reduce the potential dredging footprint and thus volume thru the use of alternative techniques such as aeration and raking. It is expected that newer improved versions of these techniques may develop and it is the intent of the lead U.S. EPA FOSC to incorporate them as needed in consult with the SOTF. Additional dredging scope and/or the use of alternative techniques will be determined as appropriate by the lead U.S. EPA FOSC for the Ceresco Dredging Operation in consult with the SOTF.”
9. Section 7.12.1: In the third paragraph and in the bullet list, please list the analyte criteria for solidification versus disposal at landfill.
10. Section 7.13:
  - a. Please identify and list the NPDES levels.
  - b. Add a section indicating that the dredging, dewatering and filtration systems will be turned off if NPDES allowable levels are being exceeded.

- c. Add a section describing how the discharged water will enter the Kalamazoo River. Describe the methods used to prevent erosion and minimization of ecological and physical disturbance to the river.
  - d. Please add the following paragraphs at the end of the section:

“Additional discharge and treatment system monitoring will be required and directed on an as needed basis by the lead U.S. EPA FOSC for the Ceresco Dredging Operation.

An odor masking agent will be procured and used on-site to ameliorate this potential odor issues associated with materials handling. Enbridge will provide the MSDS for this product and receive approval from the lead U.S. EPA FOSC for this project prior to initiation of its use.”
11. Section 7.14: Please add a statement referencing that wastes generated will be handled in accordance with the approved Waste Transportation and Disposal Plan.
12. Section 7.17:
  - a. Please replace “monthly” with “weekly” in the first sentence and in the table within this section.
  - b. Please replace the paragraph immediately following the table with the paragraph below:

“These testing parameters are in accordance or exceed the NPDES Wastewater Discharge General Permit for Petroleum Contaminated Wastewater Permit Certificate of Coverage Number MIG081158.”
  - c. Label the table in this Section.
13. Section 7.18.3: Please add the following paragraph at the end of the section: “Enbridge will develop a Ceresco Dam Dredging project specific response plan for potential spills resulting from dredge pipe releases.”
14. Talmadge Creek Summary: Please include a reference to the attached September 27, 2010 technical memorandum in the “Community Description and Habitat Quality” section. Also, please clarify that “Containment” includes a number of containment structures and systems in Talmadge Creek.
15. Appendix B, SOP: The title of this SOP (and its former use) implies it is only to be used in a specific subset of the submerged oil areas that are to be addressed. This shall be clarified so as to broaden its application to all submerged oil sites where it will be used.

16. Please add the following Submerged Oil Recovery Group, Downstream Impacted Areas, Standard Operating Procedures (SOPs) for Remediation Completion for the Enbridge Oil Spill at Talmadge Creek, Marshall, Michigan:

**“PURPOSE**

Purpose of this SOP is to provide the protocols and procedures for United States Environmental Protection Agency (U.S. EPA) and Enbridge Energy (Enbridge) representatives to qualitatively determine that recoverable oil in the Talmadge Creek, the Kalamazoo River, and their sediments have been removed from these navigable waterways at the Enbridge Line 6B MP 608 Pipeline Release Project, Marshall, Michigan.

**BACKGROUND**

The Data Quality Objectives (DQOs) defined in Enbridge’s Sampling and Analysis Plan (SAP) include both qualitative and quantitative descriptions for endpoint determinations as they relate to visual field screening for the presence of materials capable of producing a release of oil or sheen to navigable water. This priority site closure SOP does not address non-recoverable or residual contamination related to the release.

Remediation techniques, primary (aeration), and secondary (flushing and raking), have been implemented to liberate entrained oil from the sediment for recovery. Implementation of the remedial activities required that each Priority Site was divided into treatment cells. Following completion of remediation in each cell, defined by a grid of sorbent and containment booms, the areas will be staked with a green flag, labeled with a cell number, and the date. The Enbridge Submerged Oil Task Force Leader, with agreement from the on-site U.S. EPA and Enbridge representatives, is responsible for identifying when a Priority Site is ready for the final inspection by the Submerged Oil Task Force Leaders from U.S. EPA and Enbridge. The notification (recommendation for final inspection/date) will be reported to the Submerged Oil Task Force as part of the daily briefing. Following notification, remediation techniques and oil recovery activity at the identified Priority Site will be stopped for a 48 hour “wait” period prior to final inspection. All containment booms and sorbent booms will remain in place during this period.

**PROCEDURES**

Following the 48 hour wait period, the Submerged Oil Task Force Leaders from U.S. EPA and Enbridge will visually inspect the Priority Sites recommended for final inspection. Consistent with the DQOs for the project, the final inspection will be a qualitative assessment based on visual inspection for the presence of materials capable of producing a release of oil or sheen to navigable water. Non-recoverable oil and/or constituents associated with the release will be addressed as part of the long-term assessment and remediation efforts for the Site using

quantitative methods as required and approved by other regulatory authorities (e.g., DNRE).

Visual inspection of the Priority Sites will include the following:

- A “Submerged Oil Status Tracking Form” and a map of the Priority Site illustrating the delineated cells that will require inspection, will be provided to each team;
- A visual inspection of each Priority Site will be conducted by the team. Inspections will include an evaluation of sorbent booms and containment booms as well as observations related to the presence of oil on the surface water within the Priority Site. Visual inspection of the water within each Priority Site cell will be done as each cell is agitated at regular intervals across the cell in a random pattern using a rod or rake. Depending on the site, agitation may be accomplished more simply by maneuvering the air boat around each cell. The sediment will be agitated to the extent that the water becomes turbid and sediment is visibly suspended and seen in the water. Due to the various water depth at each cell it is anticipated that the inspection methods will vary from site to site, and potentially from cell to cell to achieve the criteria required for through inspection.
- Visual observation will note the presence of oil globules and tar flecks and similar discernible submerged oil characteristics during the agitation process. The observations will specify whether the materials are of sufficient quantity and produced at a frequency that would be considered recoverable using the methods identified in Enbridge’s SOP. All observations will be documented.
- Based on qualitative results and the experience of the Submerged Oil Task Force Leaders in mitigation of oil discharges, the remedial activities at the Priority Sites will be determined to be complete if the site inspection results in the determination that no recoverable oil remains. If the inspection reveals that recoverable oil is still present, this will be noted on during the inspection and Enbridge will return the site to perform additional remediation.
- Once a site is cleared, the Submerged Oil Remediation Status Tracking form will be signed and dated accordingly. In this event the area will be cleared as completed to the satisfaction of the U.S. EPA. The tracking form will be attached to a report documenting work in this area in a format similar to the segment reports submitted for the surface oil segments.”

**Specific Modifications Required: *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Drinking Water Well Supplement to the Sampling and Analysis Plan, September 27, 2010***

1. Page 1, First Sentence: Please replace “Water Well Supplement” with “Drinking Water Well Supplement.”
2. In references to the 200 feet zone identified throughout the document: Please revise the text to include properties located within 200 feet of the high water levels observed during the July 27, 2010, rains.
3. Page 2, Section 1.0, Introduction:
  - a. First Paragraph:
    - i. First Sentence: Please replace “Water Well Supplement” with “Drinking Water Well Supplement.”
    - ii. Third full paragraph: First Sentence and Last Sentence: Please replace “well water” with “drinking water wells.”
  - b. Fourth Paragraph: Please clarify whether the referenced “Validated Sampling events” includes samples that were not analyzed during drinking water analyses.
  - c. Third paragraph: reference is made to “focuses on analyzing for crude oil constituents.” This reference shall be deleted and, as previously directed by the U.S. EPA, no reduction in the analytes for drinking water will be considered before Oct. 31, 2010, at which time Enbridge may make a renewed request for a reduced analyte list, if appropriate.
4. Page 3, Section 2.0 Well Identification, first paragraph:
  - a. Please incorporate the last paragraph of this section (currently on page 4) into the first paragraph, so that it is clear that the line of concern is 200 feet from oil impact, not the normal river banks.
  - b. First Sentence and Last Sentence: Please replace “well water” with “drinking water wells.”
5. Page 5, Section 3.2:
  - a. Please replace the first sentence with “Wells will be sampled on at least a biweekly basis until at least Oct. 31, 2010, at which time Enbridge may seek permission from the U.S. EPA to revise the sampling schedule.”
  - b. Second Sentence: please replace “...will be evaluated to...” with “will be evaluated by the U.S. EPA (and other appropriate agencies) to....”
6. Page 5, Section 3.3.1:
  - a. Please replace the first sentence with the following “The initial well water sampling parameter list through Oct. 31, 2010 for all identified wells, and for the first two sampling events of any identified well is presented in Table 4.4 of the previously approved SAP.”

- b. Please add a sentence that stating “Each well identified within the 200-foot buffer (as measured from the outer high water mark resulting from the July 27, 2010 rain event will have at least two sampling events conducted for these parameters.”
  - c. Table 3.1: Please verify, and if appropriate, replace “p-Isopropyl alcohol” with “p-Isopropyl toluene.”
- 7. Page 7, Section 3.3.2: Please add “After Oct. 31, 2010,” to the beginning of the sentence.
- 8. Page 7, Table 3.2:
  - a. Please provide an explanation for the elimination of some parameters listed in Table 3.1 from Table 3.2.
  - b. Please provide numerical evaluation criteria for which analytical results will be compared and the rational for the selected criteria.
  - c. Identify the specific polynuclear aromatic hydrocarbon constituents included.
- 9. Page 8, Section 4.0 Reporting Requirements:
  - a. First bullet: Add a sentence stating that this information will be updated on a weekly basis for presentation to the Health Team.
  - b. Please replace the second bullet with the following: “The results of the analyses will be provided to the landowner and resident (if different from the landowner) within 5 days of receiving validated data. Additionally, the validated results will be provided to the Calhoun or Kalamazoo County Health Department, depending on which county the sample was collected from, within 2 days of receipt.”
  - c. Add a bullet with the following: “Data will be added to a scribe project routinely. Updated as samples are collected and validated date is received. Local project will be uploaded to scribe.net.”
- 10. Please confirm that analyses for potable well water sampling will be compliant with Table 4.4 from the existing approved SAP and will be performed using certified laboratories for drinking water methods (EPA 524.2 and 525) for VOCs and SVOCs.
- 11. Draft Revised Plan dated September 28, 2010: While this draft version better defines the proposed process to reduce the parameters being tested for in section 3.3.2, it is still not clearly state that there will be no reduction in the parameters or frequency until after October 31, 2010. As previously directed by the U.S. EPA, no reduction in the analytes for drinking water will be considered before Oct. 31, 2010, at which time Enbridge may make a renewed request for a reduced analyte list, if appropriate.

**Specific Modifications Required: *Enbridge Line 6B MP 608 Pipeline Release, Marshall, Michigan, Quality Assurance Project Plan Addendum to the approved Quality Assurance Project Plan Enbridge Line 6B MP 608, Marshall, Michigan: August 2, 2010 (Revised August 15, 2010 per U.S. EPA August 15, 2010 Letter)***

1. Introduction/Summary: Please replace “(Barr 2009)” with “(Barr 2010)”.
2. Standard Operating Procedure (SOP), Calculation of Purge Volumes for Groundwater Sampling Wells, Revision 2, February 27, 2009:
  - a. Please specify sampling of “groundwater” in all places where “sampling” is referenced.
  - b. The SOP references a minimum volume of groundwater that must be purged prior to collecting a groundwater sample from the well. However, purge volumes shall only be used as a guide where low-flow groundwater sampling, as prescribed by the SAP(s) submitted for groundwater sampling related to this release, will not be performed.
  - c. Stabilization Test Measurements: Please revise the protocol to reflect that in the event that a well is purged dry, it is required that the water level in the well rebound to at least 75% of the original water column measured prior to sampling.
3. Standard Operating Procedure, Collection of Each Type of Groundwater Sample from monitoring Wells, Residential Wells and residential Systems, Revision 2, February 27, 2009:
  - a. The frequency of well stabilization parameter collection is different than that specified in the SOP for Purge Volumes for Groundwater Sampling Wells. Please make the frequency of measurements consistent in all documents that will be used for groundwater sampling.
  - b. The SOP references a minimum volume of groundwater that must be purged prior to collecting a groundwater sample from the well. However, purge volumes shall only be used as a guide where low-flow groundwater sampling, as prescribed by the SAP(s) submitted for groundwater sampling related to this release, will not be performed.
  - c. Stabilization Test Measurements: Please revise the protocol to reflect that in the event that a well is purged dry, it is required that the water level in the well rebound to at least 75% of the original water column measured prior to sampling.
  - d. Please provide specific metrics as to when each of the referenced sampling techniques (e.g., via bailer, peristaltic pump) will be used.
  - e. III. Groundwater Sampling, 3.a.:

- i. Please state that all bailers and cords/rope will be new or properly decontaminated prior to use and provide such decontamination procedures, or referenced existing approved procedures.
    - ii. Please state that the rope/cords shall not touch the groundwater or otherwise become contaminated prior to and/or during use.
    - iii. Please provide flow parameter ranges/limits for sampling techniques where a peristaltic pump will be use.
  - f. III. Groundwater Sampling, 3.b.5: Please ensure that filtering of groundwater samples to be analyzed for metals is allowed by DNRE regulations and guidelines, and modify the protocol if necessary.

The U.S. EPA directive provided herein does not represent assurance that activities undertaken are in compliance with laws and regulations outside the purview of the U.S. EPA during these response actions, including but not limited to the laws and regulations of the State of Michigan. Enbridge is not relieved of its obligation to comply with other laws and regulations if omitted in these comments. Undertaking activities directed by the U.S. EPA does not obviate the need for Enbridge to acquire all necessary permits and comply with other applicable regulatory requirements.

U.S. EPA technical staff have been designated to direct Enbridge's revision of the Supplements. In addition, the Federal On-Scene Coordinator (FOSC), Ralph Dollhopf, has directed Enbridge to work with U.S. EPA to incorporate the modifications requested herein.

Upon submittal of the revised Supplements as amended, the U.S. EPA's FOSC will then complete a final review. Any additional corrections of, or modifications to, the Supplements will be made by Enbridge as directed by the FOSC. The U.S. EPA reserves the right to disapprove, comment, or modify, as appropriate, the Supplements upon their resubmission.

U.S. EPA appreciates Enbridge's continued efforts to conduct effective response actions to the release from its 6B Pipeline.

Sincerely,

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

**cc:** L. Kirby-Miles, U.S. EPA, ORC  
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