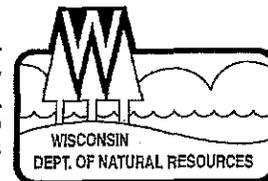


State of Wisconsin  
DEPARTMENT OF NATURAL RESOURCES  
Northeast Region Headquarters  
2984 Shawano Avenue  
Green Bay WI 54313-6727

436003260 - Conn

Scott Walker, Governor  
Cathy Stepp, Secretary  
Jean Romback-Bartels, Acting Regional Dir.  
Telephone 920-662-5100  
FAX 920-662-5413  
TTY Access via relay - 711



Work  
Copy

May 9, 2011

Mr. Ray Seegers  
WMWI Ridgeview RDF  
PO Box 227  
Whitelaw, WI 54247-0227

FILE REF: FID #436003260  
Manitowoc CO  
SW  
APPR

SUBJECT: Amended Conditional Plan of Operation Approval, Ridgeview RDF Southern Expansion, Manitowoc County, Wisconsin, License No. 04292

Dear Mr. Seegers:

The Department is amending your April 28, 2008 Plan of Operation Approval due to an oversight on the part of the Department. We apologize for the inconvenience this oversight may have caused.

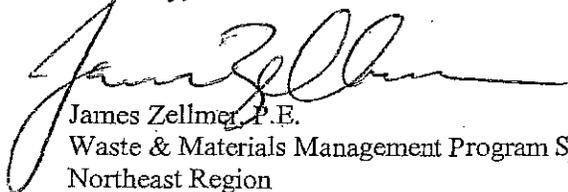
We received a letter report, dated April 15, 2008, requesting a modification to the plan of operation for the Horizontal Expansion Plan (HEP) landfill for 4 separate items which included the following:

1. Redesign of the final cover tie-in from a previously closed area to a newly closed area;
2. Inclusion in the Special Waste Plan of a new special waste category, A-28, for dredge sediments containing PCBs and heavy metals with concentrations of less than 50 ppm.
3. Placing the replacement gas header lines above the geomembrane within the rooting zone; and,
4. Allowing the termination of gas wells when a layer of wet black slime is encountered near the base of the landfill.

In the April 15, 2008 letter, WMWI Ridgeview requested that the items being proposed for modification for the HEP landfill also be incorporated into the Southern Expansion landfill plan of operation. The Department's August 13, 2008 Conditional Plan of Operation Approval Modification at the Ridgeview Recycling & Disposal Facility was applied only to the HEP landfill (License No. 03041) and the requested items were not incorporated into the Southern Expansion plan of operation approval. This Amended Plan of Operation Approval corrects this oversight. We are also incorporating the February 28, 2011 plan modification request to eliminate the requirement to apply daily cover to the dredge sediment.

If you have any questions regarding this letter, please contact Leland Archiquette at 608-267-0542 or by email at [Leland.Archiquette@wisconsin.gov](mailto:Leland.Archiquette@wisconsin.gov).

Sincerely,



James Zellmer, P.E.  
Waste & Materials Management Program Supervisor  
Northeast Region

Mr. Ray Seegers - WMWI Ridgeview  
Southern Expansion

2

CC: Jerold Korinek - Town Chairman  
John Steimle - Town of Franklin  
Greg Tilkens/Sally Hronek - NER  
Leland Archiquette /File - WA/5

## AMENDED PROJECT SUMMARY

### GENERAL INFORMATION

PROPOSED FACILITY: Waste Management Ridgeview Recycling and Disposal Facility (RDF) Southern Expansion, a non-contiguous expansion

LICENSEE AND PROPERTY OWNER: Waste Management of Wisconsin, Inc. (WMWI)

AUTHORIZED CONTACTS: Raymond Seegers, P.E., Environmental Engineer  
Ridgeview RDF  
P.O. Box 227  
Whitelaw, WI 54247-0227

Kurt Kietzer, Regional Manager  
Ridgeview RDF  
P.O. Box 227  
Whitelaw, WI 54247-0227

SITE LOCATION AND AREA: The proposed Southern Expansion will be located in portions of the SE ¼ and the SW ¼ of Sec. 26, T20N, R22E, Town of Franklin, Manitowoc County, Wisconsin. The existing facility is located about 1.3 miles north of STH 10, on Hempton Lake Road, approximately 1.6 miles NW of the City of Whitelaw. The proposed expansion will occupy 60.3 acres within a parcel of approximately 701 acres owned by WMWI. The landfill expansion will be developed in 4 Cells approximately 200+ feet south of the existing landfill.

PROPOSED WASTE TYPES: The proposed MSWLF expansion will accept the same waste types as the existing landfill, namely non-hazardous municipal, commercial and industrial solid waste, including utility ash and sludge, pulp and paper manufacturing waste, foundry waste, wastewater treatment sludge, high volume industrial waste, treated contaminated soil, and **dredge sediments that contain less than 50 parts per million polychlorinated biphenyl.**

GAS COLLECTION SYSTEM: Each gas well will be centered in a 36-inch diameter borehole. The borehole will extend to a minimum of 10 feet from landfill base grades. **In instances where a wet black slime is encountered near the base grades of the landfill during drilling, the borehole will be truncated to keep the well casing out of this slime to prevent the perforations from clogging.** The bottom of each gas well will be a minimum of one foot from the bottom of the borehole. The annular space of borehole will be backfilled with an AASHTO No. 2 or larger washed stone to cover the slotted or perforated portions of the pipe. Bentonite will be used as a seal above the stone. General soil fill will be placed above the bentonite seal. A PVC sleeve pipe will be placed around the well pipe above the final grade. The pipe boot will be clamped to the PVC sleeve. The well head, temperature monitoring device and gas monitoring port will be attached to the exposed well pipe. The well heads will be either 2-inch or 3-inch diameter SCH 80 PVC pipe. A flexible hose will connect the well pipe to the same diameter stick-up, which connects to the buried gas lateral piping. The stick-up will contain the gas flow control valve. The gas lateral piping will connect to the underground gas header piping system around the perimeter of the landfill.

**When differential settle occurs and requires the replacement of gas headers, WMWI has proposed to install the replacement headers above the geomembrane component of the final cover and within the rooting zone. This will eliminate the need to cut and repair the geomembrane.**

**FINAL COVER:** The maximum final grades in the expansion area will be 1,079.5 feet MSL. The final landfill topography will include two crests located at approximate coordinates N 799,250 - E 2,537,750 and at N 799,100 - E 2,536,930. The proposed final grades will be at a 4:1 slope from the crests to the toe of slope.

The final cover system has been proposed with 2 options. The first option was proposed as (top to bottom): 6 inches of topsoil, 18 inches of rooting zone, a geocomposite drainage layer, a 40-mil polyethylene geomembrane, a geosynthetic clay liner (GCL), a 2 foot barrier layer of on-site soils, and a minimum 6 inch soil grading layer or up to 18 inches of foundry sand. The second option was proposed as (top to bottom): 6 inches of topsoil, 30 inches of rooting zone, a geocomposite drainage layer, a 40-mil polyethylene geomembrane, 2 foot clay layer and a minimum 6 inch soil grading layer or up to 18 inches of foundry sand. The first proposed option does not meet the requirements of s. NR 504.07(6), Wis. Adm. Code, which specifies that 2.5 foot thick drainage and rooting zone layer be installed above the geomembrane. A condition in this approval establishes the code-defined minimum cover soil thickness of 30 inches of rooting zone soil for both options. A vegetative cover will be established over the final cover to minimize erosion.

**WMWI has proposed a final cover wedge designed to tie-in previously closed areas that have settlement to areas receiving new final cover. The tie-in to the settled areas without the wedge design would create slopes that are greater than 4H:1V. The proposed wedge tie-in design would utilize materials that meet the ch. NR 538, Wis. Adm. Code, beneficial use categories of 1 through 3, which may be used as unconfined geotechnical fill projects. The wedge of NR 538 material would be placed over the settled areas to increase the slope to match the final cover slopes of the area receiving the new final cover. The topsoil would be stripped prior to placing the NR 538 material. This design would avoid the loss of airspace and would maintain the proper slopes of the final cover. The 2-foot clay capping layer or the 2-foot soil barrier layer and GCL would be shingled over the NR 538 material and the existing final cover system of the settled area.**

The seepage from the drainage layer over the geomembrane will be collected in a toe drain collection system surrounding the landfill. The toe drain will consist of 4-inch diameter perforated PE pipe, surrounded by stone and placed at the toe of slope. The toe drain will slope at a minimum 2% and discharge through 4-inch diameter, corrugated non-perforated pipes located approximately every 200 feet along the perimeter of the landfill to drainage ditches surrounding the landfill.

No access road to the top of the landfill is planned.

**BEFORE THE  
STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES**

**AMENDED CONDITIONAL PLAN OF OPERATION APPROVAL  
FOR THE RIDGEVIEW RECYCLING & DISPOSAL FACILITY  
SOUTHERN EXPANSION**

**FINDINGS OF FACT**

The Department finds that:

1. Waste Management of Wisconsin, Inc. (WMWI) has proposed the Ridgeview Recycling & Disposal Facility (Ridgeview RDF) Southern Expansion, a non-contiguous, non-hazardous solid waste landfill, located in portions of the SE ¼ and SW ¼ of Sec. 26, T20N, R22E, Town of Franklin, Manitowoc County, Wisconsin.
2. On September 6, 2006, the Department received a report titled, "Plan of Operation, Southern Expansion, Ridgeview Recycling & Disposal Facility" and 23 associated plan sheets, prepared by STS Consultants, LLC, on behalf of WMWI. The report was dated September 1, 2006.
3. On April 15, 2008 the Department received a plan of operation modification request and an addendum to the Southern Expansion Plan of Operation. Both the plan operation modification request for the existing landfill (Lic. No. 0341) and the addendum to the Southern Expansion Plan of Operation requested changes to the final cover system utilizing the wedge design tie-in, the Special Waste Plan to accept dredge sediments that contain less than 50 ppm PCBs, the replacement gas header location above the geomembrane, and the truncating of gas wells in a black slime is encountered during well drilling operations.
4. On April 28, 2008 the Department issued the Conditional Plan of Operation Approval for the WMWI Ridgeview Southern Expansion without the considering the April 15, 2008 request.
5. On June 4, 2008 the Department held a public meeting at the Town of Franklin Town Hall garage and explained the proposed plan to accept dredge sediments and to solicit comments. The meeting was required by s. 289.54(2), Stats. This meeting satisfied the statutorily required meeting for both Horizontal Expansion Plan landfill (Lic. No. 0341) and the proposed Southern Expansion landfill.
6. On August 13, 2008, the Department issued the Conditional Plan of Operation Approval Modification at the Ridgeview Recycling & Disposal Facility, Manitowoc County, Wisconsin, License NO. 03041, that included the items requested in the April 15, 2008 request submittal.
7. On March 2, 2011, the Department received from WMWI Ridgeview a plan modification request to eliminate the requirement for daily cover to be placed over disposed dredge sediment. The request was dated February 28, 2011. The request has been incorporated into this approval.
8. Additional documents were considered in connection with the review of the modification request include the following:
  - a. The September 6, 2001, Plan of Operation Approval Modification for the Superior Hickory Meadows Landfill;

- b. The September 29, 2005, Plan of Operation Approval Modification for the Superior Hickory Meadows Landfill;
  - c. The April 15, 2008 plan modification request and addendum to the Southern Expansion Plan of Operation; and,
  - d. Department files for the Ridgeview RDF.
9. Additional facts relevant to the review of the plan of operation approval modification include the following:
- a. Fine grained dredge material typically possess high water contents and low hydraulic conductivity, which, without dewatering, and/or modification can result in low shear strength, high compressibility, and difficult handling properties.
  - b. Department staff has observed the properties and behavior of dredged material and other low strength, high water content solid wastes in disposal facilities, and have observed the beneficial effects of dewatering, physical confinement, and use of reactive admixtures in improving physical properties of this solid waste.
  - c. Construction and stability of final cover placed over dredged material with high water contents and low hydraulic conductivity can be difficult to impractical, unless the dredged material is handled or treated to reduce compressibility, settlement, and saturation and to enhance shear strength and hydraulic conductivity.
  - d. Full scale testing of waste disposal methods is a useful technique for documenting and justifying effective long-term operations of specialized landfill operations.
  - e. Dredge material, including dredged material containing Polychlorinated Biphenyl (PCB) and heavy metals at concentrations of less than 50 parts per million (ppm), is a solid waste.
  - f. PCB compounds are much less mobile in water or leachate than in nonionic organic solvents.
  - g. PCB compounds in a matrix of soil or dredged material adhere strongly to active surfaces in both the inorganic soil minerals and the organic matter associated with soil and dredged materials.
  - h. Leaching or transport of PCBs in soil or dredged material is limited or eliminated if disposal methods contain dredged material within the lined area of the landfill, thereby preventing the loss of suspended solids and losses of dredged materials due to wind dispersion.
  - i. There are no economically and technologically feasible options besides landfill for disposal of soil or dredged material contaminated with PCBs at concentrations of less than 50 ppm.
  - j. Modern solid waste landfill liners constructed of recompacted clay and polyethylene geomembranes are effective barriers against movement of PCBs to sub-soils or groundwater.
  - k. PCBs are a closely related group of 209 chemicals (congeners) each of which is composed of a biphenyl molecule to which hydrogen and chlorine are attached. The number and location of the chlorine atoms on the biphenyl molecule vary from congener to congener.

- l. Commercial PCBs products were manufactured by combining various congeners. These products were called Aroclors in the United States and most were named based upon the total percentage of chlorine in the mixture (i.e. Aroclor 1242 contained 42% chlorine).
  - m. Certain laboratory methods identify key congeners in a sample and match the distribution and relative abundance of the key congeners to those of a virgin commercial Aroclor product.
  - n. PCBs in dredge materials can volatilize and degrade, resulting in the loss of chlorine atoms and formation of a different congener. As a result the distribution of congeners in a sample of dredge material is often different than that of the original Aroclor. PCBs can also degrade when disposed of in landfills and the resulting distribution of congeners in leachate will also be different than that of the Aroclor used as a reference.
  - o. Use of an Aroclor matching method to analyze leachate samples from landfills containing dredge materials containing PCBs can result in failure to identify the presence of PCBs because the congener distribution in leachate does not match that of the virgin commercial Aroclor used as a reference.
  - p. Research has found that a select list of congeners can account for as much as 70% of the total PCB burden found in environmental samples and represent those congeners of significance to biota, aquatic organisms, and human health.
  - q. EPA 40 CFR Part 761, Subpart D, s. 761.61(a)(5)(v)(A), allows the disposal of dredged sediments containing PCBs at concentrations of less than 50 parts per million in a municipal solid waste landfill.
10. The special conditions in this document are necessary to assure that disposal of dredge material containing less than 50 ppm total PCBs does not cause an increased threat to public health and welfare, or the environment or inhibit compliance with chs. NR 500 through 538, Wis. Adm. Code.

#### CONCLUSIONS OF LAW

1. The Department has the authority under s. 289.30(6) Stats., to modify a plan of operation approval if the modification would not inhibit compliance with the applicable portions of chs. 280 to 299, Stats., and chs. NR 500-538, Wis. Adm. Code.
2. The Department has the authority under s. 289.30(6), Stats., to approve a modification to the plan of operation with special conditions if the conditions are needed to ensure compliance with the applicable portions of chs. 280 to 299, Stats., and chs. NR 500-538, Wis. Adm. Code.
3. The Department has authority under NR 520, Table 3, Wis. Adm. Code, to charge a review fee for a requested modification to the plan of operation approval.
4. The conditions of approval set forth below are needed to ensure compliance with the applicable portions of chs. 30, 31, 160 and 280 to 299 and ss. 1.11, 23, 40, 59.692, 59.693, 60.627, 61.351, 61.354, 62.231, 62.234, and 87.30, Stats., and chs. NR 500-538, Wis. Adm. Code.
5. In accordance with the foregoing, the Department has the authority under s. 289.30, Stats., to issue the following conditional plan of operation approval modification.

### AMENDED CONDITIONAL PLAN OF OPERATION APPROVAL

The Department hereby amends the plan of operation for the WMWI Ridgeview RDF Southern Expansion for the redesign of the final cover tie-in from a previously closed area to a newly closed area; the inclusion in the Special Waste Plan of a new special waste category, A-28, for dredge sediments containing PCBs and heavy metals with concentrations of less than 50 ppm, placing the replacement gas header lines above the geomembrane within the rooting zone; and, allowing the termination of gas wells when a layer of wet black slime is encountered near the base of the landfill, subject to the following conditions:

1. The wedge tie-in material for the final cover shall have the Initial Certification form, 4400-197, and any subsequent Annual Certification forms, 4400-198, on file with the Department prior to its use.
2. The modifications to the Special Waste Plan encompassed by this approval are valid for 5 years following the date of this approval, unless the Department renews this approval upon application made by WMWI Ridgeview.
3. All dredged sediments shall be dewatered or solidified, as necessary to pass the paint filter test prior to disposal at the facility. Dredge material shall be transported in leak proof and covered trucks to prevent leakage and air borne transport of sediments.
4. Dredged material may not be used as daily cover. All dredged material shall be disposed of in a manner that prevents particulate matter from becoming airborne in accordance with s. NR 415.04, Wis. Adm. Code, including the placement of intermediate cover or other operational practices as needed to assure that the dredged material is disposed of in a nuisance free manner.
5. Dredged material containing PCBs placed in the facility may not be commingled or covered with any potentially incompatible waste (i.e., waste soils containing organic solvents, including petroleum compounds, and other oil- or solvent-containing wastes).
6. Dredged material shall be placed in a manner such that it:
  - a. supports its own weight;
  - b. supports the weight of other materials placed over it without slumping; and,
  - c. maintains stable slopes.
7. Dredged material may not be placed within 10 feet of the liner system on the facility's base or interior sidewalls, within 10 feet of the subbase of the capping layer of the final cover system, or on the exterior slopes.
8. WMWI Ridgeview shall take adequate measures to ensure that dredged material is not tracked outside of the limits of waste filling. If vehicle washing is employed, the wash water shall be collected and treated as leachate or allowed to seep into the waste mass. Truck traffic may not be routed over dredged materials and all landfill equipment that contacts dredged materials shall be adequately cleaned when leaving the limits of waste filling.
9. WMWI Ridgeview shall notify the Department's assigned waste management engineer at least 14 days prior to beginning any new project involving disposal of dredge material containing PCBs at this facility. The Department may waive the 14-day notification period. The notification shall include the approximate volume of dredged material to be disposed of, the results of the testing performed to

determine the concentrations of PCBs in the dredged material, the planned method of disposal, and any design features needed to accommodate the generation of gas or leachate from the dredged material after disposal or to prevent clogging of the leachate collection system by fine particles. The Department may impose additional handling requirements on a case by case basis if, in the Department's opinion, they are necessary to prevent problems with the landfill's operation or design.

10. WMWI Ridgeview shall limit the amount of dredged material accepted on any day to what can be effectively managed.
11. WMWI Ridgeview shall submit to the Department an annual report with the first report due no later than April 1, 2012 and no later than April 1 of each subsequent year that summarizes the sediment disposal activities from the previous calendar year. The annual report shall include, at a minimum, the following:
  - a. Total volumes and tonnages, chemical and physical testing results, and disposal method for materials disposed of during the previous calendar year. Duplication of the testing results submitted as part of the 14-day notice is not required.
  - b. Observations of the effectiveness of handling, dumping, spreading, and conditioning of dredged material and any stabilization agents, including photographic views of the operation;
  - c. Any observation of seeps of water or leachate, slumps, compression, or displacement of dredged material due to placement of additional fill or machinery movements, and other deleterious effects of the dredged material disposal. If monofills are used for disposal, shear strength failures and other deleterious effects of the dredged material monofill shall also be reported;
  - d. Volume of truck wash water used during the year;
  - e. Definition of any stabilization agents used, mixing ratios, and mixing methods for the expeditious and usable attainment of improved shear strength, drainage, and control of deformation and displacement of the dredged material;
  - f. Site specific data from analyses of samples of unamended and amended (if applicable) dredged material for shear strength, hydraulic conductivity, and compressibility;
  - g. Recommended specifications for stabilization materials and admixture ratios, mixing methods and machinery, lift thickness, use of confining berms and other relevant actions and methods;
  - h. Observations of effectiveness of dumping, spreading, and compacting waste over dredged material monofill disposal areas, if applicable;
  - i. A summary of the PCBs analyses performed on leachate samples, and,
  - j. Plan sheets and cross-sections of dredged material monofill locations documented by survey coordinates and elevations, if applicable.

The Department reserves the right to require the submittal of additional information and to modify this approval at any time, if in the Department's opinion, modifications are necessary. Unless specifically noted, the conditions of this approval do not supersede or replace any previous conditions of approval for this facility.

NOTICE OF APPEAL RIGHTS

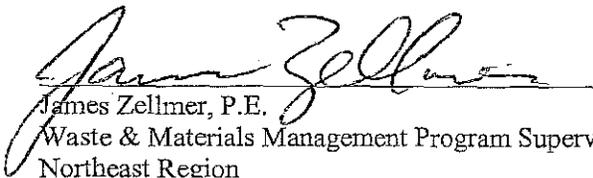
If you believe you have a right to challenge this decision made by the Department, you should know that Wisconsin statutes and administrative codes establish time periods and requirements for reviewing Department decisions.

To seek judicial review of the Department's decision, sections 227.52 and 227.53, Stats., establish criteria for filing a petition for judicial review. You have 30 days after the decision is mailed or otherwise served by the Department to file your petition with the appropriate circuit court and serve the petition on the Department. The petition shall name the Department of Natural Resources as the respondent. This notice is provided pursuant to section 227.48(2), Stats.

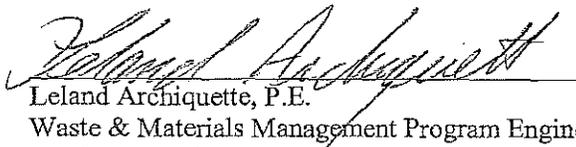
This notice is provided pursuant to section 227.48(2), Stats.

Dated: May 9, 2011

DEPARTMENT OF NATURAL RESOURCES  
For the Secretary

  
James Zellmer, P.E.

Waste & Materials Management Program Supervisor  
Northeast Region

  
Leland Archiquette, P.E.

Waste & Materials Management Program Engineer  
Northeast Region