Wisconsin Electric POWER COMPANY
231 W. MICHIGAN, P.O. BOX 2046, MILWAUKEE, WI 53201 (414) 277-2345

February 28, 1986

Mr. John Krahling
Wisconsin Department of Natural Resources
Southeast District Office
P.O. Box 12436
Milwaukee, WI 53212

Dear Mr. Krahling:

This letter will bring you up to date on some of the activities surrounding our investigation of the former gas manufacturing sites. As we have discussed on several occasions, Wisconsin Natural Gas Co. is conducting an evaluation of several former manufactured gas plant sites in an effort to learn if any waste materials could be present. Due to the fact that there are plans to develop the property owned by the City of Racine, which is located just south of the Wisconsin Natural Gas Co. general office building, the company accelerated its investigation related to that property. Preliminary results of our monitoring study are shown on the attached drawing. As you can see, PCBs exist at one test location (TP-15) at very low concentrations. The average of 61 ppm is based on samples taken one foot below the surface at two locations in the trench. The soil concentrations were 50 and 71 ppm, respectively. No other PCBs were detected on the site.

Since the PCBs are contained in a layer of gravel and cinders located about one foot below the present asphalt surface, the possibility of human and environmental exposure to the PCBs is extremely remote. In addition, the PCB concentrations are slightly above the levels that have previously been used as cleanup standards. However, we intend to do further sampling to determine the extent of contamination and remove contaminated soil according to our usual company practices. Any wastes removed will be sent to an EPA approved PCB disposal landfill. Specific details concerning the removal operations will be provided to you after the extent of contamination is known.

The PCB sampling program details are currently being developed. We intend to sample beyond the area of the PCBs identified previously. As you can probably appreciate, it is difficult to sample under frozen soil conditions. The sampling technique will consist of driving a split-spoon sampler into the frozen

ground and collecting samples at several depths. A rectangular grid pattern will be set up in the field to determine the location of the samples. Warzyn Engineering Inc. has been hired to do the soil sampling. Analyses will be performed by the Wisconsin Electric Co. laboratory.

The information on the drawing also shows that organic materials are present in the concrete containment which formed the gasholder foundation. The organic materials are probably coal tar volatiles that condensed from the manufactured gas stored in the holder during its years of service. The foundation consists of an 18 inch base of poured concrete on top of 1135 piles. A steel plate sits on top of the concrete floor. The walls of the holder foundation are about 5 1/2 feet high and are made of concrete nine inches thick.

The organic wastes appear to be contained in the holder foundation. In fact, when we excavated a trench on both sides of the holder, the soil on the outside of the holder was clean in appearance and had no odor, whereas the soil inside the holder was dark colored and noticeably odorous. The analytical data for extractable hydrocarbons support this observation whereas the data for semi-volatile hydrocarbons at TP-31 do not. The most likely explanation is that the material outside of the holder was a mixture of soil with some bricks and debris. The soil sample was collected near some of the bricks and may have indicated the presence of fill.

We are planning to remove the layer of odorous soil and coal tar at the bottom of the holder foundation. Even though there is only about a foot of odorous soil, we plan to remove approximately the bottom three feet. The specific details will be provided to you in a separate plan that I will send to you in the next week or so. We have tested the soil and coal tar mixture in the holder and have found it to be non-hazardous according to the EPA and DNR criteria. Land Reclamation Ltd. of Racine has been selected as a contractor for the disposal of the wastes.

Some organic materials were found outside of the holder at boring B-10 based on the extractable hydrocarbon data. While we do not have complete analytical information on the organic constituents, they appear different from the material contained in the holder. The semi-volatile hydrocarbons are very low in concentration. An excavation directly over the former borehole (TP-32) revealed no stained or odorous soil; however, one foot thick layers of cinders and ash were encountered at the 4 to 6 foot depth. Extractable hydrocarbon concentrations were below the detection levels. Further analytical work on the volatile constituents will be done to determine the type of organic material present. It is possible that the organic material may have been due to long-term spillage of oil around the outside of the holder. Oil was used as a seal between the telescoping holder sections.

Please let us know if you have any comments on our suggested course of action.

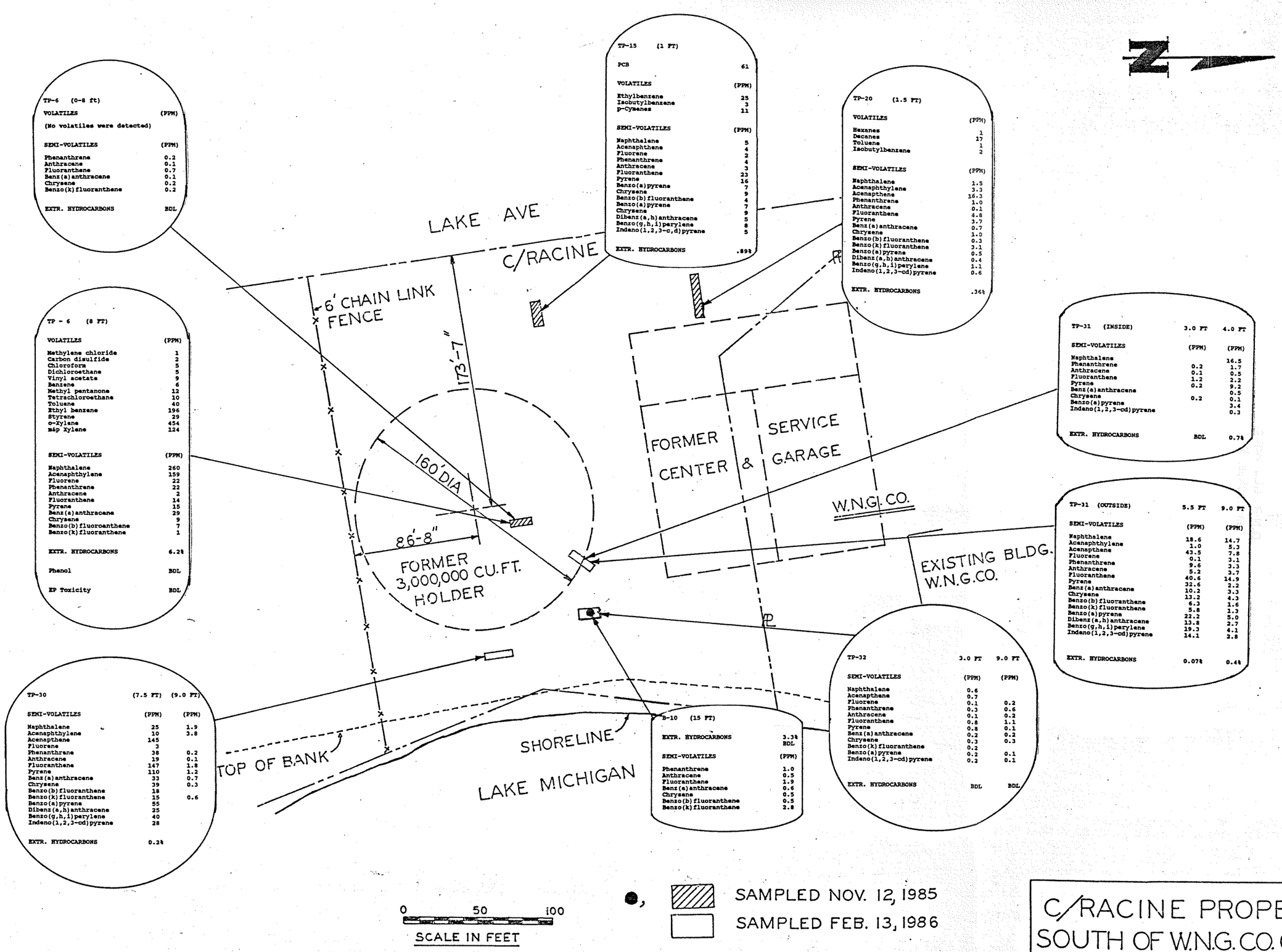
Sincerely,

James W. Lingle

James W. Lingle
Principal Environmental Chemist
Environmental Department

Attachment

cc: P. P. Didier - DNR Madison
E. D. Maruhnich - ERT
R. E. Tamminga - WNG



TP-6 (0-8 ft)

VOLATILES	(PPM)
(No volatiles were detected)	
SEMI-VOLATILES	**(PPM)**
Phenanthrene	0.2
Anthracene	0.1
Fluoranthene	0.7
Benz(a)anthracene	0.1
Chrysene	0.2
Benzo(k)fluoranthene	0.2
EXTR. HYDROCARBONS	BDL

TP-15 (1 FT)

PCB	61
VOLATILES	**(PPM)**
Ethylbenzene	25
Isobutylbenzene	3
p-Cymenes	11
SEMI-VOLATILES	**(PPM)**
Naphthalene	5
Acenaphthene	4
Fluorene	2
Phenanthrene	4
Anthracene	3
Fluoranthene	23
Pyrene	16
Benzo(a)pyrene	7
Chrysene	9
Benzo(b)fluoranthene	4
Benzo(a)pyrene	7
Chrysene	9
Dibenz(a,h)anthracene	5
Benzo(g,h,i)perylene	8
Indeno(1,2,3-c,d)pyrene	5
EXTR. HYDROCARBONS	.89%

TP-20 (1.5 FT)

VOLATILES	(PPM)
Hexanes	1
Decanes	17
Toluene	1
Isobutylbenzene	2
SEMI-VOLATILES	**(PPM)**
Naphthalene	1.5
Acenaphthylene	3.3
Acenapthene	16.3
Phenanthrene	1.0
Anthracene	0.1
Fluoranthene	4.8
Pyrene	3.7
Benz(a)anthracene	0.7
Chrysene	1.0
Benzo(b)fluoranthene	0.3
Benzo(k)fluoranthene	3.1
Benzo(a)pyrene	0.5
Dibenz(a,h)anthracene	0.4
Benzo(g,h,i)perylene	1.1
Indeno(1,2,3-cd)pyrene	0.6
EXTR. HYDROCARBONS	.36%

TP - 6 (8 FT)

VOLATILES	(PPM)
Methylene chloride	1
Carbon disulfide	2
Chloroform	5
Dichloroethane	5
Vinyl acetate	9
Benzene	6
Methyl pentanone	12
Tetrachloroethane	10
Toluene	40
Ethyl benzene	196
Styrene	29
o-Xylene	454
m&p Xylene	124
SEMI-VOLATILES	**(PPM)**
Naphthalene	260
Acenaphthylene	159
Fluorene	22
Phenanthrene	22
Anthracene	2
Fluoranthene	14
Pyrene	15
Benz(a)anthracene	29
Chrysene	9
Benzo(b)fluoroanthene	7
Benzo(k)fluoranthene	1
EXTR. HYDROCARBONS	6.2%
Phenol	BDL
EP Toxicity	BDL

TP-31 (INSIDE)

SEMI-VOLATILES	3.0 FT (PPM)	4.0 FT (PPM)
Naphthalene		16.5
Phenanthrene	0.2	1.7
Anthracene	0.1	0.5
Fluoranthene	1.2	2.2
Pyrene	0.2	9.2
Benz(a)anthracene		0.5
Chrysene	0.2	0.1
Benzo(a)pyrene		3.4
Indeno(1,2,3-cd)pyrene		0.3
EXTR. HYDROCARBONS	BDL	0.7%

TP-31 (OUTSIDE)

SEMI-VOLATILES	5.5 FT (PPM)	9.0 FT (PPM)
Naphthalene	18.6	14.7
Acenaphthylene	1.0	5.3
Acenapthene	43.5	7.8
Fluorene	0.1	3.1
Phenanthrene	9.6	3.3
Anthracene	5.2	3.7
Fluoranthene	40.6	14.9
Pyrene	32.6	2.2
Benz(a)anthracene	10.2	3.3
Chrysene	13.2	4.3
Benzo(b)fluoranthene	6.3	1.6
Benzo(k)fluoranthene	5.8	1.3
Benzo(a)pyrene	22.2	5.0
Dibenz(a,h)anthracene	13.8	2.7
Benzo(g,h,i)perylene	19.3	4.1
Indeno(1,2,3-cd)pyrene	14.1	2.8
EXTR. HYDROCARBONS	0.07%	0.4%

TP-30

SEMI-VOLATILES	(7.5 FT) (PPM)	(9.0 FT) (PPM)
Naphthalene	25	1.9
Acenaphthylene	10	3.8
Acenapthene	145	
Fluorene	3	
Phenanthrene	38	0.2
Anthracene	19	0.1
Fluoranthene	147	1.8
Pyrene	110	1.2
Benz(a)anthracene	33	0.7
Chrysene	39	0.3
Benzo(b)fluoranthene	18	
Benzo(k)fluoranthene	15	0.6
Benzo(a)pyrene	55	
Dibenz(a,h)anthracene	25	
Benzo(g,h,i)perylene	40	
Indeno(1,2,3-cd)pyrene	28	
EXTR. HYDROCARBONS	0.2%	

B-10 (15 FT)

EXTR. HYDROCARBONS	3.3%
	BDL
SEMI-VOLATILES	**(PPM)**
Phenanthrene	1.0
Anthracene	0.5
Fluoranthene	1.9
Benz(a)anthracene	0.6
Chrysene	0.5
Benzo(b)fluoranthene	0.5
Benzo(k)fluoranthene	2.8

TP-32

SEMI-VOLATILES	3.0 FT (PPM)	9.0 FT (PPM)
Naphthalene	0.6	
Acenapthene	0.7	
Fluorene	0.1	0.2
Phenanthrene	0.3	0.6
Anthracene	0.1	0.2
Fluoranthene	0.8	1.1
Pyrene	0.8	0.1
Benz(a)anthracene	0.2	0.2
Chrysene	0.3	0.3
Benzo(k)fluoranthene	0.2	
Benzo(a)pyrene	0.2	0.1
Indeno(1,2,3-cd)pyrene	0.2	0.1
EXTR. HYDROCARBONS	BDL	BDL