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WISCONSIN DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Ron Kazmierczak, Regional Director

Oshkosh Service Center
625 E. County Road Y, Suite 700
Oshkosh, WI 54901-9731
Telephone 920-424-3050
FAX 920-424-4404

April 5, 2004

Steve Barg
City of Ripon Administrator
100 Jackson Street
Ripon, WI 54971-1396

FILE REF: 420013660
Fond du Lac County
SW – Plan Mod.

SUBJECT: Revised Ground-Water Monitoring Plan Submittal – Ripon HWY FF/NN Landfill,. WDNR License # 467, BRRTS # 02-20-000915

Dear Mr. Barg:

This letter is to notify you that we intend to modify the April 11, 1984 Abandonment Plan approval for your facility. A draft of our proposed modification and its cover letter are attached for your review. If you wish to comment or request any changes in the proposed modification, please do so in writing within 30 days from the date of this letter. Be sure to include a full explanation of the reasons for any changes you are requesting. After we have reviewed your comments, or if we do not receive written comments within the 30 days, we will issue our final decision.

If you have any questions concerning this conditional approval, please contact Jennie Pelczar at (920) 303-5447 or Greg Tilkens at (920) 303-5446.

Sincerely,

B.G. Urb

Bruce G. Urben
Team Supervisor
Northeast Region Remediation & Redevelopment Program

Attach: Draft Plan Modification Approval

cc: Case File
Jennie Pelczar – NER Oshkosh – project manager
Greg Tilkens – NER Oshkosh
Joe Renville – LS/5
Dan Graff – LS/5
Ray Roder – Representative for the PRP Group
Jerry DeMers – GeoTrans Inc.
Bernard Schorle – EPA
Lee Archiquette – WA/3

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Dated: _____

Steve Barg
City of Ripon Administrator
100 Jackson Street
Ripon, WI. 54971-1396

FILE REF: 420013660
Fond du Lac County
SW – Plan Mod.

SUBJECT: Conditional Approval of the Revised Ground-Water Monitoring Plan Submittal – Ripon HWY FF/NN Landfill, WDNR License # 467, **BRRTS # 02-20-000915**

Dear Mr. Barg:

We have reviewed the report "Revised Ground-Water Monitoring Plan" (Plan) for the Ripon HWY FF/NN Landfill dated February 20, 2003, submitted by GeoTrans on behalf of the potentially responsible party group (PRP Group) of which the City of Ripon (City) is a member. This submittal was received by the Department of Natural Resources (Department) on February 24, 2003. The Plan requested that the Department modify our February 7, 1996 approval of the 1996 Monitoring Program Plan for the Ripon HWY FF/NN Landfill. We have also received the PRP Groups response to our suggestions discussed in a meeting held on September 23, 2003 with representatives of the Department, PRP Group and the PRP Groups consultant (GeoTrans). The submitted Plan includes a proposal for groundwater monitoring reduction. This letter will describe the important conditions of our approval of the Plan. This approval constitutes a modification to the April 11, 1984 Abandonment Plan Approval. The Department's response is sent to you as the Plan Approval Modification is only applicable to the licensee (the City of Ripon) and it is hopeful that the rest of the PRP Group will follow through with these modifications.

The following paragraphs constitute a brief summary of recent activity regarding the landfill. Following the summary are specific comments on the Plan.

On February 7, 1996 the Department issued an approval of a report titled "Remedial Action Monitoring Plan" submitted on behalf of the PRP Group by Hydro-Search Inc. The approval specified the monitoring (groundwater, landfill gases, and leachate) required at the landfill. The plan approval included the following items:

1. Future groundwater monitoring data be collected and results sent to the Department, and property owners (for private wells).
2. Landfill gas and leachate data be collected and sent to the Department.

More specifically the following items were required to be monitored:

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GROUNDWATER

1. The following monitoring wells were to be sampled semiannually (April and October) for groundwater elevation, field temperature, field pH, field conductivity, color, odor, turbidity, and volatile organic compounds (VOCs): MW-101, MW-102, MW-103, MW-104, P-103, P-104, P-106 MW-107, P-107, P-107D, MW-108.
2. The following private wells were to be sampled for volatile organic compounds on an annual basis in the month denoted next to the homeowner name:
   Gaastra, W14297 Charles Street (April)
   Ninneman, W14298 Charles St. (April)
   Weiss, N8778 S Koro Rd. (October)
   Rhode, N8745 S. Koro Rd (October)
   Altnau, N8798 S. Koro Rd. (October)
   Hadel, W14292 Charles St. (October)
   Miller, N8756 S. Koro Rd (April)
3. Table 3-1 of the Remedial Action Monitoring Plan listed the detection limits for the VOC's that are included in the sampling parameter list. All detection's, even if they are qualified, were to be reported on the lab sheets.
4. The PRP Group was to send copies of the lab sheets with an explanatory letter to the respective homeowner within two weeks of the data becoming available from the laboratory. A copy of the homeowner's letter was also to be sent to the Department. The sampling requirements for these households were to remain in effect should the property be sold to another party.

LEACHATE

1. The following leachate wells were to be sampled semiannually (April and October) for leachate elevation, field temperature, field pH, field conductivity, color odor, turbidity and volatile organic compounds: LC-1, LC-2, LC-3.

LANDFILL GAS

1. All landfill gas vents and the following wells were to be sampled for methane, oxygen and carbon dioxide, in percent by volume, on a semiannual basis at the same time that groundwater monitoring was completed. The wells include: LC-1, LC-2, LC-3, MW-101, MW-102, MW-103, and MW-104.

A Record of Decision (ROD) was issued to address the remedial action for source control and the groundwater operable units at the Ripon FF/NN landfill (under the provisions of the Comprehensive Environmental Response, Compensation and Liability Act) and was signed on February 26, 1996 by Department Secretary George Meyer. A source control remedy was implemented (composite cap with passive gas venting) and environmental monitoring was required at that time.

In October 2001, it was discovered through required routine monitoring that a downgradient private drinking water well (Ron Altnau is homeowner) was impacted with vinyl chloride above the ch. NR 140, Wis. Adm. Code, Enforcement Standard (ES). A new home was built in 2000 (Al Ehster is homeowner) next to Altnau and this private drinking water well was also impacted with vinyl chloride above the ES. As an interim action, both of these private wells were equipped with drinking water treatment systems to remove the vinyl chloride. In November 2002, the PRP Group paid for the extension of municipal water from Fond du Lac Road to the end of Charles Street, and households Altanu, Ehster and Miller were connected. The Miller well was not impacted but was connected as part of a contract with Miller to utilize their property to install two downgradient groundwater monitoring wells (P-113A and P-113B). The Ehster well has now been converted to a monitoring well (P-114), and the other two private wells have been abandoned (Altnau, Miller). No other residents along Koro Road or Charles Street have been connected to the municipal water line.

A feasibility study workplan dated January 8, 2003 was submitted to the Department by GeoTrans for the PRP Group to identify some of the options for a remedy that will address the expanding groundwater plume and ultimately restore groundwater quality in the area of the site.

Comments on "Revised Ground-Water Monitoring Plan" (Plan)

The Department has reviewed the Plan and the following responses are in the order in which they appear in the Plan (bolded) with Department comments (not bolded) under each section.

Parameters Proposed for Analysis

- **Natural Attenuation Parameters** – The Plan states that natural attenuation (NA) is being considered as a possible remedy. The Department is not requiring that natural attenuation parameters be sampled for, and in addition, we do not believe that additional resources should be expended on further definition of natural attenuation. While these analyses are useful in determining the geochemistry of the aquifers, the decision to sample for these parameters is yours. The Department does not believe that natural attenuation in the groundwater can be selected as a sole remedy at this site at this time and the Department has expressed that this remedy is an option only if paired with an active remedy. While natural attenuation is occurring at the site, it is not occurring at a level at which the groundwater contaminant plume is stable/receding.
- Indicator parameter data (alkalinity, chloride, COD, field conductivity, field pH, field temperature, hardness) were collected from the monitoring wells until 1993 when a request was made by the PRP group to eliminate the analysis for these parameters. The request was granted, however the Department believes that these parameters are very valuable for determining long-term groundwater quality adjacent to the site. We will need to rely heavily upon the trends in these parameters for any future groundwater monitoring requirement changes. Therefore, it is necessary that the indicator parameters be analyzed semi-annually.

Wells Proposed for Sampling and Sampling Frequency

- **Monitoring Wells Proposed for Sampling** - The proposed semi-annual monitoring of a majority of the monitoring well locations is not adequate. Quarterly monitoring was implemented at the landfill over the last year, but a significant drop in groundwater levels

due to de-watering at the NE Asphalt gravel pit resulted in almost all of the shallow monitoring wells being dry and not able to be sampled. The Department believes that continuation of quarterly sampling of the monitoring wells in the area affected by de-watering is necessary to determine what effect the de-watering had on the groundwater flow regime and if the change in the contaminant plume will have an effect on the surface water at the wetland downgradient. These monitoring wells must be sampled on a quarterly basis until it can be shown that stable trends in groundwater chemistry warrant reduced sampling. A specific monitoring schedule is located in the tables (Tables 1, 2, 3 and 4) in the conditions of the plan modification.

- Once steady state conditions are returned to the aquifer, (after being altered by the pumping of the pond at NE Asphalt gravel pit), an evaluation must be made of any impacts to the downgradient wetland (on the R and R Wash property owned by Roger Washkovick). The Department is concerned with the extent of the plume downgradient of MW-112, as there is no monitoring well between MW-112 and the wetland. Concentrations within MW-112 have increased significantly in the recent sampling event. In October 2003, the shallow monitoring wells that were impacted by the pumping at the NE Asphalt gravel pit, were no longer dry and indicate that the system may be nearing equilibrium. GeoTrans has stated in their November 26, 2003 submittal, that one surface water sample from the wetland will be collected and analyzed for VOCs during the April 2004 monitoring event. The Department would like the PRP Group to hold off on this sampling until the July or October sampling round as a sample from the wetland, collected in April may not give reliable data (a majority of the water within the wetland is snow melt at this time and not representative of normal groundwater flow through the wetland).
- **Private Drinking Water Wells Proposed for Sampling** – Considering the current private well impacts, groundwater monitoring at the private drinking water wells (Gaastra, Baneck, and Rhode) must continue on a quarterly basis. The private wells at the Wiese and Hadel residences are currently hooked up to municipal water and their private water wells are being converted into groundwater monitoring wells. The remaining three private wells are potential downgradient receptors of the contaminant plume. If the remaining private wells were also replaced with a connection to the municipal water supply, the quarterly sampling of the private wells could be eliminated or converted to monitoring wells.
- If additional private wells are impacted by the landfill's groundwater contaminant plume, the Department needs to be immediately notified and a sampling schedule will be determined and an interim action devised (ie. bottled water, install a treatment system or hook up to municipal water line).

Other Monitoring Activities

- **Groundwater Elevation Measurements** - Groundwater elevations must be taken from all wells during all routine sampling events at the landfill and reported to the Department.
- **Hydraulic Characterization of the Sandstone Aquifer** - The Department agrees with the proposed hydraulic conductivity testing of P-111D and P-113B. However, per s. NR 507.06(3), Wis. Adm. Code, hydraulic conductivity testing must be completed on all wells when they are installed. Historically, 21 of the monitoring wells were tested for hydraulic conductivity, as reported in the 1994 Remedial Investigation (RI) report. Several new wells (P-103D, P-113A, P-114, P-115, P-116) have been or will be installed and should be tested for hydraulic conductivity.

- **Leachate Wells** - Leachate wells must be sampled annually for VOCs. If a leachate well is dry during the July sampling event (when VOC samples are to be collected), an attempt to collect a sample must be made during every subsequent routine sampling event.
- **Landfill Cap Inspections** - Landfill cap inspections must be conducted semi-annually in April and October. The inspection should identify the locations and the approximate length and width of any surface cracks, any areas of stressed vegetation, pooling of water, and areas of erosion. If any of the above items are discovered, repairs must begin within 60 days of discovery.
- **Landfill Gas Monitoring** - Historically, four perimeter groundwater monitoring wells were approved to be used for landfill gas monitoring. However, under s. NR 507.11(2) Wis. Adm. Code, all gas monitoring wells must be constructed with a shut-off valve to prevent the escape of gas from the sampling device. The current monitoring wells do not have such a shut off valve, so the historic data represents gas data that is diluted since the methane gas was allowed to escape from the monitoring well when the well cap was removed. In addition, s. NR 507.22(2) Wis. Adm. Code, specifically states that when a gas monitoring well is being sampled, the gas monitoring instrument must be attached to the well prior to opening the valve on the gas monitoring well.

  Currently, GeoTrans has recommended, and the PRP group has accepted, the new proposal to install four s. NR 507.11(3)b, Wis. Adm. Code, gas monitoring wells, one on each corner of the landfill. A March 16, 2004 Department letter has specified that the corner locations for the gas probes is approved with some minor modifications to the wells construction.

  The PRP Group has proposed semi-annual gas monitoring of the gas monitoring points (four new gas wells, twelve gas vents and three leachate wells). The Department believes that monthly monitoring of the gas points is necessary during the first year after installation of the four new gas monitoring wells. The monthly monitoring will provide data that is representative of the gas situation at the landfill and will make it easier to decide upon an appropriate remedial action. This decision would be difficult with only the 4 data points that would be obtained from quarterly monitoring. The monthly monitoring will provide data during the seasonal changes and the various ground conditions, i.e. high and low barometric pressure and saturated frozen or dry ground. This data will help in determining the potential for environmental impacts and the risk those impacts pose on human health and the environment. Once the 12 consecutive months of gas data has been collected and evaluated the monitoring frequency can be modified.

  Gas has been detected in MW-103 and MW-104 in the past. These groundwater monitoring wells have a screened interval that is below the maximum depth of waste. Gas pressures within the waste mass are great enough to cause the gas to migrate both vertically and laterally to these wells. The gas monitoring data obtained from the groundwater monitoring wells, although not consistent, does show that elevated levels are achieved even when the monitoring wells were not properly sampled.

- The condition of the monitoring wells/leachate wells and gas wells must be checked during each sampling event. If repairs are necessary they should be completed within 60 days of

discovery per s. NR507.13 Wis. Adm. Code and then documented in the following quarterly report.

- **Field Methods** – Field Procedures must comply with all current standard practices per the Departments "*Groundwater Sampling Desk Reference*"PBL-DH03796, dated 9-1996.
- **Sample Storage and Analysis** – All samples must be stored and analyzed per s. NR507.17 Wis. Adm. Code requirements.
- **QA/QC** – The Department agrees with the duplicate and trip blank sampling proposed. In addition, for gas monitoring, follow s. NR 507.22(2), Wis. Adm. Code, for proper gas sampling techniques.

Reporting and Evaluation of Data

- **Reporting of Groundwater Monitoring Results** - Status reports shall be submitted within 90 days of every sampling event (quarterly). The reports must contain all pertinent results in a comprehensive form (include all historical data within in the tables in the report) and include:
  1. Updated tables (for groundwater analytical data, groundwater monitoring well elevations, gas analytical, and leachate analytical data).
  2. Laboratory results for the private homes must be sent to the Department immediately after receipt of results.
  3. All laboratory data reports, chain of custody (COC) forms, and field monitoring notes.
  4. Updated groundwater flow maps for each of the stratigraphic layers of wells.
  5. All monitoring point repairs/replacements must be documented if any occurred in that quarter.
  6. Results of the semi-annual (April and October) landfill cap inspections must be submitted in the quarterly report following these activities with the accompanying field forms.
- Please double side all documents and reports when possible to reduce filing space for all parties.

Remedial Action Options Report

A feasibility workplan dated January 8, 2003 was submitted by GeoTrans for the PRP Group. The Department responded in a March 13, 2003 letter with additional comments. A Remedial action Options Report (RAOR) with remedial action recommendations must be submitted within 14 months of the date of this approval. The delayed date of this submittal is for the PRP Group to obtain a years worth of gas monitoring data from the new gas monitoring wells to evaluate all remedial alternatives.

Discussion during September 23, 2003 meeting

On September 23, 2003 representatives from GeoTrans, Ray Roder from the PRP Group, and Steve Barg from the City met with representatives from the DNR and the Environmental Protection Agency (EPA) to discuss issues involving the current site investigation and future remediation plan. The Department outlined several areas of concern where there is no data available by which to define the degree and extent of groundwater contamination. Landfill gas issues and GeoTrans's theory that the source of the contamination is a secondary matrix contamination below the landfill were also discussed. These items were again addressed in a

response from the PRP group and GeoTrans in a letter dated October 31, 2003. Some of the items outlined and discussed in the October 31, 2003 response are being followed through with. Others could be part of an additional investigation that may occur, and some are pending receipt of additional information from the additional investigation. The items that the PRP Group and GeoTrans did not feel were necessary to complete at this time are the following:

1) Installation of a shallow observation well southwest (SW) of MW-112 location. This well is necessary to define the westerly component in the shallow groundwater regime.
2) Installation of a top of sandstone well SW of MW-112 location (to be nested with shallow well mentioned above). This well is necessary to define the extent of the contamination in the sandstone.
3) Installation of a top of sandstone well (180 to 200 foot depth) east of MW-111. This well is necessary to define the "matrix theory" as stated by GeoTrans.
4) Installation of additional wells northeast (NE) of P-102 to define the extent of contamination. If P-102 continues to show increasing concentrations, additional wells at this location will be necessary to define the degree and extent. It is possible that this contamination may be a remnant from the groundwater flow reversal caused by the pumping that occurred in the NE Asphalt gravel pit.

At the meeting the PRP Group and their consultant GeoTrans stated that they believe that the site investigation is complete. The Department did not agree that the site investigation under ch. NR716, Wis. Adm. Code is complete and a list of items were suggested. Although several items were completed, items 1, 2, and 3 listed above were not. However, the additional investigation necessary is dependent upon the remedy selected and, additional investigation may not be necessary if an aggressive remedial action is implemented at the source.

Conclusions

The Department and the PRP Group have discussed the adequacy of the characterization of contamination related to the Ripon HWY FF/NN Landfill in much detail on many occasions. While we have not always agreed on some issues, we have had success working collaboratively to address the most important issue at the site, safe drinking water for residents near the landfill.

As alluded to earlier in this letter, natural attenuation is occurring at this and most landfills with groundwater contamination problems. Due to the complexity of landfill groundwater contamination, it has typically not been feasible to fully define the natural attenuation processes at work at the sites. The typical approach for remedial actions has been to concentrate more on the source (the landfill), and less on natural attenuation. The Department believes that it is necessary at the present time to implement a final remedy that, most importantly, fully addresses any drinking water issues related to the landfill in a timely fashion, but also over the longer term, restores the landfill's regulatory compliance. Any remedy proposed must be fully supported by monitoring data, be technically feasible, and be able to restore the landfill to environmental compliance within a reasonable time frame.

The Department is conditionally approving the Revised Ground-Water Monitoring Plan Modification with specific conditions as set forth in the attached Approval that addresses many of the topics listed above.

If you have any questions concerning this conditional approval, please contact Jennie Pelczar at (920) 303-5447 or Greg Tilkens at (920) 303-5446.

Sincerely,

DRAFT

Bruce G. Urben
Team Supervisor
Northeast Region Remediation & Redevelopment Program

Attach: Tables for Groundwater, Gas, Leachate, private well tables (4 tables total)
Conditional Approval

cc: Case File
Jennie Pelczar – NER Oshkosh – project manager
Greg Tilkens – NER Oshkosh
Joe Renville – LS/5
Dan Graff – LS/5
Jerry DeMers – GeoTrans Inc.
Ray Roder – Representative for the PRP Group for the Ripon FF/NN Landfill
Bernard Schorle - EPA
Lee Archiquette – WA/3

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BEFORE THE
STATE OF WISCONSIN

DEPARTMENT OF NATURAL RESOURCES

CONDITIONAL PLAN APPROVAL MODIFICATION
FOR THE RIPON FF/NN LANDFILL (License #467)

FINDINGS OF FACT

The Department of Natural Resources (Department) finds that:

1) The property upon which the landfill is located was owned by Lyle Sauer from the initiation of the landfill until September 7, 1977 when Arline Sauer (Lyles wife) assumed sole ownership of the property. The City of Ripon (City) and Town of Ripon acquired property ownership on July 22, 2003.

2) The City and Town of Ripon operated a solid waste disposal facility located in the SE ¼, of the SE ¼, of Section 7, T16N, R17E, Town of Ripon, Fond du Lac County, Wisconsin (Ripon FF/NN Landfill). The site accepted municipal, industrial and commercial wastes, and wastewater treatment plant sludge between 1967 and 1983. License number 467 was issued to the City and Town on August 11, 1970. Thereafter, on February 4, 1972, the City exclusively took responsibility for the license, which continues to the present.

3) On April 11, 1984, the Department issued a solid waste facility Abandonment Plan Approval to the City.

4) On October 7, 1985, the Department issued an Abandonment Plan Approval Addendum to the City.

5) The landfill was included on the National Priorities List (NPL) on May 31, 1994. Inclusion on the NPL places the site in the federal Comprehensive, Environmental Response, Compensation and Liability Act (CERCLA) Program (otherwise known as the Superfund Program).

6) The Potentially Responsible Party Group (PRP Group), which includes the City and Town of Ripon, completed a Remedial Investigation (RI) for the landfill. The RI report, prepared by HydroSearch, contains groundwater quality data collected during the investigation and was submitted to the Department on August 25, 1994.

7) Groundwater quality data collected during the RI indicate that the groundwater beneath and downgradient of the landfill exceeds groundwater quality standards listed in ch. NR140, Wis. Adm. Code.

8) On February 7, 1996, the Department issued a s. 289.30, Stats., Plan Modification to the 1984 Abandonment Plan Approval for monitoring at the Ripon FF/NN Landfill.

9) On February 26, 1996, The Department signed the Record of Decision for the selected remedial action for a source control operable unit and a groundwater operable unit.

10) On January 7, 1998, the Department received a report submitted by GeoTrans on behalf of the PRP Group, titled "Monthly Status Report – July through December 1997" dated December 31, 1997. This report requested the removal of sampling groundwater monitoring wells and piezometers MW-102, MW-108, P-103, and P-104 from the semi-annual groundwater-sampling schedule. This request was approved in a letter from the Department dated May 22, 1998.

11) Samples from two downgradient private drinking water wells (Altnau and Ehster) documented exceedances of vinyl chloride, which is a volatile organic compound (VOC) and were first detected in October and November 2001(respectively). These exceedances are attributable to the contaminated groundwater plume that is emanating from the Ripon FF/NN Landfill. The following results were collected from the two private drinking water wells:

Date	Parameter	Altnau Private Well Results (ug/L)	Ehster Private Well Results (ug/L)
October 9, 2001	Vinyl Chloride	0.96 (first detection)	
October 30, 2001	Vinyl Chloride	ND	
October 31, 2001	Vinyl Chloride	0.87	
November 6, 2001	Vinyl Chloride	No sample	5.1 (first sampled for VOC's)
November 19, 2001	Vinyl Chloride	No sample	7.0
February 5, 2002	Vinyl Chloride	0.48	5.5
May 22, 2002	Vinyl Chloride	0.97	6.2
August 21, 2002	Vinyl Chloride	1.2	5.4
December 3, 2002	Vinyl Chloride	Unable to sample well	6.3

UG/L = MICROGRAMS PER LITER
ND = NO DETECT

12) Since the installation of the composite cap in 1996, methane in MW-103 has exceeded the lower explosive limit (LEL) on three separate days. In addition, MW-104 has exceeded the LEL on five separate days. The data is listed below:

Well	Date	Percent methane
MW-103	4-28-1998	10.6
MW-103	10-13-1998	11.6
MW-103	10-30-2000	11.4
MW-104	10-28-1997	51.4
MW-104	4-28-1998	23.1
MW-104	10-13-1998	49.5
MW-104	10-30-2000	29.7
MW-104	5-9-2001	16.7

13) MW-103 and MW-104 are not designed, constructed, and monitored as gas monitoring wells in accordance with s. NR 507.11, Wis. Adm. Code, therefore, they do not provide reliable data to determine the possible environmental impacts.

14) MW-103 and MW-104 have a screened interval that begins a minimum of 6 feet below the maximum depth of waste.

15) The PRP group has proposed semi-annual monitoring of the gas monitoring wells.

16) Monitoring the gas wells on a monthly basis for the first 12 months after installation will provide data that spans the seasonal changes and various soil conditions throughout the seasons.

17) Obtaining monthly monitoring data during the first 12 months after installation of the gas wells will provide reliable data regarding the potential for environmental impacts and the risk those impacts may have on human health and the environment.

18) In the Spring (March, April, May) of 2002, the dewatering of a gravel pit at the NE Asphalt gravel pit on Hwy FF, drastically impacted the groundwater gradient at the landfill and surrounding area. A groundwater flow reversal occurred and groundwater levels dropped up to 20 feet from normal levels in comparison to historic groundwater elevation data at the landfill.

19) On January 10, 2003, the Department received a report titled "Workplan for Focused Feasibility Study Sandstone Aquifer", dated January 8, 2003 prepared and submitted by GeoTrans on behalf of the PRP Group.

20) On February 24, 2003, the Department received a report titled "Revised Ground-Water Monitoring Plan", dated February 20, 2003 for the PRP Group (of which the current landfill licensee (the City) is a part of the PRP Group) and submitted by GeoTrans.

21) On March 13, 2003, The Department commented with a letter on the "Revised Ground-Water Monitoring Plan" submittal.

22) On September 23, 2003, the Department (Bruce Urben, Jennie Pelczar, Joe Renville, Greg Tilkens), Bernard Schorle from the Environmental Protection Agency (EPA), Ray Roder, Steve Barg, Travis Drake, Lud Wurtz and the PRP Groups consultant GeoTrans (Gerald DeMers, Heidi Yantz, and Mike Noel) met at the Oshkosh Service Center to discuss the technical issues at hand; source control, groundwater plume migration, nature and extent of impacts in each geologic unit, and remedial alternatives.

23) On October 31, 2003, the Department received a letter from Ray Roder (on behalf of the PRP Group) and a short summary letter from GeoTrans dated October 29, 2003 regarding the September 23, 2003 meeting between the Department and the PRP Group. This letter described in general terms what actions the PRP Group had decided to complete in regards to the September 23, 2003 discussion.

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24) On December 1, 2003, the Department received a report titled "Scope of Work for Additional Investigation Activities", dated November 26, 2003 prepared and submitted by GeoTrans.

25) On December 22, 2003, the Department submitted a response to the November 26, 2003 submittal (above) regarding the location of the gas monitoring wells.

26) On January 15, 2004, the Department received a letter from Ray Roder dated January 14, 2004 disputing the Departments request for alternate gas monitoring well locations around the landfill.

27) On January 27, 2004, the Department received a letter from Ray Roder dated January 26, 2004, asking for confirmation and legal interpretation of the Department's position on the matter of the proposed gas monitoring well locations.

28) On February 25, 2004, the Department responded to the January 26, 2004 letter from Ray Roder on the Departments position on the NR 500 code pertaining to gas monitoring well location.

29) On March 8, 2004, a new gas monitoring well location proposal was faxed to the Department. On March 16, 2004, the Department sent a letter to the PRP Group and GeoTrans which pre-approved the proposed gas well locations and commented on the gas monitoring well construction. On March 23, 2004, the Department received the final revised gas monitoring well location and construction proposal dated March 22, 2004 submitted by GeoTrans. The gas monitoring well locations proposed in the March 22, 2004 letter are acceptable and meet the requirements of NR 507.11 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 modifications will not inhibit compliance with ch. NR 500 through 538, Wis. Adm. Code.

2) The Department has the authority under s. 289.30(6), Stats., to approve a plan of operation with special conditions if the conditions are needed to ensure compliance with chs. NR 500 through 538, Wis. Adm. Code.

3) The conditions of this approval are needed to ensure compliance with chs. NR 140 and NR 500 through 538, and ch. NR 716, Wis. Adm. Code, and ch. 160 Stats.

4) The Department has the authority under s. NR 508.04(3), Wis. Adm. Code, to require the submittal of a site investigation workplan and a site investigation report in accordance with ch. NR 716, Wis. Adm. Code, when a groundwater standard is attained or exceeded at any groundwater monitoring well at a solid waste facility.

5) The Department has the authority under s. NR508.04(5), Wis. Adm. Code, to determine if the remedial action has met the requirements of ch. NR140 Wis. Adm. Code, in accordance with ch. NR726 Wis. Adm. Code.

6) The Department has the authority to require a response under ss. 160.23 and 160.25, Stats., and ss. NR 140.24(4) and 140.26.(2), Wis. Adm. Code, if a preventive action limit or an enforcement standard for a substance of health or welfare concern has been attained or exceeded at a point of standards application.

7) The Department has the authority under s. NR 507.22, Wis. Adm. Code, to require more frequent monitoring if explosive gases are detected in any monitoring well outside the limits of filling.

8) If the special conditions are complied with, the proposed modifications will not inhibit compliance with the standards set forth in chs. NR 500 through 538, Wis. Adm. Code.

9) In accordance with the foregoing, the Department has the authority under chs.160 and 289, Stats., to issue the following conditional plan of operation approval modification:

CONDITIONAL PLAN OF OPERATION
APPROVAL MODIFICATION

The Department hereby approves the report titled "Revised Ground-Water Monitoring Plan" for the closed Ripon FF/NN Landfill (License # 467) subject to the following conditions:

1) The City shall submit a Remedial Action Options Report in accordance with ch. NR 722 Wis. Adm. Code within 14 months of the date of this approval.

2) The City shall conduct environmental monitoring in accordance with chs. NR500 – 520 Wis. Adm. Code the attached tables (Tables 1, 2, 3 and 4), which are hereby made part of this approval. All monitoring data shall be submitted electronically to the Department. Contact Jack Connelly at (608) 267-7574 for information on electronic transfer of data or submit the data directly to GEMS Data Submittal Contact – WA/3, Bureau of Waste Management, Wisconsin Department of Natural Resources, P.O. Box 7921, Madison, WI 53707-7921.

3) The City shall collect and analyze one surface water sample for VOC's from the wetland downgradient of MW-112 (wetland on the R and R Wash property owner by Roger Washkovick) in July or October of 2004. The data shall be submitted in the quarterly report following the sampling event.

4) The City shall submit private well water sampling results to the Department immediately upon receipt of final laboratory documents, as well as in the quarterly report required in condition 6) below.

5) Under s. NR 708.05(4)(f) Wis. Adm. Code, if a private well becomes impacted with compounds emanating from the landfill exceeding the standards contained in Table 1 in ch.

NR140, Wis. Adm. Code, the City shall take immediate actions. Immediate actions may include supplying bottled water, installing a treatment unit, or connection of the home to municipal water. Bottled water and a treatment unit are considered temporary alternatives for providing safe water and may not be considered for long term use.

6) The City shall submit a quarterly report within 90 days of a routine sampling event. The quarterly report shall consist of the following:

   1. Updated tables (for groundwater analytical data, groundwater monitoring well elevations, gas analytical, and leachate analytical data).
   2. Laboratory results for the private homes shall be sent to the Department immediately after receipt of results.
   3. All laboratory data reports, chain of custody (COC) forms, and field monitoring notes.
   4. Updated groundwater flow maps for each of the stratigraphic layers of wells.
   5. All monitoring point repairs/replacements should be documented if any occurred in that quarter.
   6. Results of the semi-annual (April and October) landfill cap inspections shall be submitted in the quarterly report following these activities with the accompanying field forms.

7) The City shall install four s. NR 507.11, Wis. Adm. Code compliant gas monitoring wells as proposed in the recent plan dated March 22, 2004 submitted by GeoTrans on the PRP Groups behalf.

8) The City shall monitor the gas monitoring points (4 new gas monitoring wells, twelve passive gas vents, three leachate head wells) on a monthly basis for 12 consecutive months starting with the date of this approval.

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 that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., 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. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

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

Dated:_____

DEPARTMENT OF NATURAL RESOURCES
For the Secretary

_____

Bruce G. Urben
Team Supervisor
Northeast Region Remediation & Redevelopment Program

_____

Jennie Pelczar
Hydrogeologist
Northeast Region Remediation and Redevelopment Program

_____

Greg Tilkens, P.G.
Hydrogeologist
Northeast Region Waste Program

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TABLE 1

Groundwater Monitoring Requirements

		Parameter Name and Number							
		VOCs	Elevation	Field Temp	Field pH	Field Conductivity	Alkalinity, total filtered	Chloride	Hardness, total filtered
DNR	Well	ug/l	feet MSL	degrees F	standard units	umho/cm @ 25C	mg/l	mg/l	mg/l
ID #	Name	*	04189	00010	00400	00094	39036	00940	22413
110	MW-101	Q	Q	Q	Q	Q	SA	SA	SA
131	P-101	Q	Q	Q	S	Q	SA	SA	SA
111	MW-102	Q	Q	Q	Q	Q	SA	SA	SA
123	P-102	Q	Q	Q	Q	Q	SA	SA	SA
112	MW-103	Q	Q	Q	Q	Q	SA	SA	SA
114	P-103	SA	Q	SA	SA	SA	SA	SA	SA
113	MW-104	Q	Q	Q	Q	Q	SA	SA	SA
115	P-104	Q	Q	Q	Q	Q	SA	SA	SA
132	MW-106	Q	Q	Q	Q	Q	SA	SA	SA
116	P-106	SA	Q	SA	SA	SA	SA	SA	SA
117	MW-107	Q	Q	Q	Q	Q	SA	SA	SA
118	P-107	SA	Q	SA	SA	SA	SA	SA	SA
119	P-107D	SA	Q	SA	SA	SA	SA	SA	SA
120	MW-108	Q	Q	Q	Q	Q	SA	SA	SA
125	P-108	SA	Q	SA	SA	SA	SA	SA	SA
127	MW-111	A	Q	SA	SA	SA	SA	SA	SA
129	P-111	A	Q	SA	SA	SA	SA	SA	SA
130	P-111D	Q	Q	Q	Q	Q	SA	SA	SA
121	MW-112	Q	Q	Q	Q	Q	SA	SA	SA
136	P-113A	Q	Q	Q	Q	Q	SA	SA	SA
138	P-113B	Q	Q	Q	Q	Q	SA	SA	SA
140	P-114 (Ehster)	Q	Q	Q	Q	Q	SA	SA	SA
133	MW-3A	Q	Q	Q	Q	Q	SA	SA	SA
134	MW-3B	Q	Q	Q	Q	Q	SA	SA	SA
142	P-115 (Wiese)"	Q	Q	Q	Q	Q	SA	SA	SA
143	P-116 (Hadel)"	Q	Q	Q	Q	Q	SA	SA	SA
All Wells		Qualitative description of odor, color and turbidity at time of sampling							

- Analysis not required
* VOC analysis - see NR 507 Appendix 1Table 1
" Hadel and Wiese private wells have been converted into monitoring wells, which eliminates them from the private well monitoirng program and transfers them to the groundwater monitoring well program.
Q Quarterly sampling in January, April, July and October
SA Semi-annual sampling in Apr and Oct
A Annual sampling in July
ug/L microgram per liter
mg/L milligram per liter

One duplicate sample per 10 samples and one trip blank per sampling event shall be collected for every sampling round

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TABLE 2

Leachate Monitoring Requirements

		Parameter Name and Number				
		VOCs	Field temp	Field pH	Field Conductivity	Leachate Head Elevation
DNR	Well	ug/l	degrees F	standard units	umho/cm @ 25C	feet above MSL
ID #	Name	*	00010	00400	00094	00023
301	LC-1	A	A	A	A	A
302	LC-2	A	A	A	A	A
303	LC-3	A	A	A	A	A
All Wells		Qualitative description of odor, color and turbidity at time of sampling				

* VOC analysis - see NR 507 Appendix 1 Table 4

A Annual Sampling in July (if dry then sample for leachate in October, January, and April)

ug/l microgram per liter

MSL Mean Sea Level

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TABLE 3

Private Well Monitoring Requirements

		Parameter Name and Number						
		VOCs (EPA Method 524.2)	Field temp	Field pH	Field Conductivity	Alkalinity, total unfiltered	Chloride	Hardness, total unfiltered
DNR ID#	Well Name	ug/l	degrees F	standard units	umho/cm @ 25C	mg/l	mg/l	mg/l
		*	00010	00400	00094	00410	00940	00900
203	Baneck	Q	Q	Q	Q	Q	Q	Q
201	Gaastra	Q	Q	Q	Q	Q	Q	Q
207	Rhode	Q	Q	Q	Q	Q	Q	Q
All Wells		Qualitative description of odor, color and turbidity at time of sampling						

One duplicate sample shall be collected per sampling event and submit the results to the Department.
Water samples from private wells shall not be filtered

Q Quarterly sampling in January, April, July and October
* EPA Method 524.2
ug/l microgram per liter
mg/l milligram per liter

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TABLE 4

Gas Monitoring Requirements

		Parameter Name and Number						
		Methane	Oxygen	Carbon Dioxide	Barometric Pressure	Pressure Trend	Temp	Landfill Cap Inspection
DNR ID#	Well Name	% by volume 85547	% by volume 85550	% by volume 85544	00025	46381	degrees F 00010	
304	GV-1	M	M	M	M	M	M	SA
305	GV-2	M	M	M	M	M	M	SA
306	GV-3	M	M	M	M	M	M	SA
307	GV-4	M	M	M	M	M	M	SA
308	GV-5	M	M	M	M	M	M	SA
309	GV-6	M	M	M	M	M	M	SA
310	GV-7	M	M	M	M	M	M	SA
311	GV-8	M	M	M	M	M	M	SA
312	GV-9	M	M	M	M	M	M	SA
313	GV-10	M	M	M	M	M	M	SA
314	GV-11	M	M	M	M	M	M	SA
315	GV-12	M	M	M	M	M	M	SA
301	LC-1	M	M	M	M	M	M	SA
302	LC-2	M	M	M	M	M	M	SA
303	LC-3	M	M	M	M	M	M	SA
400	GP-1	M	M	M	M	M	M	SA
401	GP-2	M	M	M	M	M	M	SA
402	GP-3	M	M	M	M	M	M	SA
403	GP-4	M	M	M	M	M	M	SA

M Monthly sampling

SA Semi-annual inspection in April and October

Sampling shall be conducted in accordance with s. NR 507.22, Wis. Adm. Code