**Ridgeview landfill leachate monitoring reqs**

Tilkens, Gregory P - DNR to: Jean Greensley 11/17/2011 03:01 PM

History: This message has been replied to and forwarded.

1 attachment

20111117144507218.pdf

Jean - check out condition # 11 of this approval. Leachate monitoring for PCBs at the Southern Expansion is required.

I also learned that Phase I is the only area currently constructed. Phase I will probably provide waste disposal capacity for a few years. Apparently Phase I is not split into more discrete cells.

Greg Tilkens, P.G.
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Waste and Materials Management Program
Northeast Region
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**State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES**

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AUG 13 2008

Mr. Ray Seegers, P.E.
Ridgeview Recycling & Disposal Facility
6207 Hempton Lake Road
Whitelaw, WI 54247-0227

FILE REF: FID #436020530
Manitowoc CO
SW
APPR

Subject: Conditional Plan of Operation Approval Modification at the Ridgeview Recycling & Disposal Facility, Manitowoc County, Wisconsin, License NO. 03041

Dear Mr. Seegers:

The requested modification to your plan of operation for the following four (4) items at the WMWI Ridgeview RDF has been reviewed and approved:

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.

As a requirement to accept dredge sediment for disposal, the Department is required by sec. 289.54(2), Wis. Stats., to hold a public meeting in the city, town, or village where the disposal facility is located to explain the proposal and solicit public comment. This requirement was satisfied with a meeting that was held on Thursday, June 4, 2008, at the Town of Franklin Town Hall.

You are reminded that approval by the Department does not relieve you of obligations to meet all other applicable federal, state, and local permits, zoning and regulatory requirements.

Please call Leland Archiquette at 608-267-0542 if you have any questions regarding this approval.

Sincerely,

Len Polczinski
Waste Program Team Leader
Northeast Region

CC: Jerold Korinek - Town Chairman
John Steimle - Town of Franklin
Terry Hegeman - NER
Leland Archiquette /File – WA/5

**STATE OF WISCONSIN**
**DEPARTMENT OF NATURAL RESOURCES**

**CONDITIONAL PLAN OF OPERATION APPROVAL MODIFICATION**
**FOR THE**
**RIDGEVIEW RECYCLING & DISPOSAL FACILITY**
**LICENSE # 3041**

**FINDINGS OF FACT**

The Department finds that:

1. Waste Management of Wisconsin (WMWI) owns and operates a non-hazardous solid waste disposal facility, Ridgeview Recycling & Disposal Facility (RDF) located in the E½ of the NW¼ and the W½ of the NE¼ of Section 26, T20N, R22E, Town of Franklin, Manitowoc County, Wisconsin.

2. The Department issued a conditional plan of operation approval for the existing facility on August 8, 1984, and subsequent modifications, under which the landfill is currently operating.

3. The Department issued a conditional plan of operation approval for the Southern Expansion of the Ridgeview RDF on April 28, 2008.

4. On April 15, 2008, the Department received a request titled, "Ridgeview Plan Modification Request." The report was prepared by WMWI and dated May 25, 2007.

5. On June 3, 2008, the Department requested additional information for the plan modification request to address the Special Waste Plan.

6. 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.

7. On June 5, 2008, the Department received the $1,650 plan review fee from WMWI.

8. On June 12, 2008, the Department received the certification page with the Professional Engineer's seal from Mr. Ray Seegers of WMWI.

9. On June 27, 2008, the Department received a response to the requested information for the Special Waste Plan. The letter was dated June 20, 2008.

10. 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. Department files for the Ridgeview RDF.

d. Code Of Federal Regulations, Title 40--Protection of Environment, Chapter I--Environmental Protection Agency; Subchapter R--Toxic Substances Control Act, Part 761--Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution In Commerce, And Use Prohibitions. Available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title40/40cfr761_main_02.tpl

e. Abstract of an article titled: Reductive Dechlorination of Polychlorinated Biphenyls In Landfill Leachate; Carmen L. Royal, David R. Preston, Andrew M. Sekelsky and Gina S. Shreve; International Biodeterioration & Biodegradation; 2003, vol. 51, no1, pp. 61-66. Abstract available at: http://cat.inist.fr/?aModele=afficheN&cpsidt=14004252.

f. A publication titled: A Risk Management Strategy for PCB-Contaminated Sediments, Appendix F, Methods of Analysis of PCBs in Sediments, Water, and Biota; 2001; The National Academies, Committee on Remediation of PCB-Contaminated Sediments, Board on Environmental Studies and Toxicology; Division on Life and Earth Studies, National Research Council; National Academy Press, Washington, D.C. Available at: http://books.nap.edu/catalog.php?record_id=10041#toc.

g. A publication titled: Planar PCB Hazards To Fish, Wildlife, and Invertebrates: A Synoptic Review; Biological Report 31, Contaminant Hazard Reviews; August 1996; Ronald Eisler and André A. Belisle; Patuxent Wildlife Research Center; U.S. National Biological Service, Laurel, MD. Available at: www.pwrc.usgs.gov/infobase/eisler/chr_31_planar_pcbs.pdf.

h. A publication titled: Final PCB Analysis And Risk Assessment At Navy Installations, Part A: Overview of PCB Mixtures; 2005; Richard L. DeGrandchamp and Mace G. Barron; for Navy Environmental Health Center,Portsmouth, VA; available at: http://web.ead.anl.gov/ecorisk/issue/pdf/PCBAnalysisPartA.pdf.

11. 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 Biphenyls (PCB) and heavy metals at concentrations of less than 50 parts per million (ppm), is a solid waste.

f. 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 facility permitted, licensed, or registered by a State to manage municipal solid waste subject to 40 CFR Part 258.

g. PCB compounds are much less mobile in water or leachate than in nonionic organic solvents.

h. 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.

i. Leaching or transport of PCBs in soil or dredged material is limited 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.

j. There are no economically feasible options besides landfill for disposal of soil or dredged material contaminated with PCBs at concentrations of less than 50 ppm.

k. Modern solid waste landfill liners constructed of recompacted clay and polyethylene geomembranes are effective barriers against movement of PCBs to sub-soils or groundwater.

l. PCBs are a closely related group of 209 chemicals (congeners) each of which is composed of a biphenyl molecule to which hydrogen and one to ten chlorine atoms are attached. The number and location of the chlorine atoms on the biphenyl molecule vary from congener to congener.

m. Commercial PCBs products were manufactured by combining various congeners. These products were called Aroclors sole manufacturer 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). Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 were manufactured and sold for use.

n. PCBs in dredge materials can volatilize and degrade in the environment, resulting in the loss of chlorine atoms and formation of different congeners. As a result the relative abundance and distribution of congeners in a sample of dredge material is often different than that of a technical grade Aroclor. PCBs can also degrade when disposed of in landfills and the resulting congener distribution in leachate will also be different than that of technical grade Aroclors and of the dredge material.

o. Certain laboratory methods identify key congeners in a sample and match the distribution and relative abundance of the key congeners to those of technical grade Aroclors.

p. 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 technical grade Aroclors used as references.

q. 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.

12. 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.

## CONDITIONAL PLAN OF OPERATION APPROVAL MODIFICATION

The Department hereby approves the proposed modification to the plan of operation for the WMWI Ridgeview RDF 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 RDF.

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. Dredge material shall be covered with six inches of daily cover at the end of each day.

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 or within 10 feet of the subbase of the capping layer of the final cover system.

8. WMWI Ridgeview RDF 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 RDF 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 RDF shall limit the amount of dredged material accepted on any day to what can be effectively managed.

11. The environmental monitoring program for the existing facility, summarized in the August 8, 1984, and subsequent modifications, under which the landfill is currently operating and in Condition NO. 24 of the April 28, 2008 Conditional Plan of Approval for the Southern Expansion is hereby modified to include semi-annual testing of leachate for PCBs.

a. This modification becomes effective the first scheduled sampling event after the placement of any dredged material containing PCBs has begun.

b. Analyses shall be performed on representative leachate samples to include, at a minimum, the following specific PCB congeners: Nos. 8, 15, 26, 28, 37, 44, 49, 52, 60, 66, 70, 74, 77, 81, 82, 87, 95, 99, 101, 105, 110, 114, 118, 123, 126, 128, 132, 138, 149, 151, 153, 156, 157, 158, 166, 167, 169, 170, 177, 180, 183, 187, 189, 201, and 206. An alternative list of specific PCB congeners may be approved by the Department in writing.

c. The sum of the congeners found in the leachate samples shall be reported to the GEMS database as Total PCBs. A copy of the analytical results shall be submitted to the Department's Northeast Region and Madison Offices. Upon notification from the Department the results from the congener-specific analyses shall be submitted to the Department's GEMS database.

d. In addition to providing the results of this testing to the Department in accordance with the plan of operation approval, and in addition to the notification requirements contained in the leachate treatment agreement between WMWI Ridgeview RDF and the Manitowoc Wastewater Treatment Plant, WMWI Ridgeview RDF shall provide the PCB test results to all wastewater treatment

facilities receiving the leachate from the landfill within 15 days of receiving the results if the results identify total PCBs at a concentration greater than 1.5 $\mu$g/l.

e. Based on the monitoring results, the Department may require pretreatment of the leachate or modify this approval.

12. WMWI Ridgeview RDF shall submit to the Department an annual report with the first report due no later than April 1, 2009 and no later than April 1 of each subsequent year that summarizes the material 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;

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 and discussion of the results 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, modification is 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, administrative codes and case law 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. Such a petition shall be filed with the appropriate circuit court and shall be served 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.

Dated: Aug 13, 08

DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Len Polczinski
Waste Materials & Management Team Supervisor
Northeast Region

Leland Archiquette, P.E.
Waste Management Engineer
Northeast Region