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O'BRIEN & GERE

May 20, 1987

Director,
Waste Management Division
U.S. EPA - Region V
230 So. Dearborn Street
Chicago, Illinois 60604

Attn: Mr. Brad Bradley

Director,
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Attn: Mr. Ken Miller

Re: Granite City Site RI/FS

File: 2844.012.305

Gentlemen:

Pursuant to Mr. Stephen W. Holt's request, we are transmitting to you the enclosed materials which consist of preliminary analytical results and associated figures relative to the Granite City Remedial Investigation/Feasibility Study. The enclosed materials are intended to aid discussions for our upcoming conference call scheduled for this Friday, May 22. The analytical results are preliminary pending final review of the Quality Assurance/Quality Control documentation.

If you have any questions or comments regarding this matter, please contact me at (315) 451-4700.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Frank D. Hale
Research Manager

RECEIVED
MAY 21 1987
U.S. EPA REGION V
WASTE MANAGEMENT DIVISION
ASBESTOS WASTE ENFORCEMENT BRANCH

FDH:dn/17:18
Enclosures
cc: Mr. Stephen W. Holt, NL Industries, Inc.
Mr. Douglas M. Crawford, O'Brien & Gere Engineers, Inc.

PRELIMINARY ANALYTICAL RESULTS

ROUND 1 FIELD INVESTIGATION

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

GRANITE CITY SITE

GRANITE CITY, ILLINOIS

MAY 1987

I. WASTE PILE INVESTIGATION

WASTE MATERIAL ANALYTICAL RESULTS

KEY

A. Type 1 - Slag Samples

ID 1 - Sample location
Samples 100, 200, 300, 400 - total metals analyses
Samples 101, 201 - EP Toxic metals analyses

ID 2 - Total metals vs. EP Toxic metals analyses
0 indicates total metals analyses
1 indicates EP Toxic metals analyses

ID 3 - Total metals vs. EP Toxic metals analyses
blank - total metals analyses
1 - EP Toxic metals analyses

B. Type 2 - Upper Strata Samples

ID 1 - Sample location
5 indicates slag pile

ID 2 - Slag pile location

ID 3 - Quadrant number

C. Type 3 - SLLR Samples

ID 1 - Sample location
6 indicates SLLR pile

ID 2 - SLLR pile location

ID 3 - Null I.D. field (O)

TARACORP SITE - GRANITE CITY ILLINOIS
WASTE MATERIAL ANALYTICAL RESULTS

TYPE	ID 1	ID 2	ID 3	DATE	SAMPLE	AG	AS	BA	CD	CR	CU	DIGEST	FE	HG	LEACH	MN	NI
1	100	0		01/ 5/87	108382	5.8	620.	212.	126.	7.5	10000.	1.	340000.	<.5		1140.	480.
1	101	1	1	01/ 5/87	108383	<.05	<.005	.25	.06	<.05				<.0025	1.		
1	200	0		01/ 6/87	108384	<5.	900.	523.	28.	10.4	11000.	1.	300000.	<.5		804.	1210.
1	201	1	1	01/ 6/87	108385	<.05	.021	.49	.02	<.05				<.0025	1.		
1	300	0		01/ 6/87	108386	<5.	2200.	1097.	19.	23.2	5800.	1.	210000.	<.5		1600.	337.
1	400	0		01/ 6/87	108387	6.7	1500.	641.	35.	7.8	11000.	1.	270000.	<.5		717.	459.
2	5	0	2	01/ 6/87	132338	<5.	<5.0	<20.	<2.	<5.	<5.	1.	135.	<.5		<2.5	2.8
2	5	1	1	01/ 6/87	132325	8.0	12000.	213.	63.	8.2	750.	1.	5080.	1.1		97.	23.7
2	5	2	1	01/ 6/87	132326	<5.	350.	254.	8.	5.8	780.	1.	17400.	<.5		160.	38.0
2	5	3	2	01/ 6/87	132327	9.1	310.	174.	7.	<5.	60.	1.	1430.	<.5		23.	11.9
2	5	4	2	01/ 6/87	132328	5.8	610.	115.	16.	7.3	170.	1.	9410.	<.5		88.	23.3
2	5	5	2	01/ 6/87	132329	<5.	130.	200.	7.	5.9	17.	1.	413.	<.5		20.	6.5
2	5	6	3	01/ 6/87	109540	<.05	.005	<.2	<.02	<.05				<.0025	1.		
2	5	6	3	01/ 6/87	132330	14.	430.	156.	14.	7.4	2.9	1.	10200.	1.0	1.	103.	43.6
2	5	7	3	01/ 6/87	109541	<.05	<.005	<.2	<.02	<.05				<.0025	1.		
2	5	7	3	01/ 6/87	132331	<5.	140.	182.	6.	6.6	69.	1.	2150.	<.5	1.	40.	9.3
2	5	8	4	01/ 6/87	109542	<.05	.019	<.2	.04	<.05				<.0025	1.		
2	5	8	4	01/ 6/87	132332	6.3	1700.	153.	25.	5.7	1200.	1.	15600.	.77	1.	113.	74.3
2	5	9	4	01/ 6/87	109543	<.05	.006	.26	.07	<.05				<.0025	1.		
2	5	9	4	01/ 6/87	132333	24.2	140.	458.	200.	36.	5600.	1.	58600.	.53	1.	1990.	154.
2	5	10	4	01/ 6/87	109544	<.05	.016	<.2	6.29	<.05				<.0025	1.		
2	5	10	4	01/ 6/87	132334	22.3	1800.	333.	640.	26.	17000.	1.	336000.	1.6	1.	2290.	423.
3	6	1	0	01/ 6/87	132335	5.3	4100.	198.	15.	7.0	260.	1.	8240.	1.35		180.	32.6
3	6	2	0	01/ 6/87	132336	9.1	1780.	240.	22.	30.	450.	1.	14000.		1.	350.	
3	6	3	0	01/ 6/87	132337	19.0	5.6	173.	7000.	40.1	4900.	1.	33700.	<.5		265.	28.7

PRELIMINARY

TARACORP SITE - GRANITE CITY ILLINOIS
WASTE MATERIAL ANALYTICAL RESULTS

TYPE	ID 1	ID 2	ID 3	DATE	SAMPLE	PB	SB	SE	ZN
1	100	0		01/ 5/87	108882	15000.	600.	<2.	2430.
1	101	1	1	01/ 5/87	108883	31[illegible].		<.02	
1	200	0		01/ 6/87	108884	32000.	1600.	<2.	5480.
1	201	1	1	01/ 6/87	108885	14[illegible].		<.02	
1	300	0		01/ 6/87	108886	33000.	410.	<2.	11170.
1	400	0		01/ 6/87	108887	37300.	1400.	<2.	6640.
2	5	0	2	01/ 6/87	132338	110.	<2.	<2.	18.
2	5	1	1	01/ 6/87	132325	161000.	6400.	<2.	832.
2	5	2	1	01/ 6/87	132326	124000.	2400.	<2.	388.
2	5	3	2	01/ 6/87	132327	279000.	3800.	<2.	28.
2	5	4	2	01/ 6/87	132328	121000.	1300.	<2.	133.1
2	5	5	2	01/ 6/87	132329	160000.	2600.	<2.	15.3
2	5	6	3	01/ 6/87	109540	4[illegible].		<.02	
2	5	6	3	01/ 6/87	132330	135000.	1600.	<2.	183.2
2	5	7	3	01/ 6/87	109541	2[illegible].		<.02	
2	5	7	3	01/ 6/87	132331	61000.	630.	<2.	109.9
2	5	8	4	01/ 6/87	109542	.5[illegible].		<.02	
2	5	8	4	01/ 6/87	132332	146000.	2600.	<2.	1105.
2	5	9	4	01/ 6/87	109543	.63		<.02	
2	5	9	4	01/ 6/87	132333	152000.	1600.	<2.	6380.
2	5	10	4	01/ 6/87	109544	6[illegible].		<.02	
2	5	10	4	01/ 6/87	132334	45000.	680.	<2.	13840.
3	6	1	0	01/ 6/87	132335	286000.	1600.	<2.	383.
3	6	2	0	01/ 6/87	132336	190000.			540.
3	6	3	0	01/ 6/87	132337	105000.	200.	<2.	42100.

PRELIMINARY

PRELIMINARY

GRANITE CITY SITE

DRUMMED MATERIAL ANALYTICAL RESULTS[1]

	SAMPLE NUMBERS		
Parameter	**D2345[2]**	**A9546[3]**	**D2346[2]**
Cadmium	23.	10.19	2700.
Copper	140.	--	89.
Iron	5010.	--	7120.
Lead	273000.	1900.	237000.
Manganese	140.	--	106.
Mercury	<0.5	<0.0025	<0.5
Zinc	260000.	--	245000.
Chromium	17.3	<0.05	24.9
Arsenic	<5.	<0.005	<5.
Antimony	81.	--	81.
Nickel	13.2	--	20.3
Selenium	<2.	<0.02	<2.
Silver	6.	<0.05	15.5
Barium	<20.	0.21	38.

1 Results expressed as mg/kg (w/w)

2 Total metals analyses

3 EP Toxicity metals analyses

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II. SURFACE SOIL INVESTIGATION

SURFACE SOIL ANALYTICAL RESULTS

KEY

A. Type 5 - Surface Soil Samples from Grid

ID 1 - Sample location

ID 2 - Sample depth

0 indicates 0-3 inch core
6 indicates 3-6 inch core
9 indicates blank

B. Type 6 - Surface Soil Samples From Off-Site Removal Areas

ID 1 - Sample location

ID 2 - Sample depth

0 indicates 0-3 inch core
6 indicates 3-6 inch core
1 indicates shovel

TARACORP SITE - GRANITE CITY ILLINOIS
SURFACE SOIL ANALYTICAL RESULTS

TYPE	ID 1	ID 2	DATE	SAMPLE	PB	PCTS	DIGEST
5	1	0	01/ 7/87	130994	930.	72.98	1.
5	1	6	01/ 7/87	130995	720.	79.65	1.
5	2	0	01/ 7/87	130996	440.	83.60	
5	2	6	01/ 7/87	130997	330.	81.46	
5	3	0	01/ 7/87	131094	460.	83.24	1.
5	3	6	01/ 7/87	131095	600.	81.61	1.
5	4	0	01/ 7/87	130998	2900.	98.56	1.
5	4	6	01/ 7/87	130999	900.	91.45	1.
5	5	0	01/ 7/87	131002	560.	83.97	1.
5	5	6	01/ 7/87	131003	430.	86.27	1.
5	6	0	01/ 7/87	131004	2100.	78.49	1.
5	6	6	01/ 7/87	131005	530.	80.64	1.
5	7	0	01/ 7/87	131060	320.	78.73	1.
5	7	6	01/ 7/87	131061	270.	79.79	1.
5	8	0	01/ 8/87	131006	260.	82.47	1.
5	8	6	01/ 8/87	131007	230.	86.67	1.
5	10	0	04/ 6/87	135390	3130.	75.45	1.
5	10	6	04/ 6/87	135391	1290.	80.57	1.
5	11	0	04/ 6/87	135388	1090.	80.45	1.
5	11	6	04/ 6/87	135389	600.	84.59	1.
5	12	0	01/ 7/87	131098	750	76.26	1.
5	12	6	01/ 7/87	131099	670	78.32	1.
5	13	0	01/ 8/87	131012	240	83.54	1.

PRELIMINARY

TARACORP SITE - GRANITE CITY ILLINOIS
SURFACE SOIL ANALYTICAL RESULTS

TYPE	ID1	ID2	DATE	SAMPLE	PB	PCTS	DIGEST
5	13	6	01/ 8/87	131013	66.	87.93	1.
5	14	0	01/ 8/87	131014	480.	93.28	1.
5	14	6	01/ 8/87	131015	150.	96.53	1.
5	15	0	01/ 6/87	131016	1300.	84.00	1.
5	15	6	01/ 6/87	131017	41000.	84.81	1.
5	16	0	01/ 6/87	131018	2500.	78.88	1.
5	16	6	01/ 6/87	131019	690.	79.94	1.
5	18	0	01/ 8/87	131020	420.	77.91	1.
5	18	6	01/ 8/87	131021	12000.	81.45	1.
5	19	0	01/ 7/87	133600	280.	98.73	1.
5	19	6	01/ 7/87	133601	190.	86.31	1.
5	20	0	01/ 8/87	131022	1140.	75.68	1.
5	20	6	01/ 8/87	131023	450.	82.10	1.
5	21	0	01/ 6/87	131024	8180.	88.42	1.
5	21	6	01/ 6/87	131025	3290.	88.71	1.
5	22	0	01/ 7/87	131026	1580.	80.72	1.
5	22	6	01/ 7/87	131027	60.	81.73	1.
5	24	0	01/ 7/87	131063	200.	83.42	1.
5	24	6	01/ 7/87	131064	91.	88.34	1.
5	25	0	01/ 8/87	131028	130	93.55	1.
5	25	6	01/ 8/87	131029	66	95.46	1.
5	26	0	01/ 8/87	131030	510.	89.73	1.
5	26	6	01/ 8/87	131031	420.	91.42	1.
5	26	9	01/ 7/87	133602	9.	99.95	1.
5	28	0	01/ 7/87	131096	580.	80.00	1.
5	28	6	01/ 7/87	131097	580.	82.19	1.
5	29	0	01/ 7/87	131034	710.	78.51	1.

PRELIMINARY

TARACORP SITE - GRANITE CITY ILLINOIS
SURFACE SOIL ANALYTICAL RESULTS

TYPE	ID 1	ID 2	DATE	SAMPLE	PB	PCTS	DIGEST
5	29	6	01/ 7/87	131035	470.	79.59	1.
5	30	0	01/ 7/87	131036	400.	83.03	1.
5	30	6	01/ 7/87	131037	140.	83.38	1.
5	31	0	01/ 7/87	131038	300.	77.28	1.
5	31	6	01/ 7/87	131039	280.	79.74	1.
5	32	0	01/ 7/87	131065	1330.	84.83	1.
5	32	6	01/ 7/87	131066	1350.	87.95	1.
5	32	9	01/ 7/87	131033	20.	99.92	1.
5	33	0	01/ 7/87	131040	610.	79.25	1.
5	33	6	01/ 7/87	131041	490.	80.59	1.
5	34	0	01/ 7/87	131067	400.	78.41	1.
5	34	6	01/ 7/87	131032	270.		1.
5	35	0	01/ 7/87	131042	290.	77.11	1.
5	35	6	01/ 7/87	131043	110.	84.89	1.
5	101	0	01/ 7/87	133603	2900.	76.72	1.
5	101	6	04/ 6/87	135387	740.	85.50	1.
5	104	0	04/ 7/87	135697		85.82	1.
5	104	6	04/ 7/87	135698		86.54	1.
5	106	0	04/ 7/87	135695		79.55	1.
5	106	6	04/ 7/87	135696		80.12	1.
5	110	0	04/ 7/87	135699		80.37	1.
5	110	6	04/ 7/87	135700		81.40	1.
5	111	0	01/ 7/87	133605	1760.	70.95	1.
5	112	0	04/ 7/87	135691		90.48	1.
5	111	6	01/ 7/87	133606	1500.	82.88	1.
5	112	6	04/ 7/87	135692		91.86	1.
5	117	0	04/ 7/87	135702		81.05	1.
5	117	6	04/ 7/87	135703		83.01	1.

PRELIMINARY

TARACORP SITE - GRANITE CITY ILLINOIS
SURFACE SOIL ANALYTICAL RESULTS

TYPE	ID 1	ID 2	DATE	SAMPLE	PB	PCTS	DIGEST
5	118	0	04/ 7/87	135689		76.20	1.
5	118	6	04/ 7/87	135690		82.94	1.
5	132	0	04/ 7/87	135693		83.95	1.
5	132	6	04/ 7/87	135694		86.13	1.
5	140	1	04/ 7/87	135701		96.27	1.
5	361	0	01/ 7/87	133607	380.	83.35	1.
5	361	6	01/ 7/87	133608	270.	89.02	1.
6	37	1	01/ 7/87	131048	2120.	93.91	1.
6	38	0	04/13/86	131046	1430.	98.72	1.
6	38	6	04/13/86	131047	5210.	89.78	1.
6	39	1	01/ 7/87	131049	2340	87.48	1.
6	40	1	01/ 7/87	131050	110000.	87.15	1.
6	41	1	01/ 7/87	131051	6880.	91.78	1.
6	42	1	01/ 7/87	131052	200		1.
6	43	0	01/ 7/87	131053	2750.	83.80	1.
6	43	6	01/ 7/87	131054	3250.	80.56	1.
6	44	0	01/ 7/87	131055	49.	78.03	1.
6	44	6	01/ 7/87	131056	72.	78.93	1.
6	45	0	01/ 7/87	131057	460	79.96	1.
6	45	6	01/ 7/87	131058	1030	78.30	1.
6	46	0	01/ 7/87	131059	1260	67.05	1.
6	46	6	01/ 7/87	131062	1080	74.99	1.

PRELIMINARY

III. GROUND WATER INVESTIGATION

GROUND WATER ANALYTICAL RESULTS

KEY

A. Type 4 - Ground Water Samples

ID 1 - Well number

ID 2 - Sample depth

0 indicates single well
1 indicates shallow well of nested pair
9 indicates deep well of nested pair

ID 3 - Sample type

1 indicates filtered sample for soluble metals analysis
2 indicates unfiltered sample for total lead analysis
blank indicates unfiltered sample for sulfate and TDS analysis

TARACORP SITE GRANITE CITY ILLINOIS
GROUND WATER QUALITY RESULTS

TYPE	ID 1	ID 2	ID 3	DATE	SAMPLE	AG F	AS F	BA F	CD F	CR F	CU F	FE F	HG F	MN F	NI F	PB	PB F	SB F
4	101	0	1	01/10/87	133901	<.005	.077	<1.	<.001	<.005	<.01	20.	<.0005	4.3	<.01		.009	<.020
4	101	0		01/10/87	133900													
4	102	0	1	01/ 7/87	133903	<.005	<.005	<1.	<.001	<.005	<.01	.12	<.0005	.27	<.01		.013	<.020
4	102	0	2	01/ 7/87	133924											.68		
4	102	0		01/ 7/87	133902													
4	103	0	1	01/17/87	133905	<.005	<.005	<1.	<.001	<.005	<.01	<.10	<.0005	.06	<.01		<.005	<.020
4	103	0		01/17/87	133904													
4	104	0	1	01/10/87	133907	<.005	<.005	<1.	.002	<.005	<.01	<.10	<.0005	<.05	<.01		<.005	<.020
4	104	0		01/10/87	133906													
4	105	1	1	01/10/87	133909	<.005	<.005	<1.	.002	<.005	<.01	<.10	<.0005	<.05	<.01		<.005	<.020
4	105	1		01/10/87	133908													
4	105	9	1	01/10/87	133911	<.005	<.005	<1.	.006	<.005	<.01	<.10	<.0005	.19	<.01		<.005	<.020
4	105	9		01/10/87	133910													
4	106	1	1	01/10/87	133913	<.005	<.005	<1.	.013	<.005	<.01	<.10	<.0005	.08	<.01		<.005	<.020
4	106	1		01/10/87	133912													
4	106	9	1	01/ 9/87	133915	<.005	.005	<1.	.008	<.005	.022	<.10	<.0005	.09	<.01		.011	<.020
4	106	9	2	01/ 9/87	133925											.50		
4	106	9		01/10/87	133914													
4	107	1	1	01/ 9/87	133917	<.005	<.005	<1.	.001	<.005	<.01	<.10	<.0005	.07	<.01		<.005	<.020
4	107	1		01/ 9/87	133916													
4	107	9	1	01/ 9/87	133919	<.005	.011	<1.	<.001	<.005	<.01	7.7	<.0005	.43	<.01		<.005	<.020
4	107	9		01/ 9/87	133918													
4	108	1	1	01/10/87	133921	<.005	<.005	<1.	.209	<.005	<.01	<.10	<.0005	13.1	.20		.005	<.020
4	108	1	2	01/10/87	133926											.50		

PRELIMINARY

TARACORP SITE GRANITE CITY ILLINOIS
GROUND WATER QUALITY RESULTS

TYPE	ID 1	ID 2	ID 3	DATE	SAMPLE	SE F	SO4	TDS	ZN F
4	101	0	1	01/10/87	133901	<.005			<.02
4	101	0		01/10/87	133900		150.	592.	
4	102	0	1	01/ 7/87	133903	<.005			<.02
4	102	0	2	01/ 7/87	133924				
4	102	0		01/ 7/87	133902		121.	636.	
4	103	0	1	01/17/87	133905	<.005			<.02
4	103	0		01/17/87	133904		207.	496.	
4	104	0	1	01/10/87	133907	<.005			<.02
4	104	0		01/10/87	133906		116.	356.	
4	105	1	1	01/10/87	133909	<.005			<.02
4	105	1		01/10/87	133908		317.	996.	
4	105	9	1	01/10/87	133911	<.005			.03
4	105	9		01/10/87	133910		142.	660.	
4	106	1	1	01/10/87	133913	<.005			.27
4	106	1		01/10/87	133912		293.	1104.	
4	106	9	1	01/ 9/87	133915	<.005			.09
4	106	9	2	01/ 9/87	133925				
4	106	9		01/10/87	133914		162.	600.	
4	107	1	1	01/ 9/87	133917	<.005			<.02
4	107	1		01/ 9/87	133916		260.	816.	
4	107	9	1	01/ 9/87	133919	<.005			
4	107	9		01/ 9/87	133918		539.	1372.	
4	108	1	1	01/10/87	133921	<.005			.04
4	108	1	2	01/10/87	133926				

PRELIMINARY

TARACORP SITE GRANITE CITY ILLINOIS
GROUND WATER QUALITY RESULTS

TYPE	ID 1	ID 2	ID 3	DATE	SAMPLE	AG F	AS F	BA F	CD F	CR F	CU F	FE F	HG F	MN F	NI F	PB	PB F	SB F
4	108	1		01/10/87	133920													
4	108	9	1	01/10/87	133923	<.005	.007	<1.	3.3	<.005	<.01	<.10	<.0005	18.1	.50		.006	<.020
4	108	9		01/10/87	133922													

PRELIMINARY

TARACORP SITE GRANITE CITY ILLINOIS
GROUND WATER QUALITY RESULTS

TYPE	ID 1	ID 2	ID 3	DATE	SAMPLE	SE F	SO4	TDS	ZN F
4	108	1		01/10/87	133920		1250.	3112.	
4	108	9	1	01/10/87	133923	<.005			37.
4	108	9		01/10/87	133922		1560.	3864.	

PRELIMINARY

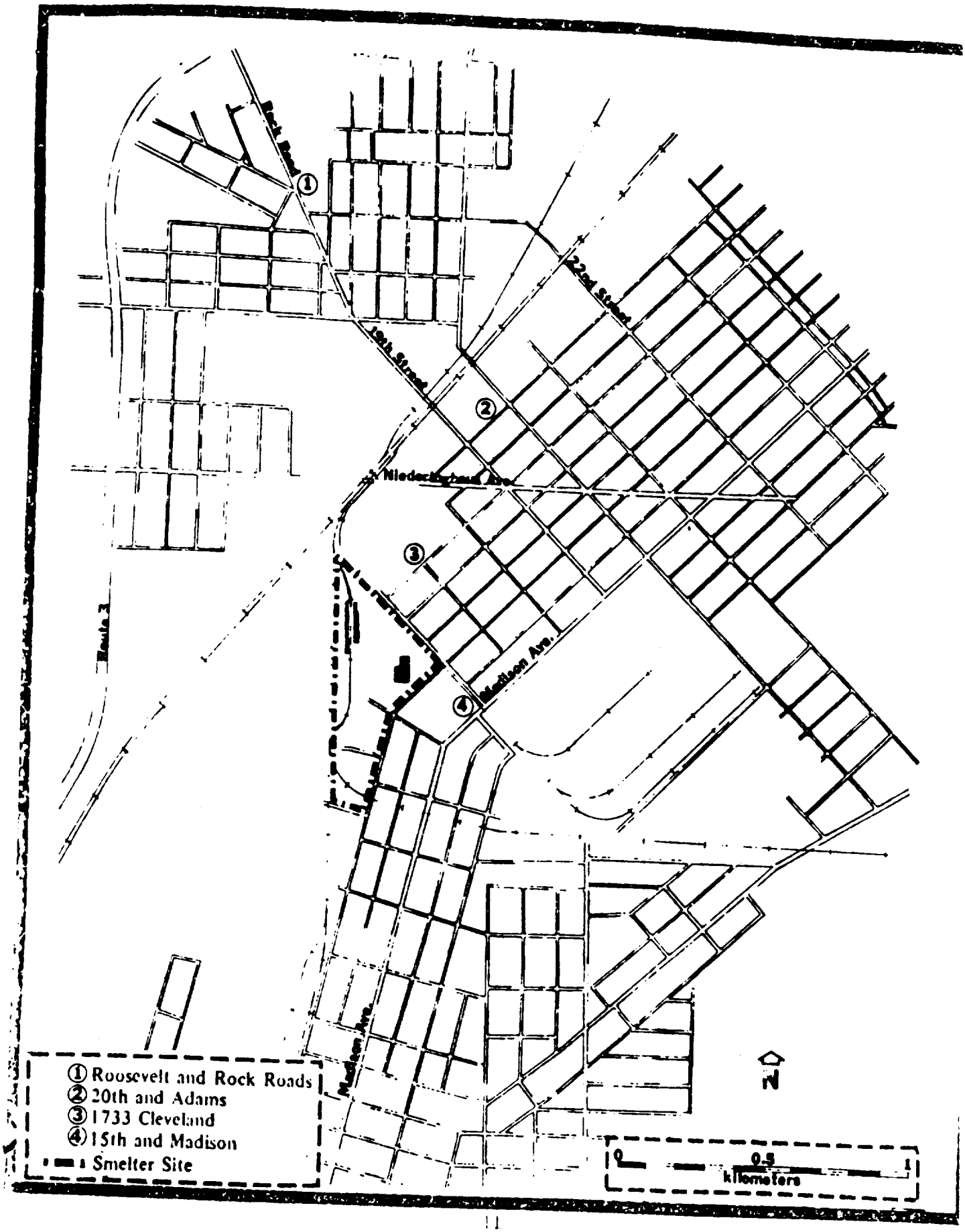
NATIONAL LEAD INDUSTRIES
GRANITE CITY, ILLINOIS
GROUND WATER ANALYTICAL RESULTS

	DATE	pH	SPCOND	ALKALINITY	ANTIMONY	ARSENIC	BARIUM	BORON	CADMIUM	CHLORIDE	CHROMIUM	COPPER	FLORIDE	HARDNESS	IRON	LEAD	MAGNESIUM	MANGANESE	MERCURY	NICKEL	NOE	SELENIUM	SILVER	SULFATE	ZINC
G101	1/16/82	7.1	1,410	37.9		0.065		0.7		10.8			0.6			(0.005					1,056			266	
	10/12/83	6.9		343.0		0.070	0.3	0.8	(0.010	66.0	(0.010	(0.02	0.6	.828	49.00	(0.050	31.8	7.60		(0.10	1,097	(0.001	(0.010	330	(0.100
	2/28/83	6.8	1,500	380.0		0.090	0.4	0.7	0.000	66.0	0.000	0.01	0.6	547	53.00	0.000	32.5	0.00		0.00		(0.001	0.020	433	0.200
	6/29/83	6.7	1,500	334.0		0.070	0.4	0.7	0.000	61.0	0.000	0.00	0.7	966	0.70	0.000	35.3	9.20		0.00	1,358	0.000	0.000	535	0.100
	8/23/83	7.3		326.0		0.071	0.4	0.8	0.000	59.0	0.000	0.00	0.6	840	4.90	0.000	30.0	8.60		0.00	1,114	0.000	0.020	420	0.000
	1/10/87	6.8	700		(0.02	0.077	(1.0		(0.001		(0.005	(0.01			20.00	0.009		4.30	(0.0005	(0.01	590	(0.005	(0.005	150	0.016
G102	1/16/82	7.1	1,330	480.0		0.010		1.1		43.0			0.1			(0.005					1,166			242	
	1/26/83	6.9	1,250	476.0		0.005	0.0	1.1		39.0	0.000	0.00	0.1		2.80	0.000	46.0	1.90		0.00	894	0.000	0.000	224	0.100
	10/11/83	6.7		398.0		0.001	0.2	1.6	(0.010	31.0	(0.010	(0.02	0.2	942	0.20	(0.050	64.0	1.06		(0.10	1,156	(0.001	(0.010	500	(0.100
	2/28/83	6.7	1,260	432.0		0.006	0.2	(0.2	0.000	28.0	0.000	0.00	0.1	66[illegible]	0.70	0.000	52.7	0.00		0.00		0.004	0.010	310	0.100
	6/29/83	6.9	1,250	367.0		0.004	0.3	1.2	0.000	29.0	0.000	0.00	0.2	762	0.20	0.000	50.0	0.23		0.00	1,071	0.004	0.000	375	0.100
	8/23/83	7.0	1,330	384.0		0.002	0.1	1.6	0.000	33.0	0.000	0.00	0.2	820	0.80	0.000	60.0	0.76		0.00	1,130	0.004	0.010	445	0.000
	1/10/87	6.6	800		(0.02	(0.005	(1.0		(0.001		(0.005	(0.01			0.12	0.013		0.26	(0.0005	(0.01	640	(0.005	(0.005	120	0.012
G103	1/16/82	7.4	1,170	330.0		0.006		0.8		16.0			0.2			(0.005					1,087			262	
	10/11/83	7.1		2[illegible]0.0		0.001	(0.1	0.6	(0.010	8.0	(0.010	(0.02	0.2	516	(0.10	(0.050	36.6	0.02		(0.10	677	0.006	(0.010	290	(0.100
	2/28/83	6.9	1,290	359.0		(0.001	0.2	0.8	0.000	13.0	0.000	0.00	0.1	662	0.00	0.000	52.2	0.00		0.00		0.002	0.000	415	0.100
	6/29/83	7.2	1,020	251.0		0.001	0.3	0.6	0.000	7.0	0.000	0.00	0.1	550	0.00	0.000	35.5	0.10		0.00	837	0.003	0.000	340	0.200
	8/23/83	7.5	910	2[illegible]5.0		0.001	0.1	0.6	0.000	6.0	0.000	0.00	0.2	444	0.10	0.000	29.0	0.02		0.00	652	0.006	0.000	290	0.000
	1/10/87	6.5	900		(0.02	(0.005	(1.0		(0.001		(0.005	(0.01			(0.10	(0.005		0.06	(0.0005	(0.01	500	(0.005	(0.005	210	0.020
G104	1/16/82	7.3	1,220	28[illegible].0		0.002		0.5		91.0			0.2			0.060					875			280	
	10/11/83	6.2		52.0		0.002	(0.1	0.2	(0.010	27.0	(0.010	(0.02	0.1	15	(0.10	(0.050	7.4	0.02		(0.10	361	0.002	(0.010	123	(0.100
	2/28/83	6.7	850	196.0		0.002	0.0	0.5		68.0	0.000	0.00	0.2	304	0.00	0.000	18.7	0.00		0.00		0.001	0.000	155	0.100
	6/29/83	7.1	630	107.0		0.003	0.2	0.3	0.000	52.0	0.000	0.00	0.1	23[illegible]	0.00	0.000	13.5	0.10		0.00	459	0.002	0.000	134	0.100
	8/23/83	6.9	440	5[illegible].0		0.004	0.0	0.3	0.000	24.0	0.000	0.00	0.2	141	0.00	0.000	7.0	0.05		0.00	311	0.001	0.000	100	0.100
	1/10/87	5.7	350		(0.02	(0.005	(1.0		0.002		(0.005	(0.01			(0.10	(0.005		(0.05	(0.0005	(0.01	360	(0.005	(0.005	120	0.021
G105S	8/24/83	7.9	280	406.0		0.000	0.2	1.4	0.000	36.0	0.000	0.00	0.3	681	0.10	0.000	45.0	0.18		0.00	929	0.002	0.000	0	
	1/10/87	6.5	825		(0.02	(0.005	(1.0		0.002		(0.005	(0.01			(0.10	(0.005		(0.05	(0.0005	(0.01	1,000	(0.005	(0.005	320	0.015
G105D	10/12/83	7.2		1[illegible]0.0		0.001	0.2	1.0	0.030	40.0	(0.010	0.03	0.5	522	(0.10	(0.050	28.5	0.23		(0.10	661	(0.001	(0.010	158	(0.100
	8/24/83	8.1		3[illegible]0.0		0.000	0.0	0.9	0.000	31.0	0.000	0.00	0.5	532	0.00	0.000	27.0	0.17		0.00	715	0.000	0.000	172	0.100
	1/10/87	6.6	683		(0.02	(0.005	(1.0		0.006		(0.005	(0.01			(0.10	(0.005		0.19	(0.0005	(0.01	660	(0.005	(0.005	140	0.041
G106S	1/10/87	-	-		(0.02	(0.005	(1.0		0.013		(0.005	(0.01			(0.10	(0.005		0.08	(0.0005	(0.01	1,100	(0.005	(0.005	290	0.2[illegible]
G106D	10/12/83	7.0		341.0		0.002	0.2	0.9	0.020	49.0	(0.010	0.04	0.3	62[illegible]	(0.10	(0.050	40.2	0.70		(0.10	946	(0.005	(0.010	355	(0.100
	8/24/83	8.0		32[illegible].0		0.000	0.0	1.1	0.000	55.0	0.000	0.00	0.4	650	0.00	0.000	37.0	0.63		0.00	964	0.006	0.000	295	0.100
	1/10/87	6.8	637		(0.02	(0.005	(1.0		0.008		(0.005	0.02			(0.10	0.011		0.09	(0.0005	(0.01	600	(0.005	(0.005	160	0.112
G107S	10/12/83	7.2		272.0		0.002	0.2	0.5	(0.010	108.0	(0.010	(0.02	0.9	882	(0.10	(0.050	46.9	1.51		(0.10	1,306	0.001	(0.010	575	(0.100
	8/24/83	8.0		250.0		0.005	0.3	0.5	0.000	129.0	0.000	0.00	0.8	745	2.50	0.000	55.0	1.90		0.00	1,324	0.001	0.000	570	0.000
	1/10/87	7.0	815		(0.02	(0.005	(1.0		0.001		(0.005	(0.01			(0.10	(0.005		0.07	(0.0005	(0.01	820	(0.005	(0.005	260	0.027
G107D	10/12/83	7.1		31[illegible].0		0.008	0.3	0.7	(0.010	89.0	(0.010	(0.02	0.4	852	4.70	(0.050	61.0	0.38		(0.10	1,229	(0.001	(0.010	475	(0.100
	8/24/83	8.0		33[illegible].0		0.006	0.4	0.9	0.000	89.0	0.000	0.00	0.3	83[illegible]	4.20	0.000	65.0	0.48		0.10	1,228	0.000	0.000	500	0.000
	1/10/87	6.7	1,400		(0.02	(0.005	-		(0.001		(0.005	(0.01			7.70	(0.005		0.43	(0.0005	(0.01	1,370	(0.005	(0.005	540	0.022
G108S	8/24/83	7.1		403.0		0.001	0.0	0.5	0.120	520.0	0.120	0.00	0.2	1,76[illegible]	0.10	0.000	125.0	1.58		0.10	3,508	0.000	0.000	1,375	0.200
	1/10/87	6.1	2,300		(0.02	(0.005	(1.0		0.210		(0.005	(0.01			(0.10	0.005		13.10	(0.0005	0.20	3,110	(0.005	(0.005	1,250	0.056
G108D	10/12/83	5.9		304.0		0.002	(0.1	0.4	13.000	530.0	(0.010	(0.02	9.8	2,56[illegible]	6.50	(0.050	280.0	46.00		1.60	4,506	(0.001	(0.010	2,[illegible]	[illegible]
	8/24/83	6.3		298.0		0.001	0.6	0.9	17.000	1500.0	(0.010	0.00	8.0	3,34[illegible]	18.00	0.050	380.0	80.00		2.50	7,142	0.000	0.010	2,750	[illegible]
	1/10/87	6.4	3,535		(0.02	0.007	(1.0		3.300		(0.005	(0.01			(0.10	0.006		18.10	(0.0005	0.50	3,860	(0.005	(0.005	1,560	38.[illegible]

NOTE: ALL CONCENTRATIONS IN PPM
pH = UNITS
SPECIFIC CONDUCTANCE = UMHOS/CM

IV. AIR INVESTIGATION

Figure VI - 1. Location of Lead Air Quality Monitors



AMBIENT LEAD MONITORING DATA SUMMARY

Quarterly Averages (ug/M^3)

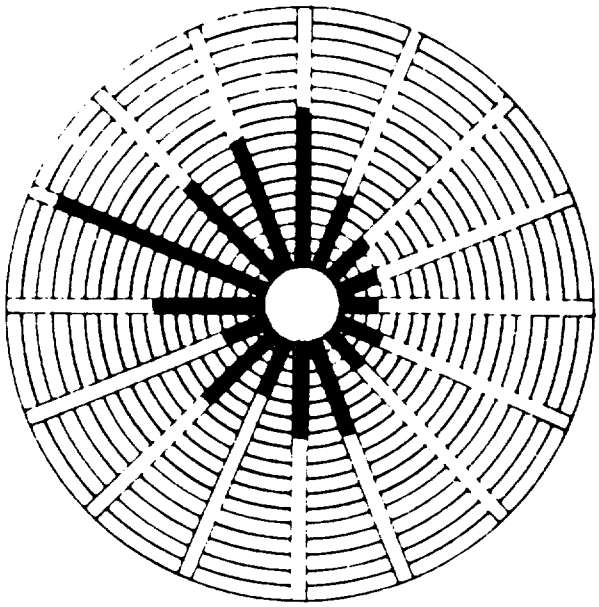
(NAAQS 1.5 ug/M^3)

Yr/Qtr.	15th & Madison	13th & Adams	Roosevelt & Rock Road	1731 Cleveland	2001 E. 20th
1978 - 1	-	-	-	-	-
2	3.1	0.6	0.7	-	-
3	1.7	4.4	1.1	-	-
4	4.4	4.0	1.7	-	-
1979 - 1	2.6	1.0	1.3	-	-
2	3.2	0.9	1.2	-	-
3	2.0	1.1	1.3	-	-
4	3.0	2.6	1.2	-	-
1980 - 1	3.0	0.5	0.8	-	-
2	1.2	0.6	0.5	-	-
3	1.0	0.5	0.7	-	-
4	1.9	0.6	1.4	-	-
1981 - 1	2.1	0.5	0.5	-	-
2	1.0	1.6	0.9	-	-
3	1.8	0.5	1.1	-	-
4	7.3	0.5	0.9	-	-
1982 - 1	1.9	0.8	1.1	-	-
2	1.6	0.9	1.5	-	-
3	1.1	0.5	0.6	-	-
4	0.9	0.8	1.8	1.5	-
1983 - 1	1.1	0.5	0.4	1.0	-
2	0.4	0.3	0.3	0.7	-
3	0.60	0.37	0.36	0.76	-
4	0.75	0.51	0.47	0.62	-
1984 - 1	1.48 *	0.31 *	0.37 *	0.74 *	-
2	0.76 *	0.29	0.30 *	0.74	-
3	0.34 *	0.23 *	0.23	0.40 *	-
4	0.39	0.26	0.30	0.45	-
1985 - 1	0.59	0.13	0.14	0.25	0.23
2	0.42	0.26	0.20	0.44	0.28
3	0.23	0.17	0.21	0.33	0.20
4	0.27	0.18	0.17	0.28	0.20
1986 - 1	0.44	0.15	**	0.42	0.23
2	0.24	0.13	**	0.20	0.15
3	0.24	0.15	**	0.30	0.15
4			**		
1987 - 1			**		
2			**		
3			**		
4			**		
1988 - 1			**		
2			**		
3			**		
4			**		
1989 - 1			**		
2			**		
3			**		
4			**		

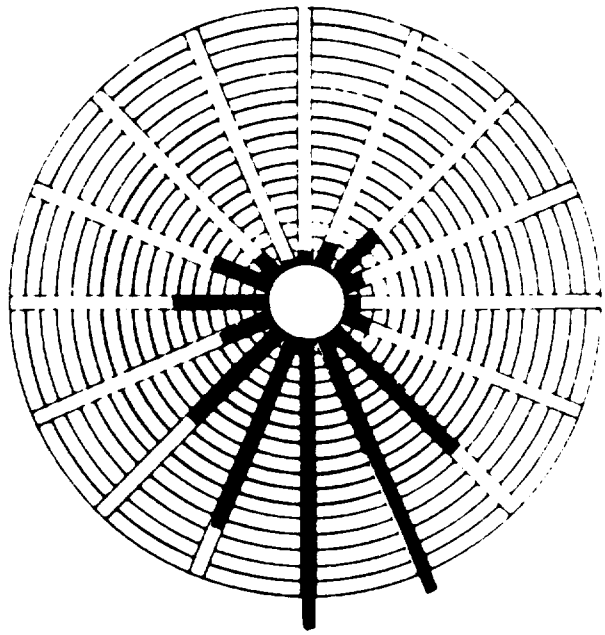
* Revised values, per 4/24/85 IEPA Letter and Data Summary.

** Monitor Site Discontinued.

Figure II-3: Wind Frequency Distribution on High Lead Days in Granite City During 1981

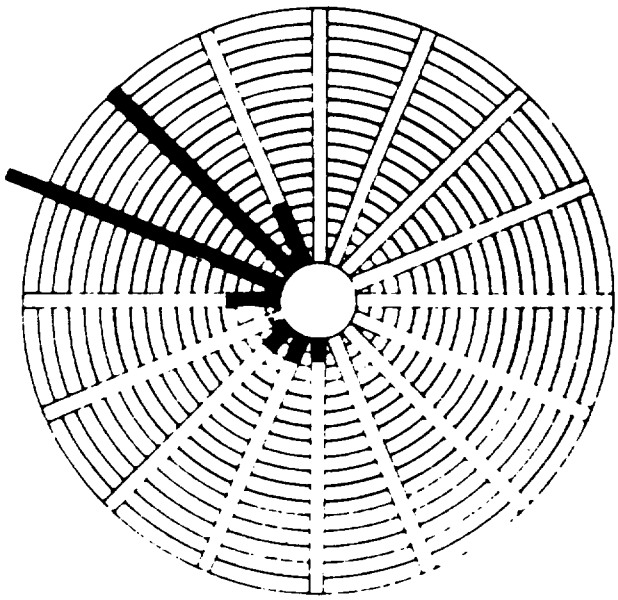


15th and Madison
(all days)

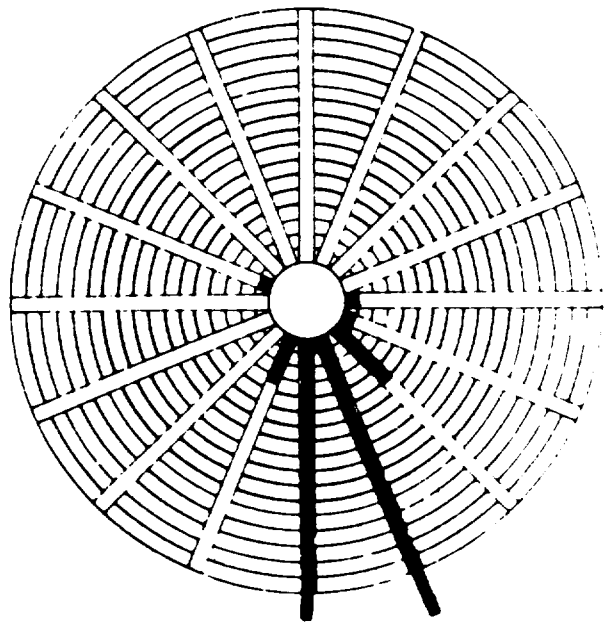


20th and Adams

Each line equals 1%



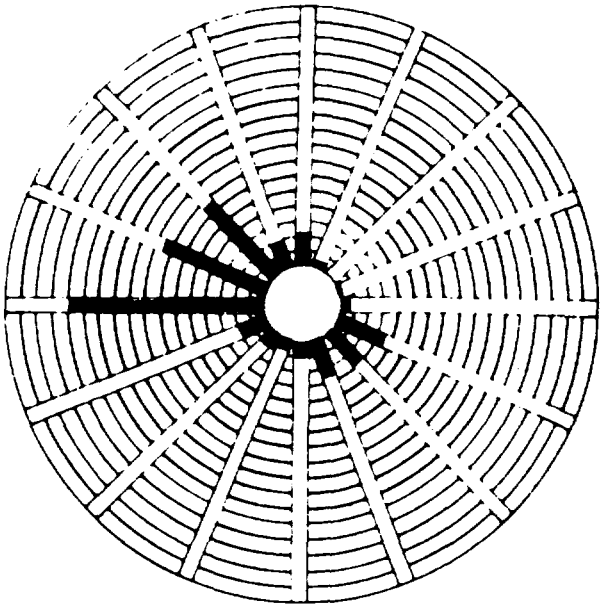
15th and Madison
(above 10 ug/m^3)



Roosevelt and Rock Road

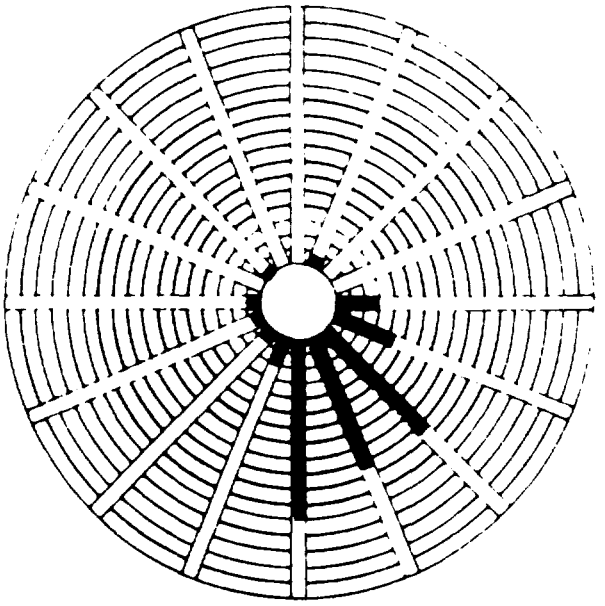
Each line equals 2%

Figure II-5: Wind Frequency Distribution on High Lead Days in Granite City During 1982

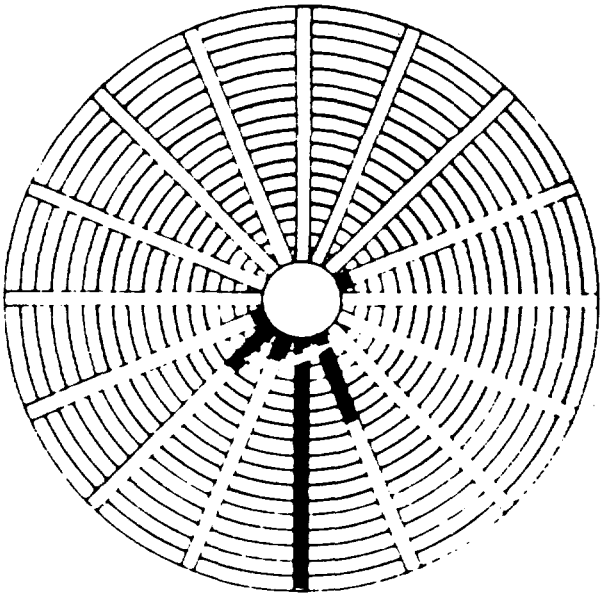


15th and Madison

Each line equals 2%

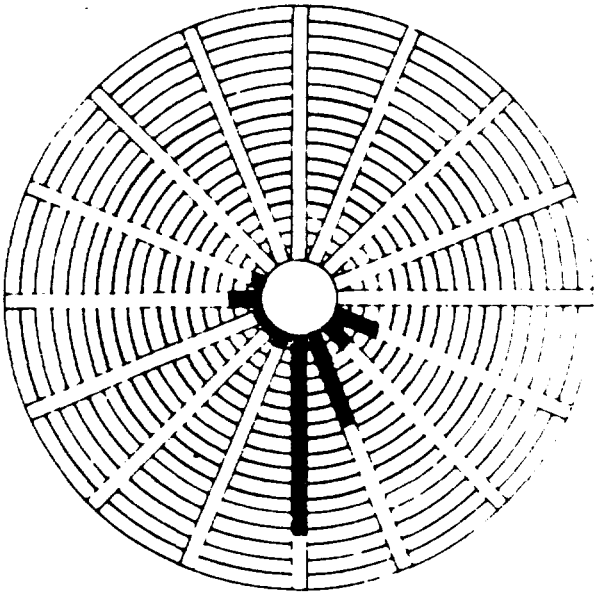


Roosevelt and Rock Road
(does not include November)



20th and Adams

Each line equals 3%



1733 Cleveland