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January 5, 2005

Raymond M. Roder
Direct Dial: 608-229-2206
rroder@reinhardtlaw.com

Ms. Jennifer S. Easterly
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
Northeast Region Office
625 East County Road Y, Suite 700
Oshkosh, WI 54901-9731

Dear Ms. Easterly:

Re: FF/NN Landfill
BRRTS # 02-20-00915

Enclosed is a letter by which GeoTrans presents a Remedial Action Plan to address landfill gas. The PRPs have approved the Plan. However, as explained below we believe the plan at the very most is marginally necessary.

The only reading which suggests landfill gas migration is a concern is the reading at GP-7 (5.9%), which is located approximately 140 feet from the fill area and is marginally above the action threshold established by § NR 507.22(4), Wis. Admin. Code, i.e., the lower exposure limit ("LEL") of 5%. It is entirely likely that if this probe had been located at 150 feet from the fill area as allowed by § NR 507.11(3)(b), Wis. Admin. Code that the reading would not have exceeded the LEL threshold and action would not fall within the purview of § NR 507.22(4). The other readings in excess of 5% (GP-1, GP-2, GP-3 and MW 103) were found at locations less than 75 feet from the fill area. Companion Probes to GP-1 (GP-12) and GP-2 (GP-10) at greater distances from the fill but still within the 150 feet limit do not show the presence of methane. As a consequence GP-1 and GP-2 are not appropriate indicators of any regulatory concern much less one that would rise to the level of a threat to the public health or welfare.

The data from the close-in probes (GP-1, GP-2 and GP-3) and the monitoring well (MW 103) merely represent the "worst case" (as was your rationale for placing the probes substantially less than 150 feet allowed by the Code). The worst case should not be the circumstances upon which the need for remediation is predicated, especially when one takes into account the distances between the fill area and any structure to which the landfill gas could migrate. Furthermore, if 150 feet is an acceptable distance between a gas probe and the fill area for a newly constructed landfill where the waste has a greater potential to produce methane, then 150 feet should be the applicable distance that triggers remediation at a landfill such as the FF/NN Landfill, which has not received waste since February, 1983. In short, less

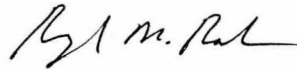
Ms. Jennifer S. Easterly
January 5, 2005
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than one (1) percent over the LEL at one probe near the regulatory perimeter hardly seems to justify a pilot remediation effort and certainly not a long term, active remediation effort.

Nonetheless, by copy of this letter GeoTrans is being advised of the FF/NN Landfill PRPs' authorization to proceed in the manner and on the schedule outlined in the enclosed letter.

Thank you for your consideration of the above.

Sincerely,

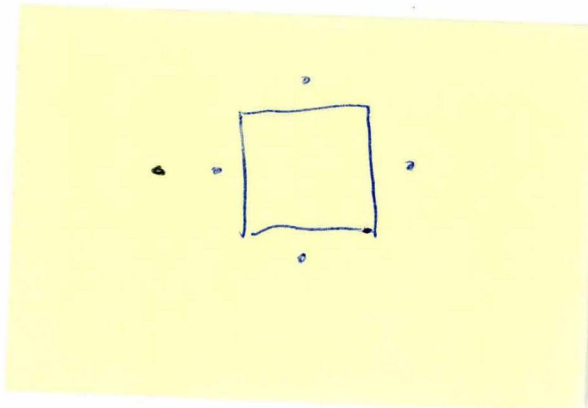


Raymond M. Roder

Madison\138303RMR:JJS

Encs.

cc Mr. Gerald DeMers (w/o encs.)
Mr. Nelson Olavarria (w/o encs.)
Mr. Steve Barg (w/encs.)



January 3, 2005
(1011.002)

Mr. Raymond Roder
Reinhart Boerner Van Deuren, s.c.
22 East Mifflin Street, Suite 600
P.O. Box 2018
Madison, WI 53701-2018

Re: Remedial Action Plan to Address Landfill Gas
FF/NN Landfill, Ripon, WI

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Dear Ray:

At your request and in response to the December 15, 2004 email request of Jennifer Easterly of the Wisconsin Department of Natural Resources (WDNR) we are providing you an action plan to address methane gas at the FF/NN Landfill. The plan is intended to meet the code provision referenced by Ms. Easterly, i.e., section NR 507.22(4) of the Wisconsin Administrative Code (WAC), to the extent that it applies. That provision reads in relevant part as follows:

“4) NOTIFICATION AND REMEDIATION. The owner or operator shall immediately notify the department and take all necessary steps to protect public health and welfare if a stabilized reading exceeds the lower explosive limit of any explosive gas generated by the waste fill in the soils outside of the limits of filling or air within 200 feet of the landfill property boundary or beyond the landfill property boundary,... Within 30 days of determining that the applicable gas level was exceeded, the owner or operator shall submit a remediation plan to the department describing the degree and extent of the problem and the proposed remedy. Within 60 days of determining that the applicable gas level was exceeded, the owner or operator shall implement the remediation plan.... “

Gas Sampling Results

GeoTrans provided the results of the most recent gas sampling in the Quarterly Report regarding the site, dated November 29, 2004. During the October 2004 sampling event, methane was detected in LC-1, four gas vents, four monitoring wells and five gas probes. The lower explosive limit (LEL) for methane of 5% was exceeded at five locations beyond the limits of the fill area. The exceedances outside of the landfill were:

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GP-1 (29.7% methane)	GP-2 (23.6%)	GP-3 (18.6%)
GP-7 (5.9%)	MW-103 (6.2%).	

GP-7 is located about 140 feet from the fill area. The others are less than 75 feet from the fill area.

Methane also exceeded 25% of its LEL (1.25%) at three locations outside of the landfill:

MW-101 (2.9%)	MW-112 (4.6%)	GP-8 (4.2%).
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However, none of these are located within an enclosed structure. Each location is outside of the landfill boundary, but less than 100 feet from the limits of fill.

Potential Risk to Receptors

As has been discussed in past correspondence, there is little risk to receptors from the methane. The nearest building, the Sauer residence, is located over 500 feet northeast of the landfill. The absence of methane in GP-10 and GP-11 indicate that methane is not migrating in that direction. There is no enclosed structure located south of the landfill. Furthermore, there is little risk from methane at the dog park.

Potential Impact to Groundwater

The recent laboratory analyses of landfill gas samples indicate that vinyl chloride is present in the landfill gas at some locations: 25.4 parts per million by volume (ppmv) in the sample collected at GP-3, southwest of the landfill, and 0.41 ppmv at GP-2, northwest of the landfill. Because landfill gas is a potential cause of vinyl chloride impacts to groundwater, we propose to address its effects in that regard by the two remedial actions described below.

Action Plan Outline

GeoTrans, Inc. proposes to address the landfill gas by:

- Collecting additional landfill gas samples for analysis of VOCs; and
- Conducting a pilot study of active removal of landfill gas from the landfill.

Additional gas samples will be collected during the January 2005 round of groundwater sampling. The objectives of these additional samples are to: confirm the presence of vinyl chloride in the landfill gas; better define the distribution of vinyl chloride inside and outside of the landfill; and, determine whether seasonal changes have affected the distribution of landfill gas. Summa™ canisters will be used to collect gas samples from GP-2 and GP-3 outside of the landfill, and LC-1, LC-2 and LC-3 within the landfill. Samples from the gas probes will confirm vinyl chloride detections outside of the landfill. The samples from the leachate head wells will identify the distribution of vinyl chloride inside the landfill. LC-1 and LC-2 have been included for sampling because vinyl chloride may be present even though methane was not recently detected in them. Each of the samples will be analyzed using method TO-14A, which includes vinyl chloride as one of the constituents tested.

The purpose of the pilot test is to evaluate the effectiveness of three different active gas extraction systems that might be suitable for use at the FF/NN Landfill. These three possible systems include:

- An interior system that uses the existing passive gas system. This system consists of gas collection trenches that were constructed just below the landfill cap.
- An interior system that uses the existing leachate head wells, which extend to the bottom of the landfill.
- An exterior system that would be simulated by using the existing gas probes located immediately outside of the landfill.

GeoTrans would conduct the pilot test using a trailer mounted vacuum blower to withdraw landfill gas. The pilot study will include the following:

- A vacuum blower will be connected to several of the existing gas vents located on the western side of the landfill (GV-1 through GC-6); these were the only vents with measurable methane during the last round of gas samples in October 2004. (Because all of the vents are interconnected by piping, extracting gas from the western vents will remove landfill gas from the surface of the entire landfill). Those vents not used for active gas removal will be capped during extraction to prevent surface air from being drawn into the gas vent system.
- In a separate test, the vacuum blower will be connected to leachate head wells.
- In a separate test, the vacuum blower will be connected to GP-3 to simulate an exterior gas collection system.
- Depending upon the results of the previous tests, the vacuum blower will be connected to a combination of locations (i.e., leachate head wells plus passive gas vents).
- Each of the above tests will be operated at two different air flow rates.
- Vacuum pressure, methane, carbon dioxide and oxygen will be monitored at nearby gas probes, leachate head wells and monitoring wells during the pilot tests to determine the effect of the extraction system on off-site landfill gas.
- Samples will be collected from the discharge of the blower unit at the beginning and end of testing at each of the three extraction setup. Each sample will be analyzed for VOCs to determine the amount of vinyl chloride present at the beginning and end of the test.
- The extraction tests will be operated over a two week period.

If authorized by the FF/NN Landfill PRPs, GeoTrans will prepare a Pilot Test Work Plan and cost estimate.

Section NR 419.07 (WAC) requires air emission controls for a landfill gas extraction system if VOC emissions exceed 216 pounds per day (see ch. NR 445, Table 3). The Lowest Achievable Emission Rate is required if a source emits more than 300 pounds per year of vinyl chloride. Assuming an extraction rate of about 500 cubic feet per minute and an average vinyl chloride concentration of 7 ppmv (average for the four samples collected in October; equivalent to 18 mg/kg), the estimated average emission rate for vinyl chloride would be 0.034 lb/hr or 0.8

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lb/day. Based on these calculations, air emissions controls for VOCs or vinyl chloride are not expected to be needed for the pilot test.

Schedule

GeoTrans is currently determining the specific equipment needed to conduct the pilot study. We can complete a Work Plan for the pilot test by mid-February 2005, and can begin the pilot test in April 2005 (pending WDNR approval and weather conditions) if authorized by January 17, 2005 to commence the work.

I trust this information meets your needs. If you have any questions, please call.

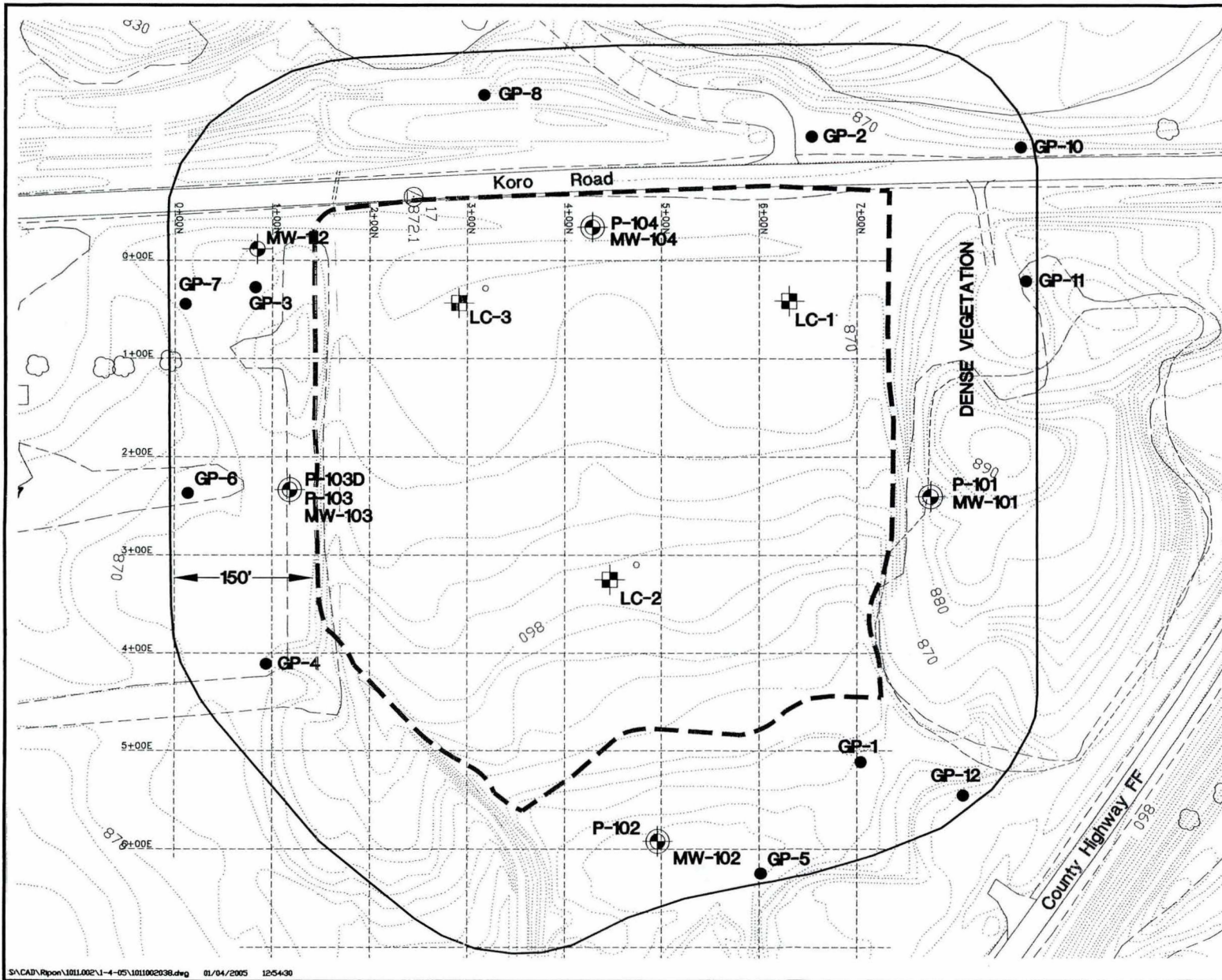
Sincerely,

GeoTrans, Inc.



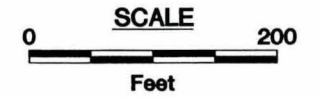
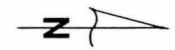
Gerald L. DeMers
Senior Engineer, Associate

Cc: Nelson Olavarria
Steve Barg



EXPLANATION

- P-104 MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
 - MW-104 MONITOR WELL, PIEZOMETER LOCATION, DESIGNATION
 - LC-2 LEACHATE HEAD WELL LOCATION, DESIGNATION
 - OUTLINE OF CLOSED LANDFILL
 - GP-1 GAS PROBE LOCATION AND DESIGNATION
- NOTE:** CONTOURS ON LANDFILL DO NOT REFLECT CURRENT TOPOGRAPHY.



REVISED GAS PROBE LOCATIONS	FF/NN LANDFILL RIPON, WISCONSIN	DATE: 1/4/05
		DESIGNED: KFL
		CHECKED: HWY
		APPROVED: GLD
		DRAWN: HJW
	PROJ.: 1011.002	