FILE

REITZ & JENS, Inc 1040 North Lindbergh Boulevard St Louis Missouri 63132 314 993-4132

CONSULTING ENGINEERS

0714
Site: West Lake LF
ID # MRD079900932
Break: 1.1
Other: Out
4-3-84

REC'D

APR 06 1984

Ms Geri Kountzman
Waste Management Program
Mo DNR
Box 1368
Jefferson City, MO 65102

Re West Lake Landfill, Bridgeton, Mo

Dear Ms Kountzman

Attached, for your information and file, are copies of water sample analyses and groundwater elevations of the monitoring wells at West Lake Landfill

The samples were collected on February 8 and tested by the Laclede Gas Co Laboratory Division

If there are any questions, please call

Very truly yours,

David E Murray

DAVID E MURRAY

Encl
DEM/rs
cc W Canney
Mo DNR (St Louis)

40249163

SUPERFUND RECORDS

DNR 0121

Mr William Cunney
Page 2

TEST PARAMETERS	1HL	2HL	3HL	34	35	36	37	37A	38	39	40	41
Date	2/8/84	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8
Time	2 30pm	2 45pm	3 00pm	1 00pm	1 10pm	1 20pm	1 30pm	1 40pm	1 50pm	2 10pm	12 45pm	-
Odor	None	none	none	none	none	sulfide	none	none	musty	musty	sulfide	-
Appearance	clear	clear	clear	clear	clear	grey	turbid	turbid	clear	clear	clear	-
Depth of well (ft)	29 3	28 5	31 33	64 0	62 83	41 5	27 0	53 5	51 0	50 5	61 3	NO SAMPLE BROKEN WELL
Depth of water (ft)	13 14	12 9	13 67	17 84	20 5	2 67	0 75	8 42	20 25	17 5	12 7	
C O D (mg/l)	12 0	24 0	18 0	16 0	48 0	502 0	TOO DRY TO SAMPLE	24 0	28 0	36 0	20 0	
Chlorides (mg/l)	6 8	6 8	6 8	33 3	31 8	83 4		43 9	40 9	31 8	47 0	
Total dissolved solids (mg/l)	493 0	261	400	400	647	1216 0		459	794 0	582 0	518 0	
Iron (mg/l)	0 08	0 15	0 36	25 35	5 7	0 69		2 57	0 83	1 08	1 79	
Conductivity (UMHO/cm)	690	440	300	480	900	1700		620	1100	750	870	
pH (units)	7 8	7 3	7 8	6 9	7 1	7 2		7 1	6 9	7 2	7 0	

Mr William Canney
Page 3

TEST PARAMETER	HL1	HL2	HL3	34	35	36	37	37A	38	39	40	41
Calcium (mg/1)	135 0	89 2	71 3	53 5	142 7	361 8	257 3	86 6	183 4	124 8	119 7	
Magnesium (mg/1)	139 0	126 8	356 1	219 5	146 3	343 9	209 8	117 I	304 9	148 8	129 3	
Hardness Calc (mg/1)	909 5	749 9	1644 5	1037 5	958 8	2319 6	1506 4	698 5	1713 5	924 4	831 3	MELL BROKEN
Sodium (mg/1)	29 1	35 4	26 4	37 3	40 0	69 1	150 0	67 3	47 3	45 4	68 2	
Arsenic (ug/1)	*5	*5	*5	*5	9	6	6	6	12	13	*5	
Barium (ug/1)	300	130	*100	*100	*100	130	*100	*100	*100	*100	*100	
Cadmium (ug/1)	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	*2	
Chromium (ug/1)	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	
Cobalt (ug/1)	*30	*30	*30	*30	*30	*30	*30	*30	*30	*30	*30	
Copper (ug/1)	8	7	8	14	15	11	*5	33	*5	16	*5	
Iron (ug/1)	50	100	170	18000	700	45000	1300	7300	1500	1700	500	
Lead (ug/1)	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	
Manganese (ug/1)	1200	720	140	500	1740	1900	3950	710	1400	290	570	
Mercury (ug/1)	0 8	1 4	5 9	2 5	1 6	0 4	1 1	2 6	3 5	2 7	1 7	
Selenium (ug/1)	*5	16	*5	13	18	8	10	*5	20	21	15	
Silver (ug/1)	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	*1	
Zinc (ug/1)	7220	3720	1830	4390	6390	140	50	250	1940	460	70	

*less than

WEST LAKE LANDFILL

Groundwater Elevations

Monitoring Well	Top of Pipe Elevation	Surface Elevation	11/16/82	2/9/83	5/16/83	8/2/83	11/15/83	2/8/84
HL 1	448 9	444 8	434 0	433 8	434 9	435 5	432 2	432 8
HL 2	449 4	444 7	436 9	438 5	440 8	439 4	436 6	431 5
HL 3	450 3	446 3	440 3	441 3	437 0	438 4	435 7	430 1
34	478 4	475 1	452 3	433 2	436 8	435 2	432 9	432 2
35	475 1	471 9	439 6	433 9	437 1	435 7	432 8	432 8
36	471 0	470 0	431 5	432 6	437 1	435 0	432 4	432 2
37	459 9	458 8	-	434 1	437 3	436 0	434 8	433 6
37A	477 5	474 4	433 5	434 2	436 9	435 5	432 9	432 4
38	462 6	458 9	432 3	436 1	436 5	435 0	432 8	431 8
39	465 4	462 7	432 6	434 1	437 0	435 2	432 3	432 4
40	480 5	477 4	432 3	432 9	437 [illegible]	435 5	431 7	431 9
41	485 5	blocked 17 5' from top of pipe			-	-	-	-

Collection Well

B	48" RCP	490 7
C	24" RCP	476 0
D	24" RCP	506 2
E	12" PVC	378 0

REITZ & JENS, INC
1040 N Lindbergh
St Louis, Mo 63132

WEST LAKE LANDFILL

Groundwater Elevations

Monitoring Well	Top of Pipe Elevation	Surface Elevation	5/1-2/84
HL 1	449 0	444 8	437 3
HL 2	447 1	444 7	436 1
HL 3	447 7	446 3	433 5
34	478 4	475 1	441 4
35	475 1	471 9	437 4
36	471 0	470 0	437 1
37	459 9	458 8	438 8
37A	477 5	474 4	437 1
38	462 6	458 9	439 1
39	465 4	462 7	437 1
40	480 5	477 4	437 5
41	485 5	blocked 17 5' from top	

REITZ & JENS INC

REITZ & JENS, Inc 1040 North Lindbergh Boulevard St Louis Missouri 63132 314 993 4132

CONSULTING ENGINEERS

RECEIVED

SEP 26 1983

WASTE MANAGEMENT PROGRAM

September 21, 1983

Waste Management Program
Mo DNR
Box 1368
Jefferson City, MO 65102

Attn Mrs Geri Kountzman

Re West Lake Landfill, Water Monitoring Program

Gentlemen

This is in reference to your letter of August 31, 1983 concerning establishment of a groundwater monitoring program for West Lake Landfill

The described groundwater monitoring program purposes are to determine

1 If there is only one general groundwater aquifer to depth or if there are some perched lenses or perched aquifer in addition to general groundwater aquifer

2 The direction of groundwater movement

3 Ability to recover groundwater samples for water quality analyses

4 Review background data for determination of monitoring wells necessary to establish groundwater monitoring system

GEOLOGY

Proposal is intended to gather information to answer the purposes listed above and only after water movement patterns out from the aquifer under the landfill have been determined by numerical readings from well coverage, will meaningful discussion, not mostly surmise, be possible and defensible conclusions stated

No assumption or supposition was made in our earlier correspondence, we indicate a plan that, with field observations, can identify groundwater movement pattern(s) at this location

WELL PLACEMENT

The gradient across the site should be determinable with the two surface monitoring points and addition of 6 new wells along with existing monitoring wells

LACLEDE GAS COMPANY

Laboratory Division

4118 SHREWSBURY
ST LOUIS MISSOURI 63119
(314) 644-6577

JUN - 1984

June 7, 1984

West Lakes Quarry
Attn Mr William Canney
13570 St Charles Rock Road
Bridgeton Mo 63044

Dear Mr Canney

This report concerns sampling and analysis performed by this laboratory on 5/1 - 5/2/84

These are the annual test results for West Lakes Quarry All methods of analysis were taken from the Standard Methods, 15th Edition

The results may be found on the attached sheets If there are any questions, please feel free to call

Sincerely,

William T Fitzgerald

William T Fitzgerald

WTF eb
attachment

cc Reitz & Jens

TEST PARAMETER	1HL	2HL	3HL	34	35	36	37	37A	38	39	40	41
Date	5/1/84	5/1/84	5/1/84	5/1/84	5/1	5/1	5/2	5/2	5/2	5/2	5/2	
Time	12 pm	12 20pm	12 45pm	9 30am	10 15	11 am	11 am	10 30am	11 30am	10 am	9 am	
Odor	None	None	None	Slight	Mod	Mod	None	None	Slight	Slight	Slight	
Appearance	Turbid	Turbid	Grey	Brown	Brown	Turbid	Grey	Brown	Yellow	Turbid	Clear	
Depth of well (ft)	28 75	28 66	31 33	64 0	62 83	41 16	27 33	53 16	51 16	50 16	60 83	
Depth of water (ft)	17 0	17 66	17 17	27 0	25 17	7 25	6 25	12 75	27 66	21 83	17 83	
pH (units)	7 2	7 4	7 8	6 8	7 1	6 8	6 8	7 1	6 7	7 0	7 0	
C O D (mg/l)	7 5	188	7 5	22 2	47 3	496	44 4	22 2	32 1	42 0	53 0	
NH3 as N (mg/l)	0 06	*0 04	0 04	0 04	0 55	4 5	1 05	0 65	0 36	0 18	3 6	
NO3/NO2 (mg/l)	0 02	*0 01	0 18	0 03	*0 01	*0 01	*0 01	*0 01	*0 01	*0 01	0 05	
P total (mg/l)	0 02	0 01	0 07	0 01	0 01	*0 01	0 01	0 42	0 02	0 01	0 02	
Chlorides (mg/l)	3 0	6 1	6 1	36 4	33 3	106 1	90 9	51 5	39 4	24 3	51 5	
Sulfates (mg/l)	90	21	65	60	*6	33	199	61	6	165	33	
T D S (mg/l)	697	324	310	320	592	1670	1175	456	793	604	537	
Fluoride (mg/l)	0 3	0 3	0 4	0 3	0 5	0 4	0 3	0 4	0 3	0 2	0 2	
Boron (mg/l)	* 1	3	35	* 1	20	* 1	* 1	* 1	* 1	* 1	* 1	
Conductivity	1100	650	500	400	1050	2400	1700	770	1300	900	1000	

MELL BROKEN

To continue