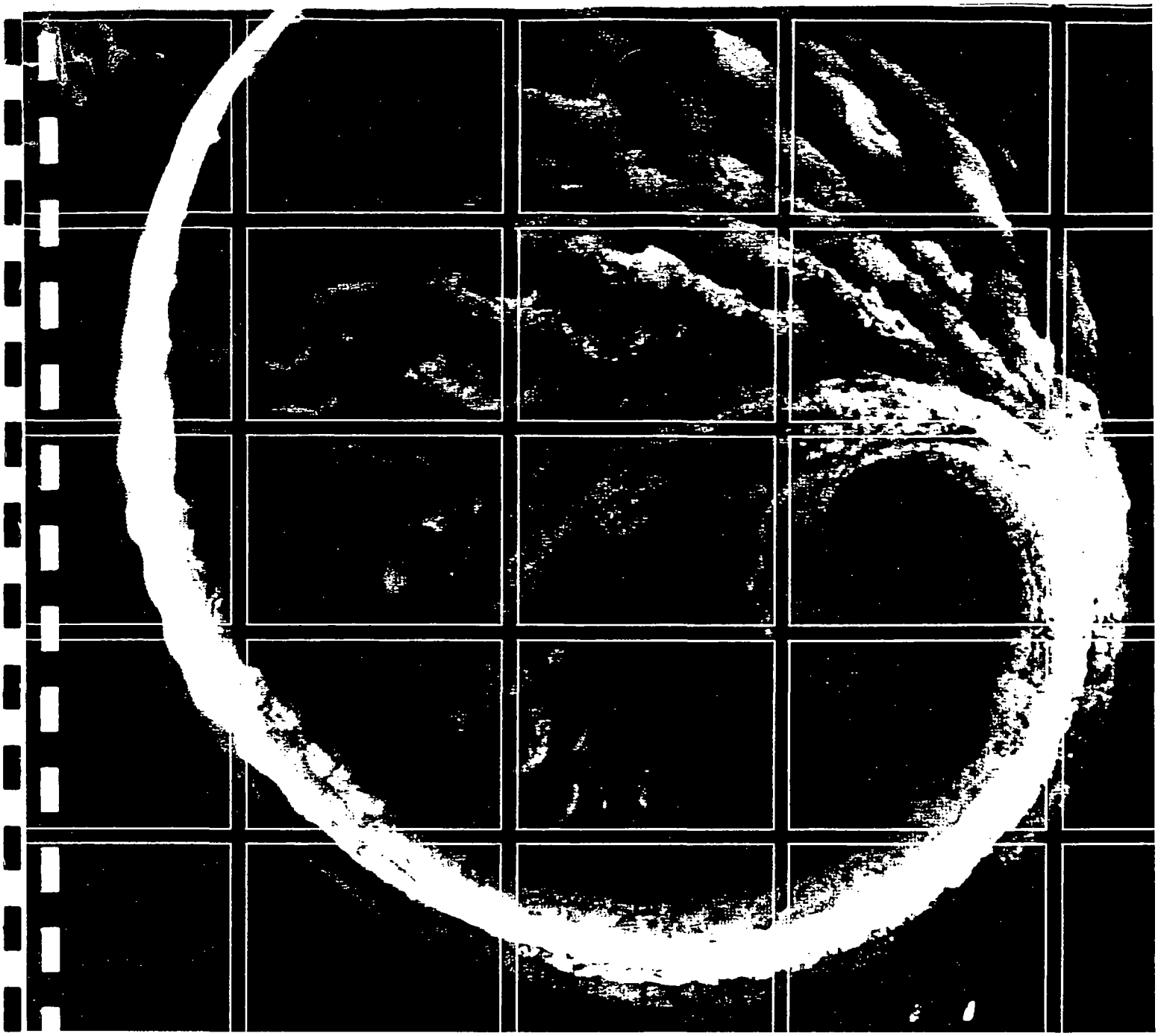

Ground Water Monitoring 2004 Biennial Report

Sullivan Landfill - Sullivan, Missouri

August 19, 2004

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Superfund

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CONTENTS

1.0	*INTRODUCTION*	*1*
2.0	*GROUND WATER SAMPLING*	*2*
2.1	*WELL PURGING ACTIVITIES*	*2*
2.2	*DECONTAMINATION PROCEDURES*	*3*
2.3	*SAMPLE COLLECTION PROCEDURES*	*3*
2.4	*QUALITY CONTROL SAMPLES*	*4*
3.0	*GROUND WATER POTENTIOMETRIC SURFACE GRADIENT*	*6*
4.0	*ANALYTICAL RESULTS*	*7*
5.0	*LANDFILL INSPECTION INFORMATION*	*8*
6.0	*SUMMARY*	*9*

APPENDICES:

A *FIELD DATA SHEETS*

B *LABORATORY REPORT AND CHAIN-OF-CUSTODY FORMS*

C *LANDFILL INSPECTION REPORTS – MAY 2002 THROUGH MAY 2004*

LIST OF TABLES

1 *Well Summary - May 25-26, 2004*

2 *Summary of Detected Analytes - May 25-26, 2004*

3 *Historic Summary of Detected Ground Water Analytes*

LIST OF FIGURES

1 *Site Plan and Well Locations*

2 *Ground Water Potentiometric Surface Gradient Map - May 25, 2004*

1.0 *INTRODUCTION*

This report summarizes the ground water monitoring activities, which took place on May 25 and 26, 2004 at the closed Sullivan Landfill site located in Sullivan, Missouri. Environmental Resources Management (ERM), Inc. of St. Charles, Missouri, performed the ground water sampling activities. Additionally, this report serves as documentation of monthly landfill inspection activities for the period from May 2002 through May 2004, which was performed by City of Sullivan Water Department personnel.

2.0 *GROUND WATER SAMPLING*

This section describes the sampling procedures used to collect the ground water samples. It describes the well purging activities, decontamination procedures, sample collection procedures, and quality control samples.

In a letter dated February 29, 2000, that outlined post-closure ground water monitoring requirements for the landfill, the Missouri Department of Natural Resources (MDNR) requested some alterations to the historical sampling program in anticipation of the approval of the post-closure monitoring program for the landfill. The post-closure ground water monitoring requirements indicated that sampling frequency for the wells could be reduced from annual to biennial. The analyte lead was added to the parameter list, and inorganic samples were to be analyzed for dissolved parameters. The monitoring wells MW102A, MW102B, and B201 were no longer required to be sampled, and MW104 was included as a sampling point. This biennial ground water monitoring program was included with the landfill closure plan that was filed with the Franklin County Recorder of Deeds on September 6, 2000.

2.1 *WELL PURGING ACTIVITIES*

There are seven ground water monitoring wells currently surrounding the landfill. There is also a ground water production well located near the landfill designated as the "Voss Well". The locations of these wells are shown on Figure 1. Table 1 displays a summary of the well numbers and applicable physical measurements.

Ground water sampling activities were generally conducted in accordance with methodologies presented in the March 1994 Ground Water Monitoring Plan (the Work Plan) prepared by ABB Environmental Services, Inc. (ABB) of Portland, Maine, and approved by the MDNR.

Prior to well purging, depth to water measurements were collected from the monitoring wells (Table 1) and the casing volume of each well to be sampled was calculated. The Voss Well has a permanent pump and is sealed, so no water level reading was collected from this well.

As described in the Work Plan, some of the wells will not accept a submersible Grundfos pump. Therefore, in order to use a consistent method of purging and sampling for all of the wells, purging of the ground water monitoring wells was completed with dedicated PVC bailers. The bailers were lowered and raised with an electric motor operated outrigger unit. A stainless steel line was

connected to the bailers and they were lowered approximately 10 feet below the water surface before retrieval.

The Voss well is fitted with an automatic chlorination device, therefore, prior to purging, the chlorinator was turned off. The well was then purged until approximately 350 gallons had been removed.

Ground water from the monitoring wells was tested, after approximately each full casing volume was removed, for the following field-measured parameters: pH, temperature, specific conductance, and turbidity. These readings were recorded on Field Data Sheets, which are included as Appendix A. As described in the Work Plan, if two well volumes have been removed and field-measured parameters (except turbidity) have stabilized within 10%, the well is considered purged and may be sampled. As shown in the Field Data Sheets, the field-measured parameters for all of the monitoring wells were generally stable after two casing volumes had been removed.

According to the Work Plan, the Voss Well is considered to be purged after it is allowed to run for a minimum of 10 minutes. During this sampling event it was allowed to run for approximately 1 hour prior to sample collection since it was allowed to purge at a relatively slow rate. The purge rate was set low to avoid excessive ponding of water where the purge water was discharged. Field-measured parameters were collected from the Voss Well just before sample collection and were recorded on a Field Data Sheet (see Appendix A).

Purge water from all the wells, except the Voss Well, was disposed of in the city of Sullivan sanitary sewer, as approved by the MDNR project manager for this site. Purge water from the Voss Well was allowed to discharge on the ground, in accordance with the Work Plan.

2.2 *DECONTAMINATION PROCEDURES*

Dedicated bailers were used in all of the monitoring wells. Each bailer is stored by hanging it within the individual wells. Decontamination consisted of a rinse with distilled water prior to use. The stainless steel line used to retrieve bailers was decontaminated between wells with an Alconox detergent and distilled water solution followed by a distilled water rinse.

2.3 *SAMPLE COLLECTION PROCEDURES*

Samples were collected from each well for volatile organic compounds (VOCs) and dissolved barium, chromium, and lead.

Laboratory-supplied containers that had been pre-preserved were used for sample collection. Following sample collection, the containers were stored on ice in an insulated cooler.

Samples from the monitoring wells were collected directly from the bailers used to purge the wells. Samples collected for inorganic analysis were initially placed in a laboratory-supplied clean unpreserved container and then field filtered into a laboratory-supplied pre-preserved container. Field filtering was conducted using a peristaltic pump, using clean tubing and 0.45 micron filters for each well sampled.

At the Voss Well, the ground water samples were collected from a short length of hose attached to the well spigot. This was the same length of hose that had been used for well purging.

2.4 *QUALITY CONTROL SAMPLES*

A trip blank was included for field sampling quality control purposes. The trip blank consisted of a laboratory-supplied sample for VOCs only, which accompanied the sample containers to the field, during storage, and during delivery to the analytical laboratory.

The laboratory analyzed a method blank and a laboratory control sample (LCS) for quality control (QC) purposes. The method blank sample consisted of a laboratory grade water blank analyzed for VOCs, barium, chromium, and lead. The laboratory control sample consisted of a laboratory grade water blank spiked with a known quantity of VOCs, barium, chromium, and lead. The control sample was then analyzed and a percent recovery value calculated based on the amount of VOCs, barium, chromium, and lead detected as compared to the amount with which the sample was spiked.

The method blank exhibited concentrations of bromomethane above the reporting limit. The analytical results from the environmental samples with the method blank returned non-detect for this compound. Therefore, the presence of bromomethane in the method sample does not effect the quality of the analytical results for the ground water samples collected during the biennial ground water sampling event.

The LCS and laboratory control sample duplicate (LSCD) recoveries were outside quality control QC limits for less than 10% of the compounds spiked. Laboratory QC practices, based on federal guidance documents, allow for up to 10% of the spiked compounds to be outside QC criteria without necessitating re-preparation/re-analysis. Sample purge efficiency and compliance is

demonstrated by the remaining acceptable LCS/LCSD recoveries. Additionally, chloroethane is not a constituent of concern with regards to the ground water samples collected from the closed Sullivan Landfill.

The LCS/LCSD surrogate recoveries were also outside acceptance limits. LCS/LCSD spike recoveries are within QC limits demonstrating acceptable samples extraction and instrument performance. There is an apparent anomaly in the surrogate addition, that was isolated to the LCS/LCSD and is not indicative of the sampling batch.

3.0 *GROUND WATER POTENTIOMETRIC SURFACE GRADIENT*

On May 25, 2004 a round of water level measurements was collected from the all of the monitoring wells at the site. The depth-to-water measurements and ground water elevations are shown in Table 1.

The water level elevations for MW-101, MW-102B, MW-103, and MW-105 were used in the construction of the ground water potentiometric surface gradient map (see Figure 2). These four wells were chosen because the screened elevations of these wells are the most similar. Historically, the ground water potentiometric surface gradient maps prepared by ABB Environmental Services, Inc. and ERM also utilized only these four wells.

As shown in Figure 2, the ground water potentiometric surface gradient is trending to the north-northeast based on the measurements collected on May 25, 2004. The ground water potentiometric surface gradient is similar to that determined during the last biennial monitoring event in May 2002.

4.0 *ANALYTICAL RESULTS*

The ground water samples were hand delivered by ERM to Severn Trent Laboratories (STL) in St. Louis, Missouri for laboratory analyses. The samples were held, transported, and delivered following strict chain-of-custody procedures.

The collected samples were analyzed for VOCs by Method 8260B, and dissolved barium, chromium, and lead by Method 6010B. The laboratory analytical report and completed chain-of-custody forms are included as Appendix B.

A summary of detected VOCs and inorganic analytes is attached as Table 2.

Four VOCs were found above laboratory detection limits: trichloroethene (TCE), 1,1-dichloroethane (1, 1-DCA), tetrachloroethene (PCE), and carbon disulfide (CD). TCE was detected at 1.4ug/l in MW-101, 6.6ug/l in MW-104, 3.2 ug/l MW-105 and 3.6 ug/l in the Voss Well. DCA was detected at 8.6 ug/l in MW-105 and at 5.0 ug/l in the Voss Well. PCE was detected in well MW-103, MW-104, and the Voss Well at concentrations of 1.0ug/l, 1.1 ug/l, and 1.1 ug/l, respectively. Additionally, CD was detected at 5.4 ug/l in MW-103, 3.5ug/l in MW-104, and 7.7 ug/l in MW-105.

Except for the previously described four compounds, all other VOCs were not detected above the laboratory method detection limits.

The analytical results for dissolved barium, chromium, and lead show that for all of the samples submitted, dissolved chromium and lead levels were below the instrument detection limit. Dissolved barium concentrations however, were detected in all five wells at estimated concentrations below the laboratory method detection limit of 200 ug/l.

5.0 *LANDFILL INSPECTION INFORMATION*

According to the post-closure monitoring requirements for the Sullivan Landfill as set forth by the MDNR and contained on the closure plan for the landfill filed with the Franklin County, Missouri Recorder of Deeds on September 6, 2000, semiannual visual inspections and maintenance, as necessary, are to be performed on the landfill. The landfill is typically mowed twice per year depending upon vegetation growth. Presently, personnel from the City of Sullivan Water Department perform these inspection and maintenance activities. Although the landfill is only required to be inspected twice per year, the City of Sullivan generally performs monthly inspections of the landfill noting any need for maintenance and scheduling the completion of the maintenance activities, usually prior to the next month's inspection. City personnel complete a checklist to document their monthly inspection and any maintenance activities. Enclosed in Appendix C are copies of the landfill inspection reports from May 2002 through May 2004. As can be seen in these inspection reports, only routine maintenance activities have been necessary at the landfill since May 2002.

6.0 *SUMMARY*

On May 25 and 26, 2004, ground water samples were collected for VOCs and dissolved barium, chromium, and lead from five wells around the Sullivan Landfill located in Sullivan, Missouri. As described in Section 4.0 of this report, the only analytes found at levels above the detection limit were TCE, 1,1-DCA, PCE, and CD. These analytes were found in several monitoring wells at varied concentrations as shown in Table 2. The concentrations of these VOCs found in the ground water samples are only slightly above the detection limits of 1 ug/l and are below the maximum contaminant levels (MCLs) promulgated by the U.S. Environmental Protection Agency (USEPA), except for the TCE concentration in MW-104. The TCE concentration in MW-104 was 6.6 ug/l, slightly above the USEPA MCL of 5.0 ug/l. The TCE present in the ground water sample collected from MW-104 is consistent with the concentration observed from the May 2002, biennial sampling event. The May 2002 sampling event result for TCE in MW-104 was 6.8 ug/l. Additionally, the May 2002 event was the first time that TCE exceeded the MCL.

In order to provide a comparison to previous sampling results, a historical summary of detected VOCs, as well as total and dissolved barium, chromium, and lead from all previous sampling events has been included as Table 3. As shown in this table, the measurements in all of the wells have remained relatively consistent over time since sampling activities began.

A ground water potentiometric surface gradient map was completed based on depth-to-water measurements collected on May 25, 2004 and indicates a north-northeast trend, which is consistent with what has been historically observed.

No outstanding inspection or maintenance issues appear to be present at the landfill in association with the monthly inspection activities performed by the City of Sullivan. Additionally, during the performance of the 2004 biennial ground water sampling event, ERM did not notice any areas of concern associated with excessive vegetation, site security, site access, condition of the landfill cover, monitoring wells, or gas vents. In general, the landfill appears to be well maintained.

Tables

TABLE 1

WELL SUMMARY SULLIVAN LANDFILL SAMPLING [1]
May 25 & 26, 2004
SULLIVAN, MISSOURI

Well	TOC Elevation [2]	Depth-to-Water from TOC	Ground Water Elevation [2]	Total Well Depth from TOC	Total Boring Depth from Ground Surface	Base of Well Elevation [2]	Formation Screened
MW-101	887.08	149.9	737.18	185	243	702.08	Gasconade
MW-102A	895.5	174.78	720.72	275	283	620.5	Gasconade
MW-102B	896.01	164.41	731.6	210	214	686.01	Gasconade
MW-103	878.46	170.75	707.71	208	243	670.46	Gasconade
MW-104	898.95	170.02	728.93	202	205	696.95	NC
MW-105	881.69	140.83	740.86	177	203	704.69	Gasconade
B-201	NC	7.1	NC	20.2	17.5	NC	Roubidoux
Voss	NC	NC	NC	NC	NC	NC	NC

NOTES: [1] All measurements are expressed in feet.
[2] Elevations are based on the North American Vertical Datum of 1988.

KEY: TOC = Top of casing.
NC = Not collected.

TABLE 2

SUMMARY OF DETECTED ANALYTES[1]
May 25 & 26, 2004
SULLIVAN LANDFILL
SULLIVAN, MISSOURI

	MCL[2]	Detection Limit	Sample Number					
			MW-101	MW-103	MW-104	MW-105	Voss	Trip Blank
Volatile Organic Analytes								
Acetone	[3]	2	--	--	--	--	--	4.4
2-Butanone	[3]	5	--	--	--	--	--	--
Chlorobenzene	100	1	--	--	--	--	--	--
Dibromochloromethane	[3]	1	--	--	--	--	--	--
Chloroform	[3]	1	--	--	0.23 J	0.35 J	0.19 J	--
1,1-Dichloroethane	[3]	1	--	0.35 J	0.88 J	8.6	5.0	--
1,2-Dichloroethane	5	1	--	--	--	0.19 J	--	--
1,1-Dichloroethene	7	1	--	--	--	0.73 J	--	--
1,2-Dichloroethene	5	1	--	--	--	--	--	--
Methylene Chloride	5	1	--	--	--	--	0.61 J	1.5
Toluene	1,000	1	--	--	--	--	--	--
1,1,1-Trichloroethane	200	1	--	--	--	--	--	--
Bromodichloromethane	[3]	1	--	--	--	--	--	--
Trichloroethene	5	1	1.4	0.44 J	6.6	3.2	3.6	--
Tetrachloroethene	5	1	--	1	1.1	0.62 J	1.1	--
Bromoform	[3]	1	--	--	--	--	--	--
cis-1,2-Dichloroethene	70	1	--	--	0.51 J	0.47 J	0.28 J	--
4-Methyl-2-pentanone	[3]	5	0.41 J	0.90 J	0.48 J	0.47 J	0.59 J	0.40 J
Carbon disulfide	[3]	1	--	5.4	3.5	7.7	--	--
Inorganic Analytes (dissolved)								
Barium	2000	200	57.7 B	54.3 B	75.1 B	119 B	97.7 B	NA
Chromium	100	10	--	--	--	--	--	NA
Lead	15	5	--	--	--	--	--	NA

NOTES: [1] Results expressed in ug/l.
[2] U.S. Environmental Protection Agency maximum contaminant level.
[3] No MCL is associated with this compound.

KEY: -- = Not Detected
B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.
J = Estimated value (Organics Only).
NA = Not Analyzed

TABLE 3

MW-101
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

	Sample Event																
	5/23/1992	7/22/1992	2/13/1993	8/30/1993	5/24/1994	9/6/1994	3/24/1995	6/28/1995	9/15/1995	12/18/1995	5/3/1996	6/23/1997	7/22/1998	6/29/1999	5/22/2000	5/14/2002	5/26/2004
Volatile Organic Compounds (ug/l)																	
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	4 J,B	--	--	1.4 J,B	--
2-Butanone (MEK)	--	--	--	--	--	--	--	--	--	--	--	3 J	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.41 J
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3 J	0.4 J	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	--	--	--	--	--	--	--	--	--	--	--	--	1 J,B	0.2 J	--	0.4 J,B	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4 J	--	--
Trichloroethene	4	--	--	4.2	1.9	3.7	2.1	2.2	3.7	4.1	3.2	--	3 J	2.3	3.8	1.2	1.4
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3 J	0.4 J	--	--
Toluene	--	--	--	--	--	--	--	1.8	--	--	--	--	--	--	0.1 J	--	--
Dibromochloromethane	--	--	--	3.3 J	2.2	--	--	--	--	--	--	NA	NA	NA	--	--	--
Dichlorodifluoromethane	NA	NA	--	--	--	--	2.1	1.9	3	4.9	4.8	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	NA	NA	51	31	26.2	43.8	26.8	24.8	32.4	42.3	32.9	NA	NA	NA	NA	NA	NA
Dichlorofluoromethane	NA	NA	30	26	18.6	23.7	16.3	19.4	22.5	39.8	25.5	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3 J	--
Inorganic Analytes (total) (ug/l)																	
Barium	90	--	NA	NA	52	53	56	51	53	58	63	61.1	67 B	--	NA	NA	NA
Chromium	--	--	NA	NA	--	--	--	--	--	--	--	--	4.5 B	39	NA	NA	NA
Lead	10	8	NA	NA	--	--	--	--	--	--	--	--	NA	NA	NA	NA	NA
Inorganic Analytes (dissolved) (ug/l)																	
Barium	NA	NA	--	53	60	58	64	57	56	55	54	NA	NA	NA	--	62 B	57.7 B
Chromium	NA	NA	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--
Lead	NA	NA	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--

KEY: -- = Not Detected
B = Organic qualifier indicating that this compound was also detected in the associated laboratory method blank.
B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.
J = Estimated value (Organics Only).
NA = Not Analyzed

TABLE 3

MW-104
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

	Sample Event						
	5/23/1992	7/22/1992	2/13/1993	8/30/1993	5/23/2000	5/14/2002	5/26/04
Volatile Organic Compounds (ug/l)							
Acetone	4 J	--	--	--	0.92 J	1.4 J,B	--
Carbon Disulfide	--	--	--	--	--	--	3.50
2-Butanone (MEK)	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	30 J	--	--	--	--	--	0.48
1,1-Dichloroethane	--	--	--	--	0.35 J	0.82 J	0.88 J
1,1-Dichloroethene	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	0.23 J	0.23 J
Methylene Chloride	--	--	--	--	--	0.37 J,B	--
1,1,1-Trichloroethane	--	--	--	--	0.37 J	0.95 J	--
Trichloroethene	4 J	--	--	--	4.3	6.8	6.60
Tetrachloroethene	--	--	--	--	0.49	1.1	1.10
Toluene	--	--	--	--	--	--	--
Dibromochloromethane	NA	NA	--	--	--	--	--
Dichlorodifluoromethane	NA	NA	--	--	NA	NA	NA
Trichlorofluoromethane	NA	NA	89	58	NA	NA	NA
Dichlorofluoromethane	NA	NA	52	60	NA	NA	NA
cis-1,2-Dichloroethene	--	--	--	--	--	0.55 J	0.51 J
Inorganic Analytes (total) (ug/l)							
Barium	NA	--	NA	NA	NA	NA	NA
Chromium	NA	60	NA	NA	NA	NA	NA
Lead	NA	60	NA	NA	NA	NA	NA
Inorganic Analytes (dissolved) (ug/l)							
Barium	70	NA	--	56	--	90.3 B	75.1 B
Chromium	--	NA	--	--	--	--	--
Lead	--	NA	--	3.1	--	--	--

KEY: -- = Not Detected
B = Organic qualifier indicating that this compound was also detected in the associated laboratory method blank.
B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.
J = Estimated value (Organics Only).
NA = Not Analyzed

TABLE 3

MW-105
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

	Sample Event																
	5/24/1992	7/22/1992	2/2/1993	8/30/1993	5/24/1994	9/6/1994	3/29/1995	6/28/1995	9/22/1995	12/18/1995	5/3/1996	6/23/1997	7/22/1998	6/29/1999	5/23/2000	5/13/2002	5/26/2004
Volatile Organic Compounds (ug/l)																	
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.4 B	--
Carbon Disulfide	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.70
2-Butanone (MEK)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47 J
1,1-Dichloroethane	21	--	27	--	8.0	11.7	11.5	10.1	12.5	8.1	17.1	--	12	13	8.0	7.6	8.60
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19 J
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	1 J	0.9 J	0.2 J	--	0.73 J
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3 J	0.35 J
Methylene Chloride	3 J	--	--	--	--	--	--	--	--	--	--	--	2 J,B	0.7 J	0.4 J	0.9 J,B	--
1,1,1-Trichloroethane	5	--	--	--	9.4	9.6	8.9	7.1	6.2	3.6	1.7	--	3 J	2.5	1.1	0.8 J	--
Trichloroethene	6	--	--	--	2.5	4.3	3.6	2.6	5.4	2.9	4.8	--	4 J	3.9	3.0	2.5	--
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6 J	0.7 J	0.6 J	0.62 J
Toluene	--	--	--	--	--	--	--	1.2	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	23 J	--	--	--	--	--	--	--	NA	NA	--	--	--	--
Dichlorodifluoromethane	NA	NA	--	--	2.7	--	4.4	2.3	2.8	3.6	7.7	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	NA	NA	89	--	31	50.6	44.2	29.5	26.7	25.6	197	NA	NA	NA	NA	NA	NA
Dichlorofluoromethane	NA	NA	320	120	84.1	114	121	88.8	104	114	28.9	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5 J	0.47 J
Inorganic Analytes (total) (ug/l)																	
Barium	300	120	NA	NA	152	123	136	121	129	139	160	158 B	144 B	--	NA	NA	NA
Chromium	30	--	NA	NA	--	--	--	--	--	--	--	--	1.5 B	--	NA	NA	NA
Lead	120	50	NA	NA	--	--	--	--	--	--	5.8	--	NA	NA	NA	NA	NA
Inorganic Analytes (dissolved) (ug/l)																	
Barium	NA	NA	120	120	--	139	153	136	131	145	173	NA	NA	NA	--	143 B	119 B
Chromium	NA	NA	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--
Lead	NA	NA	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--

KEY: -- = Not Detected
B = Organic qualifier indicating that this compound was also detected in the associated laboratory method blank.
B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.
J = Estimated value (Organics Only).
NA = Not Analyzed

TABLE 3

VOSS WELL
HISTORIC SUMMARY OF DETECTED GROUND WATER ANALYTES
SULLIVAN LANDFILL

	Sample Event														
	2/12/1993	8/31/1993	5/24/1994	9/6/1994	3/29/1995	6/28/1995	9/22/1995	12/18/1995	5/3/1996	6/23/1997	7/22/1998	6/30/1999	5/23/2000	5/14/2002	5/26/2004
Volatile Organic Compounds (ug/l)															
Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	6.3 B	--
2-Butanone (MEK)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-Pentanone (MIBK)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.59 J
1,1-Dichloroethane	--	--	1.9	2.0	2.3	3.1	2.6	3.1	3.5	--	4 J	5.2	3.6	5.5	5.0
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--	--	0.89 J	0.19 J
Methylene Chloride	--	--	--	--	--	--	--	--	--	--	2 J,B	0.9 J	--	0.99 J, B	0.61 J
1,1,1-Trichloroethane	--	--	1.7	1.7	1.5	1.6	1.5	1.8	1.6	--	2 J	1.9	1.2 J	1.5	--
Trichloroethene	--	--	2.5	2.4	2.8	2.7	2.8	3.1	3.4	--	3 J	2.6	1.6 J	3.3	3.6
Tetrachloroethene	--	--	--	--	--	--	--	--	--	8	1 J	1	0.9 J	1.2	1.1
Toluene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--	--	0.38 J	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--	--	0.44 J	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	NA	NA	0.1 J	--	--	--
Dichlorodifluoromethane	NA	--	3.9	3.8	4.7	5.2	5.7	7	8.7	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	120	15 J	73.9	--	70.1	90.3	81.4	88.7	92.7	NA	NA	NA	NA	NA	NA
Dichlorofluoromethane	150	19 J	70	66.7	76.7	97.4	80.8	161	192	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24 J	0.28 J
Inorganic Analytes [1] (ug/l)															
Barium	NA	NA	76	82	82	69	83	83	85	88.2 B	83 B	--	NA	NA	NA
Chromium	NA	NA	--	--	--	--	--	--	--	--	--	--	NA	NA	NA
Lead	NA	NA	--	--	--	--	--	--	--	--	NA	NA	NA	NA	NA
Inorganic Analytes (dissolved) (ug/l)															
Barium	90	76	78	91	93	78	85	86	96	NA	NA	NA	--	94.8 B	97.7 B
Chromium	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--
Lead	--	--	--	--	--	--	--	--	--	NA	NA	NA	--	--	--

KEY: -- = Not Detected
B = Organic qualifier indicating that this compound was also detected in the associated laboratory method blank.
B = Inorganic qualifier indicating that this analyte was found below the instrument detection limit, but above the client-required detection limit.
J = Estimated value (Organics Only).
NA = Not Analyzed

Figures

DAW | H:\A31\A3197\ACAD\FG1.DWG – June 25, 2002 – 15:15:06

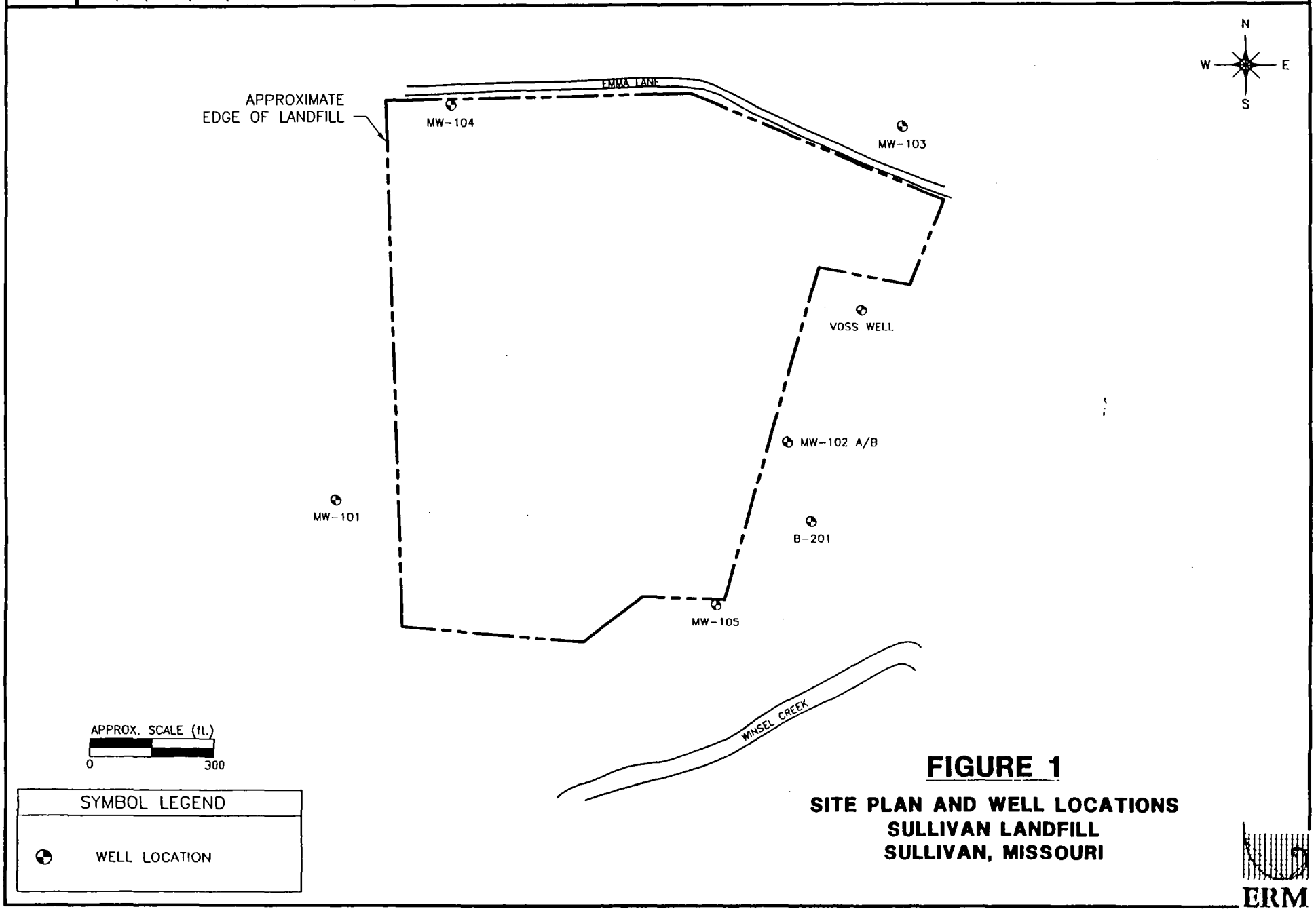
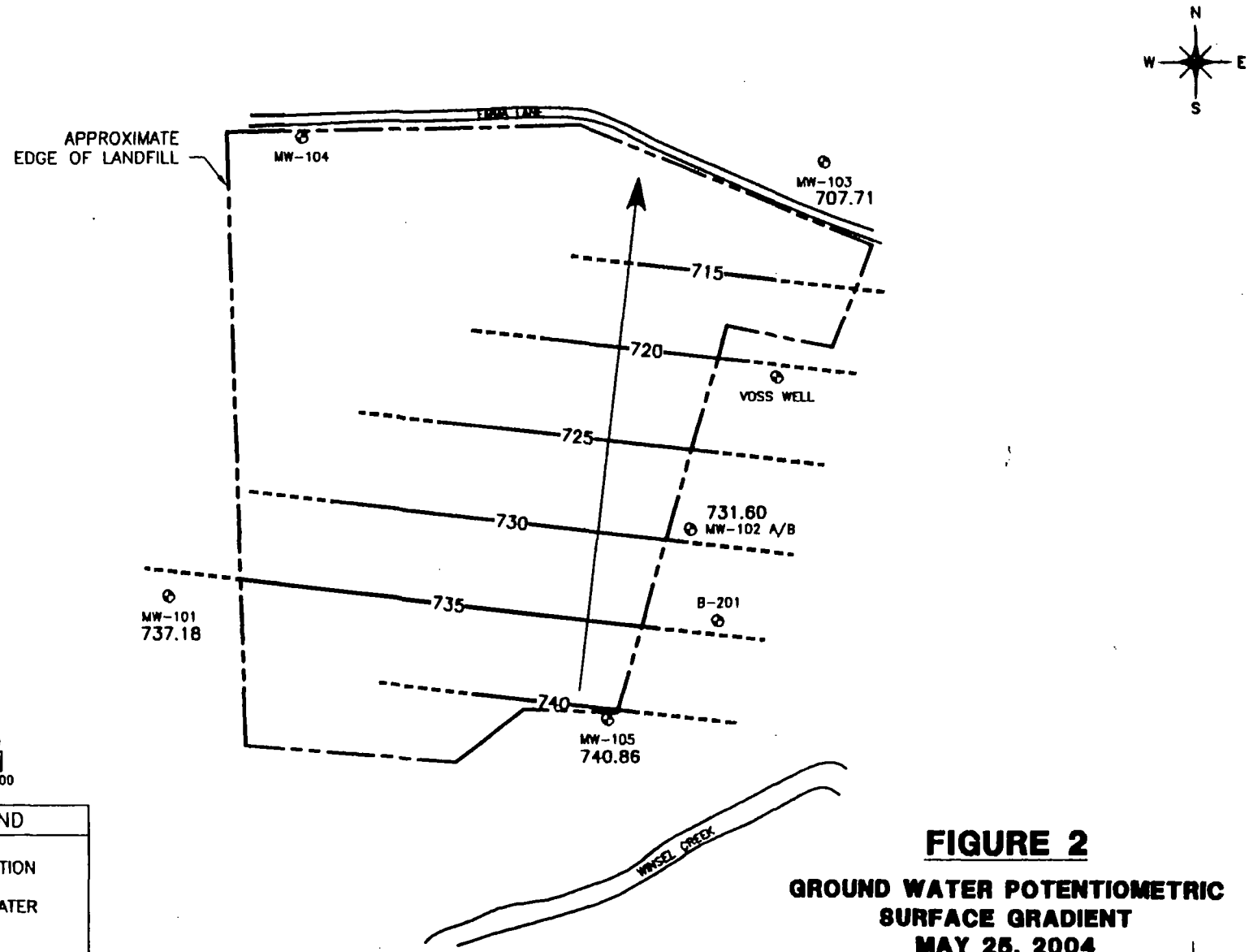


FIGURE 1

SITE PLAN AND WELL LOCATIONS
SULLIVAN LANDFILL
SULLIVAN, MISSOURI

ERM

USER: fredkr FILE: S:\trw\0015940\xxxx\acad\gwc_052504.dwg\Layout1 Tue, 10 Aug 2004 - 8:36am



SYMBOL LEGEND	
⊕	WELL LOCATION
↗	GROUND WATER GRADIENT
—725—	EQUIPOTENTIAL LINE

CONTOUR INTERVAL = 5 FT.

FIGURE 2

GROUND WATER POTENTIOMETRIC SURFACE GRADIENT
MAY 25, 2004
SULLIVAN LANDFILL
SULLIAN, MISSOURI

ERM

Appendix A

Field Data Sheets

Environmental Resources Management
Ground Water Sampling
Field Data Form

Project # 00015490 Sample I.D. MW-101 Date 5/26/2004 Time 1500

Project Description: 2004 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
DAW	ERM	None	
MDB	ERM		

Well Number MW-101 Total Depth 185 (ft) I.D. 2 (in)

Material PVC Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 149.90 Post-Purge _____ Sampling _____

Length of Water Column 35.1 Casing Volume 5.7 (gal)

Pumping Method Dedicated Bailer Sampling Method Dedicated Bailer

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
220.0	*	388	62.0	5.0
400.0	*	388	60.3	7.0
380.0	*	350	59.8	8.0

OBSERVATIONS * pH meter malfunction, condensation inside the pH meter
Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1500

Environmental Resources Management
Ground Water Sampling
Field Data Form

Project # 00015490 Sample I.D. MW-103 Date 5/25/2004 Time 1615

Project Description: 2004 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
DAW	ERM	None	
MDB	ERM		

Well Number MW-103 Total Depth 208 (ft) I.D. 2 (in)

Material PVC Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 170.75 Post-Purge _____ Sampling _____

Length of Water Column 37.25 Casing Volume 6.1 (gal)

Pumping Method Dedicated Bailer Sampling Method Dedicated Bailer

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
31.0	6.5	311	63.0	5.0
35.0	7.4	298	60.8	6.0
37.0	7.4	299	60.8	10.0
40.0	7.4	301	60.9	12.0

OBSERVATIONS Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1615

Environmental Resources Management
Ground Water Sampling
Field Data Form

Project # 00015490 Sample I.D. MW-102A Date 5/25/2004 Time 1445

Project Description: 2004 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
DAW	ERM	None	
MDB	ERM		

Well Number MW-102A Total Depth 275 (ft) I.D. 2 (in)

Material PVC Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 174.78 Post-Purge _____ Sampling _____

Length of Water Column 100.22 Casing Volume 16.3 (gal)

Pumping Method _____ Sampling Method _____

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)

OBSERVATIONS No samples collected from well, only depth to water measurement.

Environmental Resources Management
Ground Water Sampling
Field Data Form

Project # 00015490 Sample I.D. MW-102B Date 5/25/2004 Time 1315

Project Description: 2004 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
DAW	ERM	None	
MDB	ERM		

Well Number MW-102B Total Depth 210 (ft) I.D. 2 (in)

Material PVC Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 164.41 Post-Purge _____ Sampling _____

Length of Water Column 45.59 Casing Volume 7.4 (gal)

Pumping Method _____ Sampling Method _____

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)

OBSERVATIONS No samples collected from well, only depth to water measurement.

Environmental Resources Management
Ground Water Sampling
Field Data Form

Project # 00015490 Sample I.D. MW-104 Date 5/26/2004 Time 1330

Project Description: 2004 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
AJC	ERM	None	
DAW	ERM		
MDB	ERM		

Well Number MW-104 Total Depth 202 (ft) I.D. 2 (in)

Material PVC Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 170.02 Post-Purge _____ Sampling _____

Length of Water Column 31.98 Casing Volume 5.2 (gal)

Pumping Method Dedicated Bailer Sampling Method Dedicated Bailer

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
350.0	7.9	488	60.1	5
400.0	7.5	464	58.9	7
120.0	7.4	491	58.4	8
170.0	7.5	480	58.5	9
240.0	7.6	485	59.0	10

OBSERVATIONS Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1330

Environmental Resources Management
Ground Water Sampling
Field Data Form

Project # 00015490 Sample I.D. MW-105 Date 5/26/2004 Time 1030

Project Description: 2006 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
DAW	ERM	None	
MDB	ERM		

Well Number MW-105 Total Depth 177 (ft) I.D. 2 (in)

Material PVC Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 140.83 Post-Purge _____ Sampling _____

Length of Water Column 36.17 Casing Volume 5.9 (gal)

Pumping Method Dedicated Bailer Sampling Method Dedicated Bailer

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)
22.0	7.6	599	59.8	6
24.0	7.6	592	59.6	8
22.0	7.6	294	59.6	10

OBSERVATIONS Collected samples for VOCs and dissolved metals (Ba, Pb, Cr) @ 1030

Environmental Resources Management
Ground Water Sampling
Field Data Form

Project # 00015490 Sample I.D. MW-201 Date 5/26/2004 Time 1330

Project Description: 2004 Biennial Ground Water Sampling Event

Samplers:	Affiliation:	Observers:	Affiliation:
		None	

Well Number MW-201 Total Depth 20.2 (ft) I.D. 2 (in)

Material PVC Screened Interval _____ (ft)

WATER LEVEL TO TOP OF CASING (ft)

Pre-Purge 7.10 Post-Purge _____ Sampling _____

Length of Water Column 13.1 Casing Volume 2.1 (gal)

Pumping Method _____ Sampling Method _____

STABILIZATION TEST

Turbidity (NTU)	pH	Conductance (umhos/cm)	Temperature (F)	Cumulative Volume (gal)

OBSERVATIONS No samples collected from well, only depth to water measurement.

Appendix B

Laboratory Report and Chain-of-Custody Forms

METHODS SUMMARY

F4E270170

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3010A
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. A3149

TRW Sullivan Landfill

Lot #: F4E270170

Alan Cork

ERM Inc
1630 Heritage Landing Drive
Suite 100
St. Charles, MO 63303

SEVERN TRENT LABORATORIES, INC.

Marti Ward

MARTI WARD
Project Manager

June 7, 2004

ERM INC

Client Sample ID: MW-103

GC/MS Volatiles

Lot-Sample #...: F4E270170-001 **Work Order #...:** GG6N61AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	87	(85 - 117)
Dibromofluoromethane	93	(72 - 136)
1,2-Dichloroethane-d4	92	(78 - 125)
4-Bromofluorobenzene	90	(79 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

SAMPLE SUMMARY

F4E270170

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GG6N6	001	MW-103	05/25/04	16:15
GG6PJ	002	VOSS WELL	05/26/04	09:15
GG6PL	003	MW-105	05/26/04	10:30
GG6PP	004	MW-104	05/26/04	13:30
GG6PR	005	MW-101	05/26/04	15:00
GG6PV	006	TRIP BLANK	05/26/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ERM INC

Client Sample ID: VOSS WELL

GC/MS Volatiles

Lot-Sample #...: F4E270170-002 **Work Order #...:** GG6PJ1AA **Matrix.....:** WATER
Date Sampled...: 05/26/04 09:15 **Date Received..:** 05/27/04
Prep Date.....: 06/01/04 **Analysis Date..:** 06/01/04
Prep Batch #...: 4154176 **Analysis Time..:** 16:20
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,2-Dichloroethene	**0.28 J**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Acetone	ND	2.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Methylene chloride	**0.61 J**	**1.0**	**ug/L**
Carbon disulfide	ND	1.0	ug/L
1,1-Dichloroethane	**5.0**	**1.0**	**ug/L**
2-Butanone	ND	5.0	ug/L
Chloroform	**0.19 J**	**1.0**	**ug/L**
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
Trichloroethene	**3.6**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
4-Methyl-2-pentanone	**0.59 J**	**5.0**	**ug/L**
cis-1,3-Dichloropropene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	**1.1**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
Styrene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L

(Continued on next page)

ERM INC

Client Sample ID: MW-103

GC/MS Volatiles

Lot-Sample #...: F4E270170-001 **Work Order #...:** GG6N61AA **Matrix.....:** WATER
Date Sampled...: 05/25/04 16:15 **Date Received..:** 05/27/04
Prep Date.....: 06/01/04 **Analysis Date..:** 06/01/04
Prep Batch #...: 4154176 **Analysis Time..:** 15:56
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Acetone	ND	2.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Carbon disulfide	**5.4**	**1.0**	**ug/L**
1,1-Dichloroethane	**0.35 J**	**1.0**	**ug/L**
2-Butanone	ND	5.0	ug/L
Chloroform	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
Trichloroethene	**0.44 J**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
4-Methyl-2-pentanone	**0.90 J**	**5.0**	**ug/L**
cis-1,3-Dichloropropene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	**1.0**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
Styrene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L

(Continued on next page)

ERM INC

Client Sample ID: VOSS WELL

TOTAL Metals

Lot-Sample #...: F4E270170-002 **Matrix.....:** WATER
Date Sampled...: 05/26/04 09:15 **Date Received..:** 05/27/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4153569						
Barium	**97.7 B**	**200**	**ug/L**	**SW846 6010B**	**06/01-06/03/04**	**GG6PJ1AC**
		Dilution Factor: 1		Analysis Time..: 12:36		
Chromium	ND	10.0	ug/L	SW846 6010B	06/01-06/03/04	GG6PJ1AD
		Dilution Factor: 1		Analysis Time..: 12:36		
Lead	ND	5.0	ug/L	SW846 6010B	06/01-06/03/04	GG6PJ1AE
		Dilution Factor: 1		Analysis Time..: 12:36		

NOTE(S):

B Estimated result. Result is less than RL.

ERM INC

Client Sample ID: MW-103

TOTAL Metals

Lot-Sample #...: F4E270170-001 **Matrix.....:** WATER
Date Sampled...: 05/25/04 16:15 **Date Received..:** 05/27/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4153569						
Barium	**54.3 B**	**200**	**ug/L**	**SW846 6010B**	**06/01-06/03/04**	**GG6N61AC**
		Dilution Factor: 1		Analysis Time..: 12:32		
Chromium	ND	10.0	ug/L	SW846 6010B	06/01-06/03/04	GG6N61AD
		Dilution Factor: 1		Analysis Time..: 12:32		
Lead	ND	5.0	ug/L	SW846 6010B	06/01-06/03/04	GG6N61AE
		Dilution Factor: 1		Analysis Time..: 12:32		

NOTE(S):

B Estimated result. Result is less than RL.

ERM INC

Client Sample ID: MW-105

GC/MS Volatiles

Lot-Sample #...: F4E270170-003 **Work Order #...:** GG6PL1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	86	(85 - 117)
Dibromofluoromethane	91	(72 - 136)
1,2-Dichloroethane-d4	93	(78 - 125)
4-Bromofluorobenzene	86	(79 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

ERM INC

Client Sample ID: VOSS WELL

GC/MS Volatiles

Lot-Sample #...: F4E270170-002 **Work Order #...:** GG6PJ1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	86	(85 - 117)
Dibromofluoromethane	91	(72 - 136)
1,2-Dichloroethane-d4	91	(78 - 125)
4-Bromofluorobenzene	88	(79 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

ERM INC

Client Sample ID: MW-104

GC/MS Volatiles

Lot-Sample #...: F4E270170-004 **Work Order #...:** GG6PP1AA **Matrix.....:** WATER
Date Sampled...: 05/26/04 13:30 **Date Received..:** 05/27/04
Prep Date.....: 06/01/04 **Analysis Date..:** 06/01/04
Prep Batch #...: 4154176 **Analysis Time..:** 17:06
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,2-Dichloroethene	**0.51 J**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Acetone	ND	2.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Carbon disulfide	**3.5**	**1.0**	**ug/L**
1,1-Dichloroethane	**0.88 J**	**1.0**	**ug/L**
2-Butanone	ND	5.0	ug/L
Chloroform	**0.23 J**	**1.0**	**ug/L**
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
Trichloroethene	**6.6**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
4-Methyl-2-pentanone	**0.48 J**	**5.0**	**ug/L**
cis-1,3-Dichloropropene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	**1.1**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
Styrene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L

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ERM INC

Client Sample ID: MW-105

GC/MS Volatiles

Lot-Sample #...: F4E270170-003 **Work Order #...:** GG6PL1AA **Matrix.....:** WATER
Date Sampled...: 05/26/04 10:30 **Date Received..:** 05/27/04
Prep Date.....: 06/01/04 **Analysis Date..:** 06/01/04
Prep Batch #...: 4154176 **Analysis Time..:** 16:43
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,2-Dichloroethene	**0.47 J**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Acetone	ND	2.0	ug/L
1,1-Dichloroethene	**0.73 J**	**1.0**	**ug/L**
Methylene chloride	ND	1.0	ug/L
Carbon disulfide	**7.7**	**1.0**	**ug/L**
1,1-Dichloroethane	**8.6**	**1.0**	**ug/L**
2-Butanone	ND	5.0	ug/L
Chloroform	**0.35 J**	**1.0**	**ug/L**
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
1,2-Dichloroethane	**0.19 J**	**1.0**	**ug/L**
Benzene	ND	1.0	ug/L
Trichloroethene	**3.2**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
4-Methyl-2-pentanone	**0.47 J**	**5.0**	**ug/L**
cis-1,3-Dichloropropene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	**0.62 J**	**1.0**	**ug/L**
Dibromochloromethane	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
Styrene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L

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ERM INC

Client Sample ID: MW-104

TOTAL Metals

Lot-Sample #...: F4E270170-004 **Matrix.....:** WATER
Date Sampled...: 05/26/04 13:30 **Date Received..:** 05/27/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4153569						
Barium	**75.1 B**	**200**	**ug/L**	**SW846 6010B**	**06/01-06/03/04**	**GG6PP1AC**
		Dilution Factor: 1		Analysis Time..: 12:45		
Chromium	ND	10.0	ug/L	SW846 6010B	06/01-06/03/04	GG6PP1AD
		Dilution Factor: 1		Analysis Time..: 12:45		
Lead	ND	5.0	ug/L	SW846 6010B	06/01-06/03/04	GG6PP1AE
		Dilution Factor: 1		Analysis Time..: 12:45		

NOTE(S):

B Estimated result. Result is less than RL.

ERM INC

Client Sample ID: MW-105

TOTAL Metals

Lot-Sample #...: F4E270170-003 **Matrix.....:** WATER
Date Sampled...: 05/26/04 10:30 **Date Received..:** 05/27/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4153569						
Barium	**119 B**	**200**	**ug/L**	**SW846 6010B**	**06/01-06/03/04**	**GG6PL1AC**
		Dilution Factor: 1		Analysis Time..: 12:41		
Chromium	ND	10.0	ug/L	SW846 6010B	06/01-06/03/04	GG6PL1AD
		Dilution Factor: 1		Analysis Time..: 12:41		
Lead	ND	5.0	ug/L	SW846 6010B	06/01-06/03/04	GG6PL1AE
		Dilution Factor: 1		Analysis Time..: 12:41		

NOTE(S):

B Estimated result. Result is less than RL.

ERM INC

Client Sample ID: MW-101

GC/MS Volatiles

Lot-Sample #...: F4E270170-005 **Work Order #...:** GG6PR1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	87	(85 - 117)
Dibromofluoromethane	91	(72 - 136)
1,2-Dichloroethane-d4	91	(78 - 125)
4-Bromofluorobenzene	86	(79 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

ERM INC

Client Sample ID: MW-104

GC/MS Volatiles

Lot-Sample #...: F4E270170-004 **Work Order #...:** GG6PP1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	86	(85 - 117)
Dibromofluoromethane	91	(72 - 136)
1,2-Dichloroethane-d4	92	(78 - 125)
4-Bromofluorobenzene	86	(79 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

ERM INC

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: F4E270170-006 **Work Order #...:** GG6PV1AA **Matrix.....:** WATER
Date Sampled...: 05/26/04 **Date Received..:** 05/27/04
Prep Date.....: 06/01/04 **Analysis Date..:** 06/01/04
Prep Batch #...: 4154176 **Analysis Time..:** 17:53
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Acetone	**4.4**	**2.0**	**ug/L**
1,1-Dichloroethene	ND	1.0	ug/L
Methylene chloride	**1.5**	**1.0**	**ug/L**
Carbon disulfide	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
Chloroform	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
4-Methyl-2-pentanone	**0.40 J**	**5.0**	**ug/L**
cis-1,3-Dichloropropene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
Styrene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L

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ERM INC

Client Sample ID: MW-101

GC/MS Volatiles

Lot-Sample #...: F4E270170-005 **Work Order #...:** GG6PR1AA **Matrix.....:** WATER
Date Sampled...: 05/26/04 15:00 **Date Received..:** 05/27/04
Prep Date.....: 06/01/04 **Analysis Date..:** 06/01/04
Prep Batch #...: 4154176 **Analysis Time..:** 17:30
Dilution Factor: 1

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
1,2,4-Trichloro-benzene	ND	1.0	ug/L
Chloromethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Acetone	ND	2.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
Chloroform	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
Trichloroethene	**1.4**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
4-Methyl-2-pentanone	**0.41 J**	**5.0**	**ug/L**
cis-1,3-Dichloropropene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L
Styrene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F4E270170 **Work Order #...:** GHFF21AA **Matrix.....:** WATER
MB Lot-Sample #: F4F020000-176

Prep Date.....: 06/01/04 **Analysis Time..:** 13:37
Analysis Date..: 06/01/04 **Prep Batch #...:** 4154176
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	**0.30 J**	**1.0**	**ug/L**	**SW846 8260B**
Chloromethane	**0.65 J**	**2.0**	**ug/L**	**SW846 8260B**
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Bromomethane	**2.0**	**2.0**	**ug/L**	**SW846 8260B**
Chloroethane	ND	2.0	ug/L	SW846 8260B
Acetone	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B

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ERM INC

Client Sample ID: MW-101

TOTAL Metals

Lot-Sample #...: F4E270170-005 -- **Matrix.....:** WATER
Date Sampled...: 05/26/04 15:00 **Date Received..:** 05/27/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4153569						
Barium	57.7 B	**200**	**ug/L**	**SW846 6010B**	**06/01-06/03/04**	**GG6PR1AC**
		Dilution Factor: 1		Analysis Time..: 12:49		
Chromium	ND	10.0	ug/L	SW846 6010B	06/01-06/03/04	GG6PR1AD
		Dilution Factor: 1		Analysis Time..: 12:49		
Lead	ND	5.0	ug/L	SW846 6010B	06/01-06/03/04	GG6PR1AE
		Dilution Factor: 1		Analysis Time..: 12:49		

NOTE(S):

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F4E270170 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F4F010000-569 **Prep Batch #...:** 4153569						
Barium	ND	200	ug/L	SW846 6010B	06/01-06/03/04	GHEQN1AE
		Dilution Factor: 1				
		Analysis Time..: 11:35				
Chromium	ND	10.0	ug/L	SW846 6010B	06/01-06/03/04	GHEQN1AJ
		Dilution Factor: 1				
		Analysis Time..: 11:35				
Lead	ND	5.0	ug/L	SW846 6010B	06/01-06/03/04	GHEQN1AN
		Dilution Factor: 1				
		Analysis Time..: 11:35				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

ERM INC

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: F4E270170-006 **Work Order #...:** GG6PV1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	87	(85 - 117)
Dibromofluoromethane	91	(72 - 136)
1,2-Dichloroethane-d4	88	(78 - 125)
4-Bromofluorobenzene	85	(79 - 120)

NOTE(S):

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F4E270170 **Work Order #...:** GHFF21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: F4F020000-176 GHFF21AD-LCSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
4-Methyl-2-pentanone	94	(52 - 144)			SW846 8260B
	98	(52 - 144)	4.0	(0-20)	SW846 8260B
cis-1,3-Dichloropropene	105	(77 - 128)			SW846 8260B
	107	(77 - 128)	2.0	(0-20)	SW846 8260B
Toluene	97	(85 - 120)			SW846 8260B
	98	(85 - 120)	0.59	(0-20)	SW846 8260B
trans-1,3-Dichloropropene	113	(85 - 140)			SW846 8260B
	115	(85 - 140)	1.4	(0-20)	SW846 8260B
1,1,2-Trichloroethane	99	(79 - 124)			SW846 8260B
	102	(79 - 124)	3.2	(0-20)	SW846 8260B
2-Hexanone	99	(46 - 145)			SW846 8260B
	104	(46 - 145)	5.7	(0-20)	SW846 8260B
Tetrachloroethene	93	(73 - 122)			SW846 8260B
	95	(73 - 122)	2.0	(0-20)	SW846 8260B
Dibromochloromethane	114	(78 - 138)			SW846 8260B
	116	(78 - 138)	1.4	(0-20)	SW846 8260B
Chlorobenzene	99	(85 - 114)			SW846 8260B
	99	(85 - 114)	0.050	(0-20)	SW846 8260B
Ethylbenzene	97	(85 - 116)			SW846 8260B
	98	(85 - 116)	1.1	(0-20)	SW846 8260B
Styrene	101	(85 - 119)			SW846 8260B
	102	(85 - 119)	0.68	(0-20)	SW846 8260B
Bromoform	112	(63 - 144)			SW846 8260B
	113	(63 - 144)	0.88	(0-20)	SW846 8260B
1,1,2,2-Tetrachloroethane	102	(74 - 135)			SW846 8260B
	106	(74 - 135)	3.7	(0-20)	SW846 8260B
1,2-Dichlorob nzene	97	(85 - 116)			SW846 8260B
	96	(85 - 116)	0.91	(0-20)	SW846 8260B
1,3-Dichlorobenzene	95	(85 - 116)			SW846 8260B
	94	(85 - 116)	0.82	(0-20)	SW846 8260B
1,4-Dichlorobenzene	92	(85 - 112)			SW846 8260B
	93	(85 - 112)	0.40	(0-20)	SW846 8260B
m-Xylene & p-Xylene	99	(85 - 118)			SW846 8260B
	100	(85 - 118)	1.0	(0-20)	SW846 8260B
o-Xylene	102	(85 - 120)			SW846 8260B
	101	(85 - 120)	0.78	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	89	(85 - 117)
	88	(85 - 117)
Dibromofluoromethane	91	(76 - 131)
	93	(76 - 131)
1,2-Dichloroethane-d4	87	(76 - 125)
	91	(76 - 125)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F4E270170 **Work Order #...:** GHFF21AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	88	(85 - 117)
Dibromofluoromethane	89	(72 - 136)
1,2-Dichloroethane-d4	87	(78 - 125)
4-Bromofluorobenzene	95	(79 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F4E270170 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#:	F4F010000-569	**Prep Batch #...:** 4153569			
Barium	101	(80 - 120)	SW846 6010B	06/01-06/03/04	GHEQN1C9
		Dilution Factor: 1	Analysis Time..: 11:39		
Chromium	102	(80 - 120)	SW846 6010B	06/01-06/03/04	GHEQN1DE
		Dilution Factor: 1	Analysis Time..: 11:39		
Lead	102	(80 - 120)	SW846 6010B	06/01-06/03/04	GHEQN1DJ
		Dilution Factor: 1	Analysis Time..: 11:39		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F4E270170 **Work Order #...:** GHFF21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: F4F020000-176 GHFF21AD-LCSD
Prep Date.....: 06/01/04 **Analysis Date..:** 06/01/04
Prep Batch #...: 4154176 **Analysis Time..:** 12:50
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Chloromethane	68	(10 - 150)			SW846 8260B
	66	(10 - 150)	3.0	(0-20)	SW846 8260B
Vinyl chloride	88	(10 - 150)			SW846 8260B
	91	(10 - 150)	3.4	(0-20)	SW846 8260B
Bromomethane	63	(10 - 150)			SW846 8260B
	72	(10 - 150)	14	(0-20)	SW846 8260B
Chloroethane	345 a	(37 - 136)			SW846 8260B
	334 a	(37 - 136)	3.2	(0-20)	SW846 8260B
Acetone	95	(25 - 150)			SW846 8260B
	104	(25 - 150)	9.0	(0-20)	SW846 8260B
1,1-Dichloroethene	86	(57 - 128)			SW846 8260B
	92	(57 - 128)	6.6	(0-20)	SW846 8260B
Methylene chloride	90	(54 - 119)			SW846 8260B
	91	(54 - 119)	1.2	(0-20)	SW846 8260B
Carbon disulfide	104	(44 - 150)			SW846 8260B
	108	(44 - 150)	4.2	(0-20)	SW846 8260B
1,1-Dichloroethane	100	(83 - 118)			SW846 8260B
	102	(83 - 118)	2.2	(0-20)	SW846 8260B
2-Butanone	111	(51 - 143)			SW846 8260B
	112	(51 - 143)	0.98	(0-20)	SW846 8260B
Chloroform	101	(81 - 120)			SW846 8260B
	102	(81 - 120)	1.2	(0-20)	SW846 8260B
1,1,1-Trichloroethane	96	(79 - 120)			SW846 8260B
	99	(79 - 120)	3.7	(0-20)	SW846 8260B
Carbon tetrachloride	98	(75 - 126)			SW846 8260B
	104	(75 - 126)	6.5	(0-20)	SW846 8260B
1,2-Dichloroethane	103	(73 - 126)			SW846 8260B
	103	(73 - 126)	0.19	(0-20)	SW846 8260B
Benzene	97	(85 - 114)			SW846 8260B
	99	(85 - 114)	2.0	(0-20)	SW846 8260B
Trichloroethene	96	(77 - 117)			SW846 8260B
	97	(77 - 117)	1.6	(0-20)	SW846 8260B
1,2-Dichloropropane	102	(79 - 128)			SW846 8260B
	102	(79 - 128)	0.0	(0-20)	SW846 8260B
Bromodichloromethane	102	(77 - 126)			SW846 8260B
	105	(77 - 126)	2.3	(0-20)	SW846 8260B
1,2-Dichloroethene (total)	100	(83 - 121)			SW846 8260B
	103	(83 - 121)	2.6	(0-20)	SW846 8260B

(Continued on next page)

F4E270170

CLIENT ANALYSIS SUMMARY

Storage Loc: VE4

Project Manager: MAW
Quote #: 47683
SDG:
Project: A3149
TRW Sullivan Landfill
PO#:
Report to: Alan Cork
Client: 8011 ERM INC
#SMPS in LOT: 6

Date Received: 2004-05-27
Analytical Due Date: 2004-06-04
Report Due Date: 2004-06-05
Report Type: B Standard Report
EDD Code: 00

metals were filtered in the field Detection limits need to be below USEPA/MDNR Maximum Contaminant Levels for Drinking Water
Report J values

6	TRIP BLANK	2004-05-26 / 0	GG6PV	WATER

SAMPLE COMMENTS:

XX	QK	SW846 8260B	Volatile Organics, GC/MS (8260B)	25	PURGE AND TRAP - 25 mL purge (Waters)	01	STANDARD TEST SET	PROT: A	WRK LOC	06	TIC: N

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: F4E270170 **Work Order #...:** GHFF21AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: F4F020000-176 GHFF21AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	80 *	(82 - 121)
	80 *	(82 - 121)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

* Surrogate recovery is outside stated control limits.

LOT # F4E270170

TL ST. LOUIS

Chain of Custody Record

CUR 1250

STL-4124 (0901)

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

Client: ERM, Inc.	Project Manager: Alan Cork	Date: 5/26/04	Chain of Custody Number: 110125
Address: 1630 Heritage Landing Dr. STE 100	Telephone Number (Area Code)/Fax Number: (636) 928-0300 / 928-2050	Lab Number:	Page 1 of 1
City: St. Charles; State: MO; Zip Code: 63303	Site Contact: Dan Wilkens; Lab Contact: Marti Ward		
Project Name and Location (State): TRW - Sullivan Landfill	Carrier/Waybill Number: Hand Delivery to Lab		
Contract/Purchase Order/Quote No.: 0015940 QUOTE# 47683			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): 8260B VOCs	Diss. Ba	Diss. Pb	Diss. Cr	Special Instructions/ Conditions of Receipt
MW-103	5/25/04	1615		X			1			2			X	X	X	X	500P, 2x40mL
VOSS WELL	5/26/04	0915		X			1			2			X	X	X	X	↓
MW-105	5/26/04	1030		X			1			2			X	X	X	X	↓
MW-104	5/26/04	1330		X			1			2			X	X	X	X	↓
MW-101	5/26/04	1500		X			1			2			X	X	X	X	↓
TRIP BLANK										2			X				2x40mL

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	5/27/04	0935	1. Received By: E Wilson	052704	0935
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Dissolved Metals Analyses have been field filtered / Analyze by Method SW 6010B

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

F4E270170 CLIENT ANALYSIS SUMMARY

Storage Loc: VE4,METS
Date Received: 2004-05-27
Analytical Due Date: 2004-06-04
Report Due Date: 2004-06-05
Report Type: B Standard Report
EDD Code: 00

Project Manager: MAW
Quote #: 47683 SDG:
Project: A3149 TRW Sullivan Landfill
PO#:
Report to: Alan Cork
Client: 8011 ERM INC
#SMPS in LOT: 6

metals were filtered in the field Detection limits need to be below USEPA/MDNR Maximum Contaminant Levels for Drinking Water
Report J values

SAMPLE #	CLIENT SAMPLE ID	DATE/TIME SAMPLED	WORKORDER	!
1	MW-103	2004-05-25 / 1615	GG6N6	WATER

SAMPLE COMMENTS: METS WERE FILTERED IN THE FIELD AND NEE TO BE PRESERVED

CR	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
PB	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
BA	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	QK	SW846 8260B	Volatile Organics, GC/MS (8260B)	25	PURGE AND TRAP - 25 mL purge (Waters)	01	STANDARD TEST SET	PROT: A	WRK LOC	06	TIC: N	

SAMPLE #	CLIENT SAMPLE ID	DATE/TIME SAMPLED	WORKORDER	!
2	VOSS WELL	2004-05-26 / 915	GG6PJ	WATER

SAMPLE COMMENTS: METS WERE FILTERED IN THE FIELD AND NEE TO BE PRESERVED

BA	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
CR	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
PB	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	QK	SW846 8260B	Volatile Organics, GC/MS (8260B)	25	PURGE AND TRAP - 25 mL purge (Waters)	01	STANDARD TEST SET	PROT: A	WRK LOC	06	TIC: N	

SAMPLE #	CLIENT SAMPLE ID	DATE/TIME SAMPLED	WORKORDER	!
3	MW-105	2004-05-26 / 1030	GG6PL	WATER

SAMPLE COMMENTS: METS WERE FILTERED IN THE FIELD AND NEE TO BE PRESERVED

PB	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
BA	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
CR	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	QK	SW846 8260B	Volatile Organics, GC/MS (8260B)	25	PURGE AND TRAP - 25 mL purge (Waters)	01	STANDARD TEST SET	PROT: A	WRK LOC	06	TIC: N	

SAMPLE #	CLIENT SAMPLE ID	DATE/TIME SAMPLED	WORKORDER	!
4	MW-104	2004-05-26 / 1330	GG6PP	WATER

SAMPLE COMMENTS: METS WERE FILTERED IN THE FIELD AND NEE TO BE PRESERVED

BA	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
CR	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
PB	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	QK	SW846 8260B	Volatile Organics, GC/MS (8260B)	25	PURGE AND TRAP - 25 mL purge (Waters)	01	STANDARD TEST SET	PROT: A	WRK LOC	06	TIC: N	

SAMPLE #	CLIENT SAMPLE ID	DATE/TIME SAMPLED	WORKORDER	!
5	MW-101	2004-05-26 / 1500	GG6PR	WATER

SAMPLE COMMENTS: METS WERE FILTERED IN THE FIELD AND NEE TO BE PRESERVED

BA	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
CR	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
PB	QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	05	METALS, TOTAL - Waters	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	QK	SW846 8260B	Volatile Organics, GC/MS (8260B)	25	PURGE AND TRAP - 25 mL purge (Waters)	01	STANDARD TEST SET	PROT: A	WRK LOC	06	TIC: N	

SAMPLE #	CLIENT SAMPLE ID	DATE/TIME SAMPLED	WORKORDER	!

F4E270170

CLIENT COMMENTS SUMMARY

Storage Loc: VE4.METS
Date Received: 2004-05-27
Analytical Due Date: 2004-06-04
Report Due Date: 2004-06-05
Report Type: B Standard Report
EDD Code: 00

Project Manager: MAW
Quote #: 47683 SDG:
Project: A3149
TRW Sullivan Landfill
PO#:
Report to: Alan Cork
Client: 8011 ERM INC
#SMPS in LOT: 6

metals were filtered in the field
Detection limits need to be below USEPA/MDNR Maximum
Contaminant Levels for Drinking Water

Report J values

N

SEVERN TRENT STL

Lot No: F4E270170

Condition Upon Receipt Form
St. Louis Laboratory

Client: ERM
Date: 052704 Time: ~~0900~~ 0935 EWW
Quote No: 476683
Initiated by: EWW
Shipper/No: Client
COC/RFA Numbers: 110125

Condition/Variance (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	Y N	Sample received in undamaged condition?	7.	Y N	Sample received with Chain of Custody?
2.	Y N	Sample received within 4-C ± 2-C* ?	8.	Y N	Chain of Custody matches sample IDs on containers?
		Record 6°	9.	Y N N/A	Custody seal received intact on cooler.?
3.	Y N N/A	Sample received with proper pH [1]?	10.	Y N N/A	Custody seal tamper evident on cooler.?
4.	Y N	If N/A - Was pH taken by original STL lab?	11.	Y N N/A	Custody seal on bottles received intact?
5.	Y N	Sample received in proper containers?	12.	Y N N/A	Custody seal tamper evident on bottles?
6.	Y N	Sample volume sufficient for analysis?	13.	Y N	Was CUR (equivalent) rec' d from original STL lab?

* Temperature Variance Does Not Affect the Following Analyses: _____

[1]For DOE-AL (Pantex, LANL, Sandia) sites, verify pH all containers received, except for VOA, TOX, and soils.

Notes:

Corrective Action:

☐ Client's Name: _____ Informed by: _____ By: _____

☐ Sample(s) processed "as is". _____

☐ Sample(s) on hold until: _____ If released, notify: _____

Project Management Review: MST Date: 5-28-04

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIALS AND THE DATE NEXT TO THAT ITEM

Appendix C

Landfill Inspection Reports
May 2002 - May 2004

SULLIVAN WWTP
RAINFALL RECORDS

MAY 2002

7 - 1.00"
8 - .25"
12 - 1.7"
17 - .6"
28 - .4"

JUNE 2002

5 - .3"
10 - .8"
11 - 1.1"
25 - .7"

JULY 2002

3 - .9"
5 - .15"
15 - .3"
23 - .4"

AUGUST 2002

6 - .3"
12 - .15"
13 - .8"
18 - .8"
29 - .7"

SEPT 2002

19 - 2.3"
20 - .2"

OCT 2002

25 - 1.9"
28 - .2"
29 - 1.4"
31 - .1"

NOV 2002

6 - .1"
14 - .3"

DEC 2002

4 - 1" SNOW
19 - 1.5"

JAN 2003

2 - .3"
3 - TRACE

FEB 2003

7 - .4" R ~1" SNOW
14 - .7"
18 - .3"
19 - .5"
26 - SNOW

MARCH 2003

13 - .6"
19 - 1.1"
25 - .4"

APRIL 2003

9 - .2"
16 - .8"
21 - .3"
24 - 1.00"
25 - .5"
28 - .5"

MAY 2003

1 - .3"
4 - 2.5"
6 - 1.2"
8 - .2"
12 - .7"
19 - .2"
20 - .1"
27 - .7"

JUNE 2003

10 - 1.7"
13 - .7"
26 - 2.00"
27 - TRACE

JULY 2003

9 - .3"
18 - .35"
21 - .1"

Sullivan WKTP
Rainfall Records

Aug 2003

3 - 1.5"
29 - .7"
31 - .8"

Sept 2003

1 - 2.5"
2 - .5"
12 - .2"
13 - .3"
21 - .3"
25 - .8"
30 - .4"

Oct 2003

9 - .7"
14 - .35"
16 - .9"
28 - .1"
29 - .4"

Nov 2003

1 - .8"
5 - .5"
14 - .3"
16 - 3.00"
17 - .3"
22 - .8"
24 - .3"

Dec 2003

3 - .2"
6 - .7"
13 - .5"
18 - .3"
20 .5"

Jan 2004

2 - .1"
4 - 1.5"
19 - 1.0"
27 - 1" Snow
29 - .5"

Feb 2004

5 - Snow

March 2004

3 - 1.3"
4 - 1.3"
15 - .3"
17 - .3"
23 - .2"
25 - .5"
26 - 1.3"
28 - .7"
31 - .3"

April 2004

13 - .1"
20 - .5"
22 - .5"
23 - .3"
24 - 1.3"
29 - 1.6"
30 - .3"

SULLIVAN LANDFILL

Inspection Checklist

Date: 5-10-2002 Weather Conditions: Cloudy

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	X
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	9-2001

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: [signature]

W0029544.080

8940-02

5-10-2002 SULLIVAN LANDFILL April Rain Fall

DATE	LANDFILL	RAINFALL
1		
2		
3		
4		
5		
6		
7		.7
8		.4
9		
10		
11		
12		
13		
14		
15		
16		.2
17		
18		
19		
20		
21		2.6
22		
23		
24		
25		
26		
27		
28		1.0
29		
30		
31		

SULLIVAN LANDFILL

Inspection Checklist

Date: 7-2-2002 Weather Conditions: Clear Hot

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	no
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	6-2002 ~~6-2001~~

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	2-B
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	Mud Hay Ramp from Property

10. Describe any specific actions taken to address concerns listed above:

Put ½ Bottle of Mole Patrol at Surface Run

Inspected by: Bob Hahn

W0029544.080

8940-02

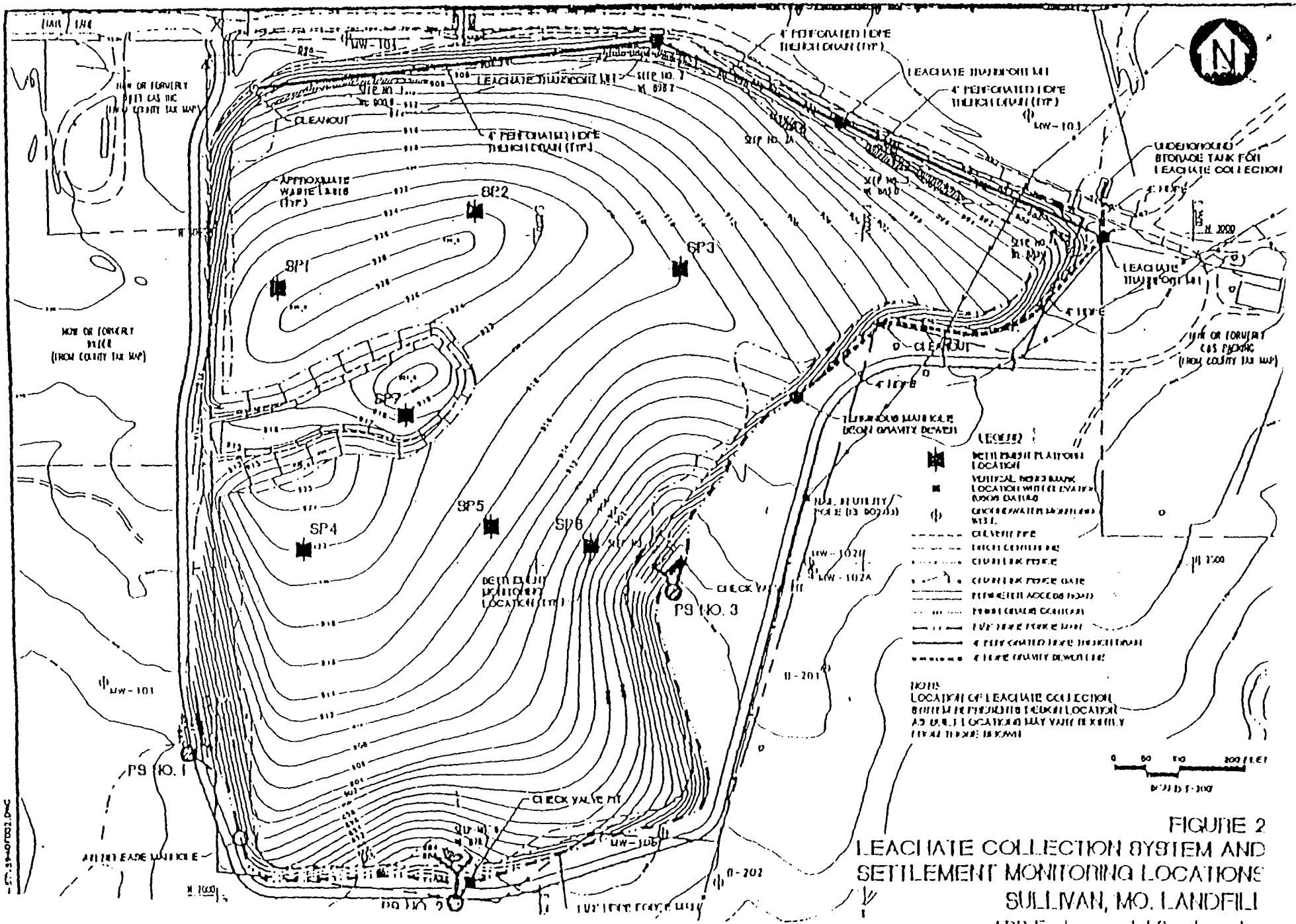

FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

SULLIVAN LANDFILL

DATE	LANDFILL 7-2-2002	RAINFALL
		.5
0		.8
1		1.1
2		
3		
4		
5		
6		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		.7
27		
28		
29		
30		
31		

SULLIVAN LANDFILL

Inspection Checklist

Date: 9-4-2002 Weather Conditions: Clear

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	X
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	6-2002

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	Hay Has Still Not Been Removed From Cap at least 50 Bales on Cap & Another 200 on Side off Cap All Need to Be Removed

10. Describe any specific actions taken to address concerns listed above: ASAP

Inspected by: [signature]

8940-02

W0029544.080

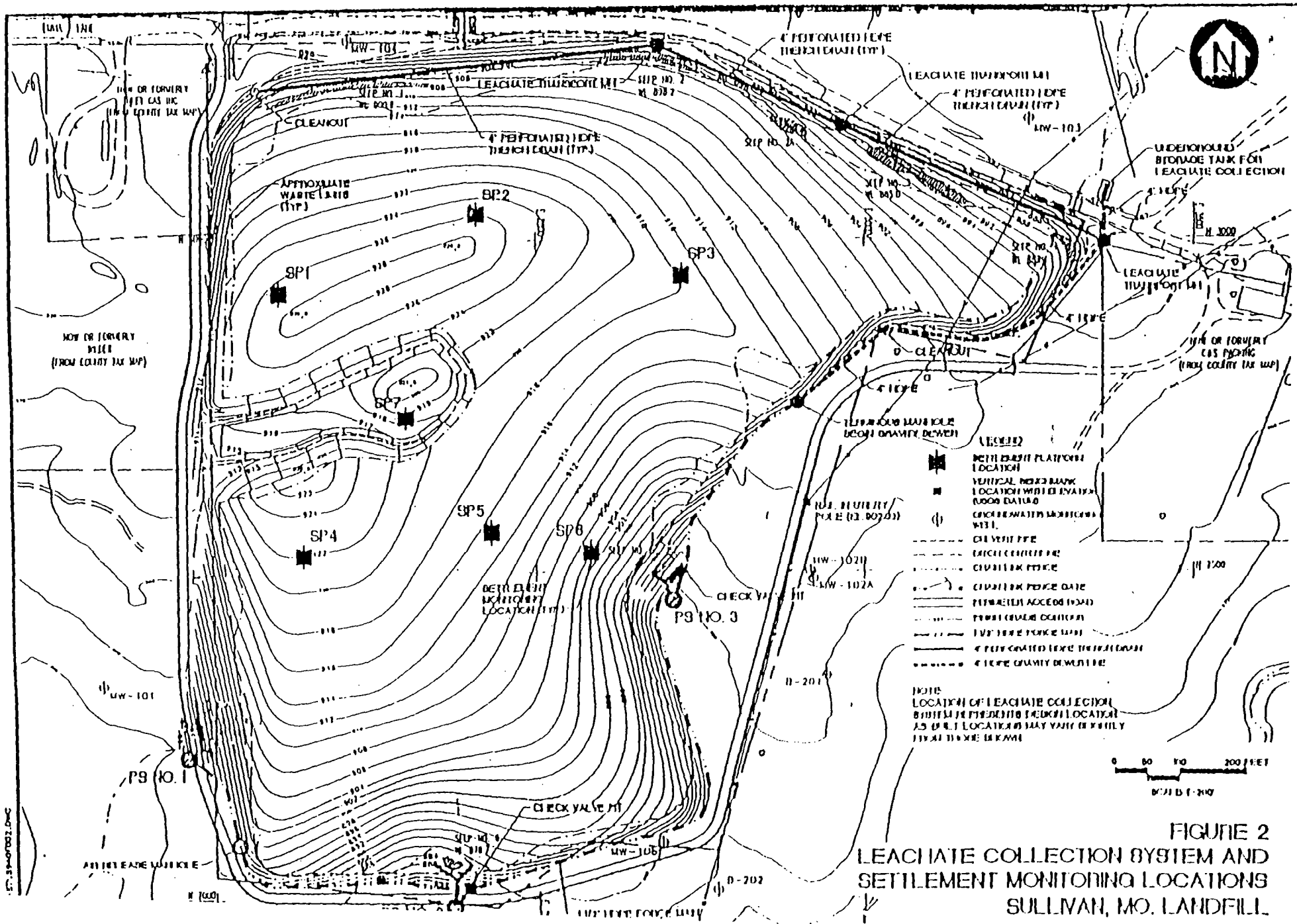

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL
ARCO Environmental Services, Inc.

SULLIVAN LANDFILL 9-4-2002

DATE	LANDFILL	RAINFALL
		.1
0		
1		
2		.15
3		.8
4		
5		
6		
7		
8		
9		.8
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		

SULLIVAN LANDFILL

Inspection Checklist

Date: 10-2-2002 Weather Conditions: Clear

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	✓
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	6-2-002

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Will Have To Find A Way To Get Rid Of Ground Hogs 2 Large on Side Cop Found 1 of Them Hole Did Not Find The Other Hole

Inspected by: Bob Hale

8940-02

W0029544.080

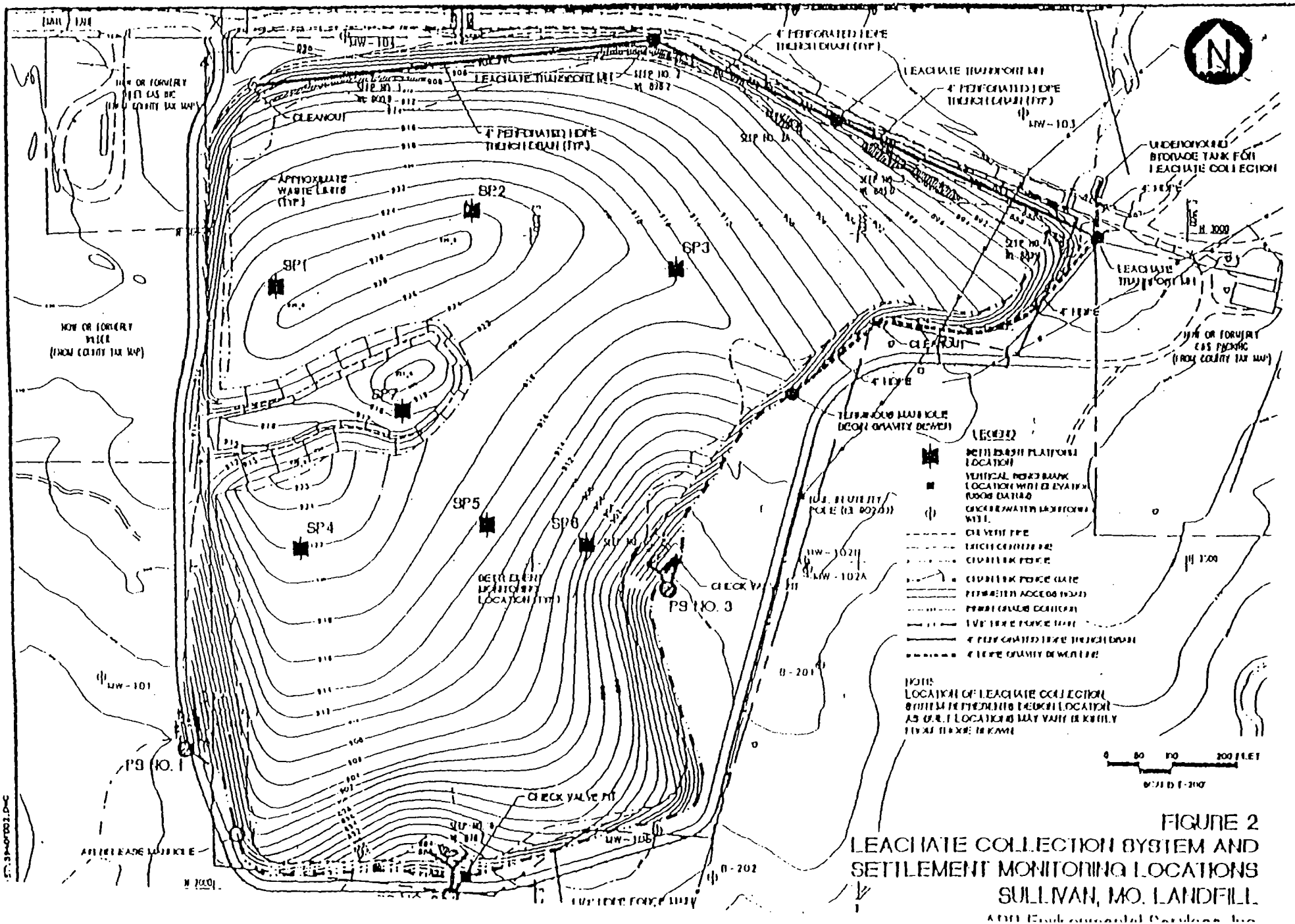

FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

OCT-2-2002

SULLIVAN LANDFILL

DATE	LANDFILL	RAINFALL
0		
1		
2		
13		
14		
15		
16		
17		
18		
19		2.3
20		.7
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		

SULLIVAN LANDFILL

Inspection Checklist

Date: 11-5-2002 Weather Conditions: Cloudy & Rain

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	6-2002

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: Bob Hah

W0029544.080

8940-02

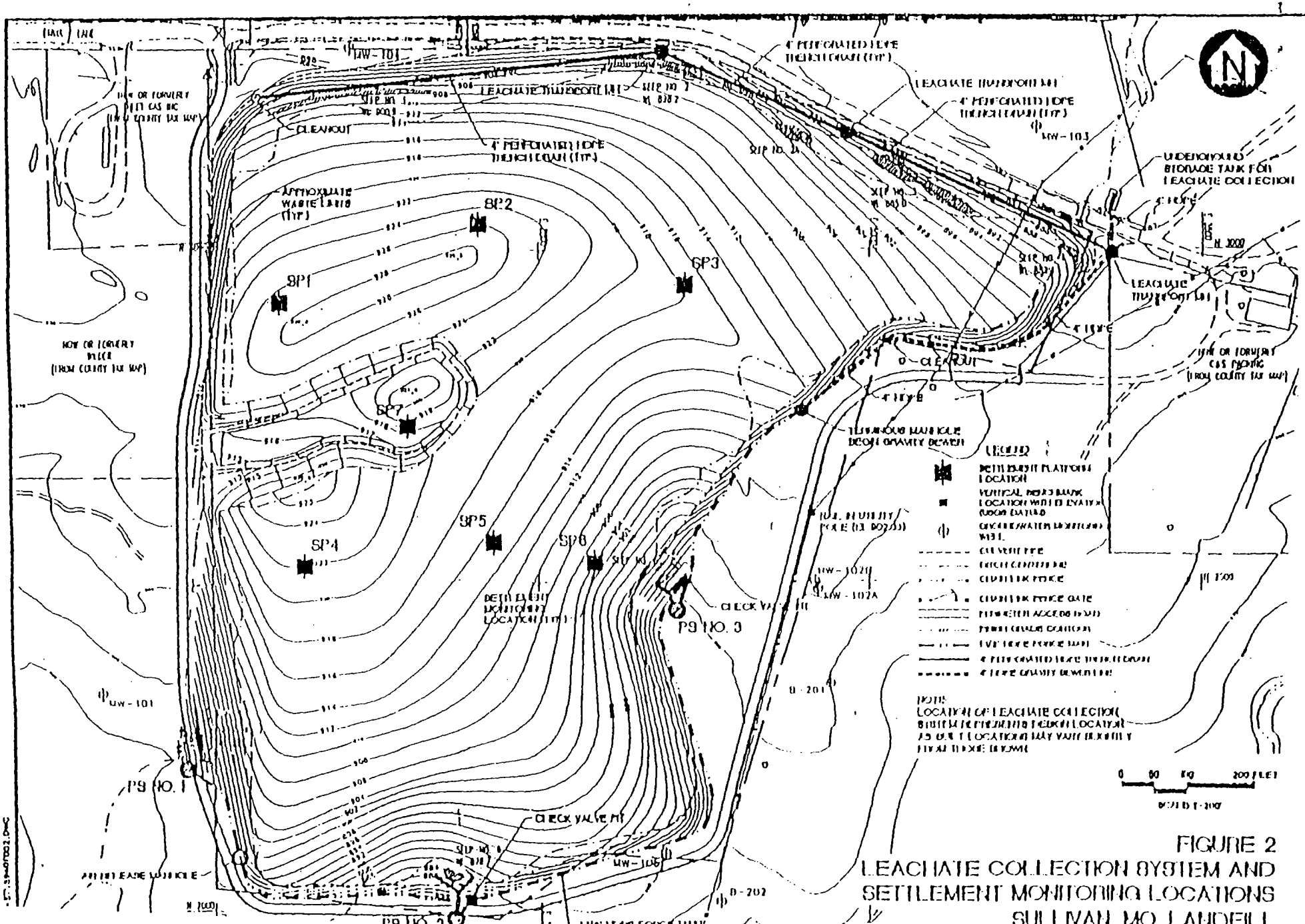

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

ABB Environmental Services, Inc.

Nov-5

SULLIVAN LANDFILL

ATE	LANDFILL	RAINFALL
0		
1		
2		
3		
4		
5		
6		
7		
18		
19		
20		
21		
22		
23		
24		1.9
25		
26		.2
27		
28		
29		1.4
30		
31		.1

SULLIVAN LANDFILL

Inspection Checklist

Date: DEC 2 - 2002 Weather Conditions: Clear

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	6 - 2002

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Need to Remove Tree That is About to Fall on Fence ASAP

Inspected by: [illegible] 12-2-2002

W0029544.080

8940-02

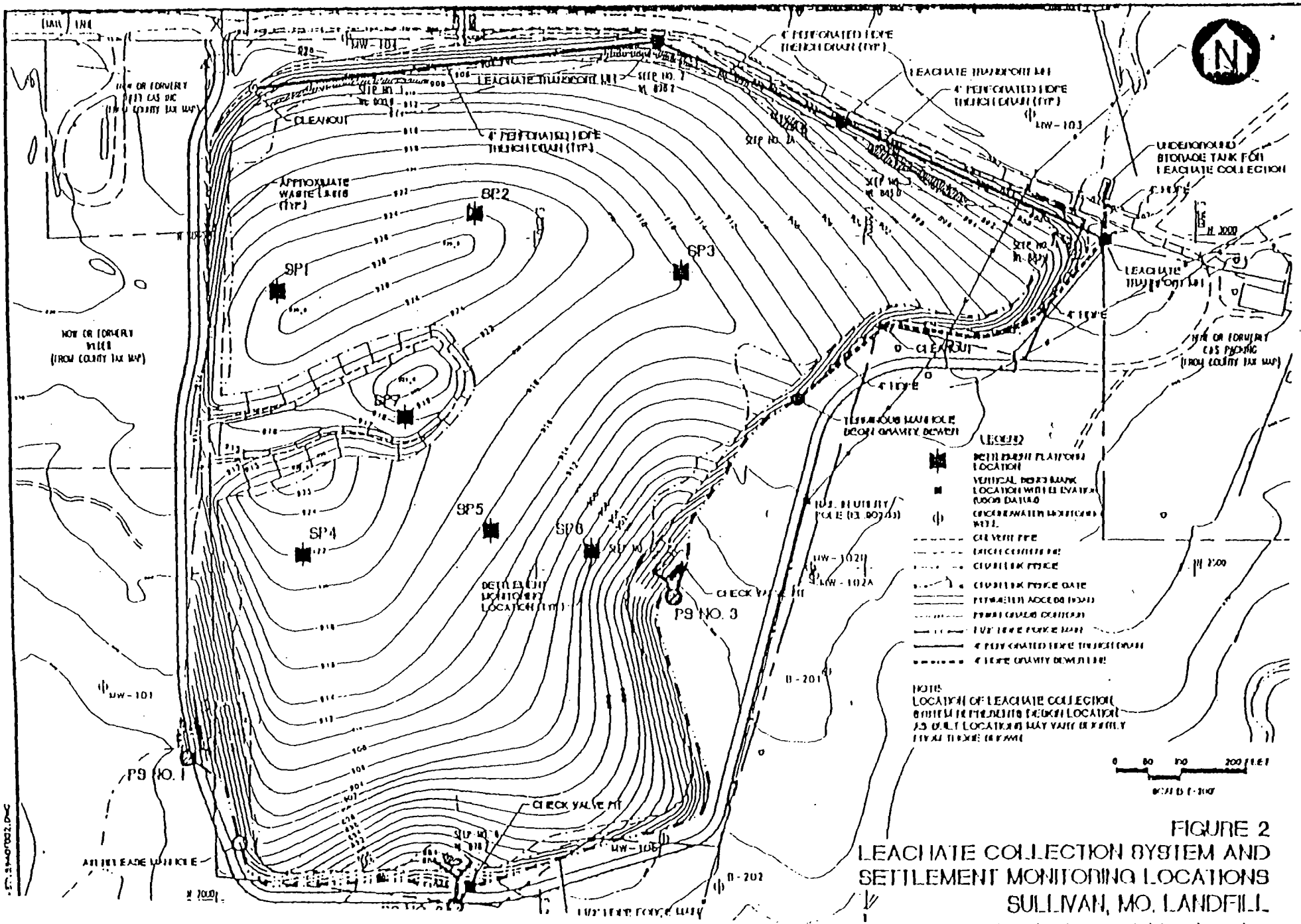

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

ARCO Environmental Services, Inc.

DEC 2002

SULLIVAN LANDFILL

DATE	LANDFILL	RAINFALL
		.2
		.1
0		
1		
2		
3		
4		.3
5		
6		
7		
8		
9		
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
30		
31		

SULLIVAN LANDFILL

Inspection Checklist

Date: 1-6-2003 Weather Conditions: Cloudy

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	6-2002

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	ok
6. Gas Vent Risers (16) Undisturbed	ok
7. Perimeter Drain Outlets Clear	ok
8. Groundwater Monitoring Wells (9) Undisturbed	ok
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: Bob [illegible]

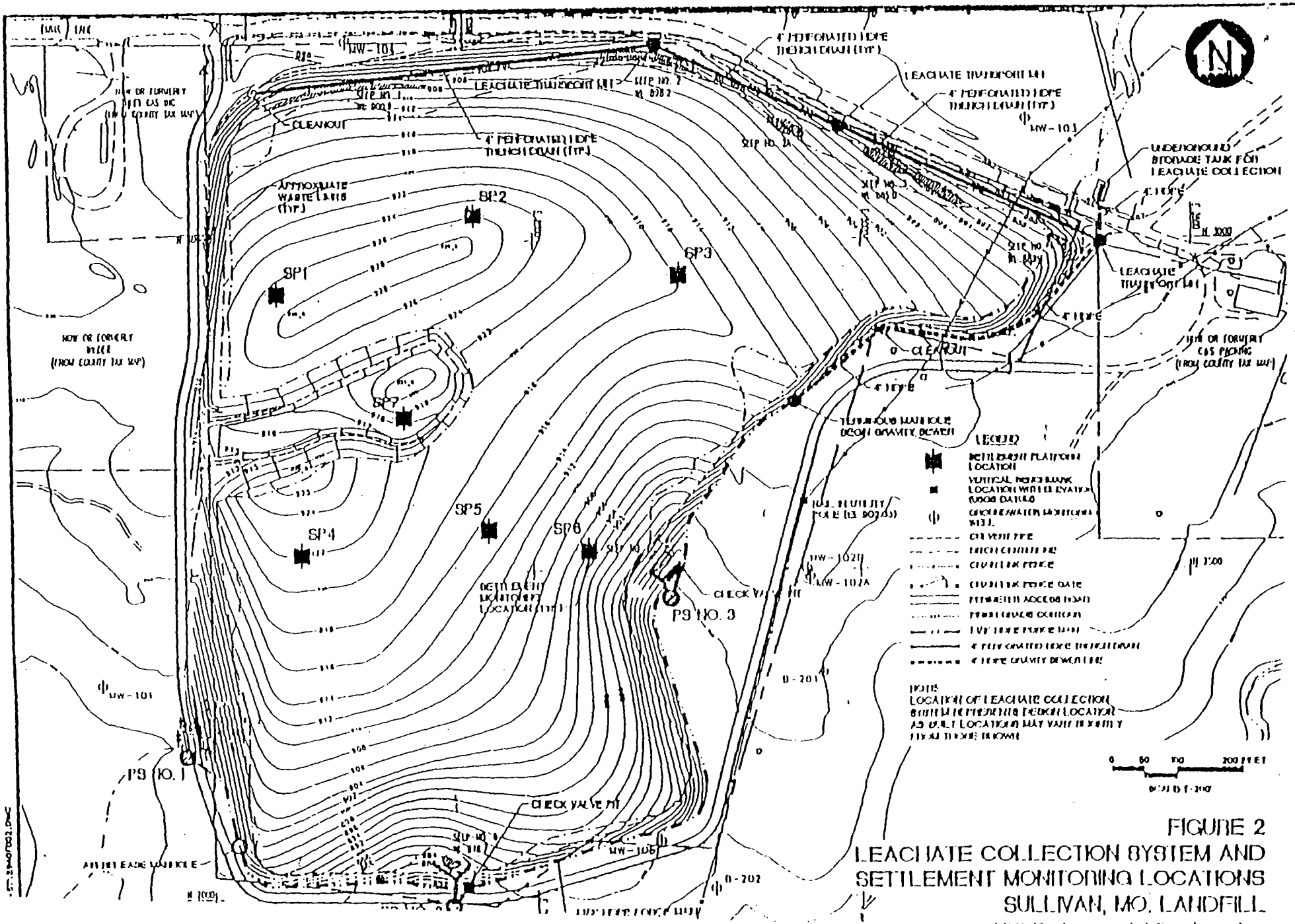

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

Dec 4 1" Snow

Dec 19 1.5 Rain

Dec 31 .2 Rain

SULLIVAN LANDFILL

Inspection Checklist

Date: 2-5-2003 Weather Conditions: Clear Cool

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	6-2002

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: Bob Hab

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8940-02

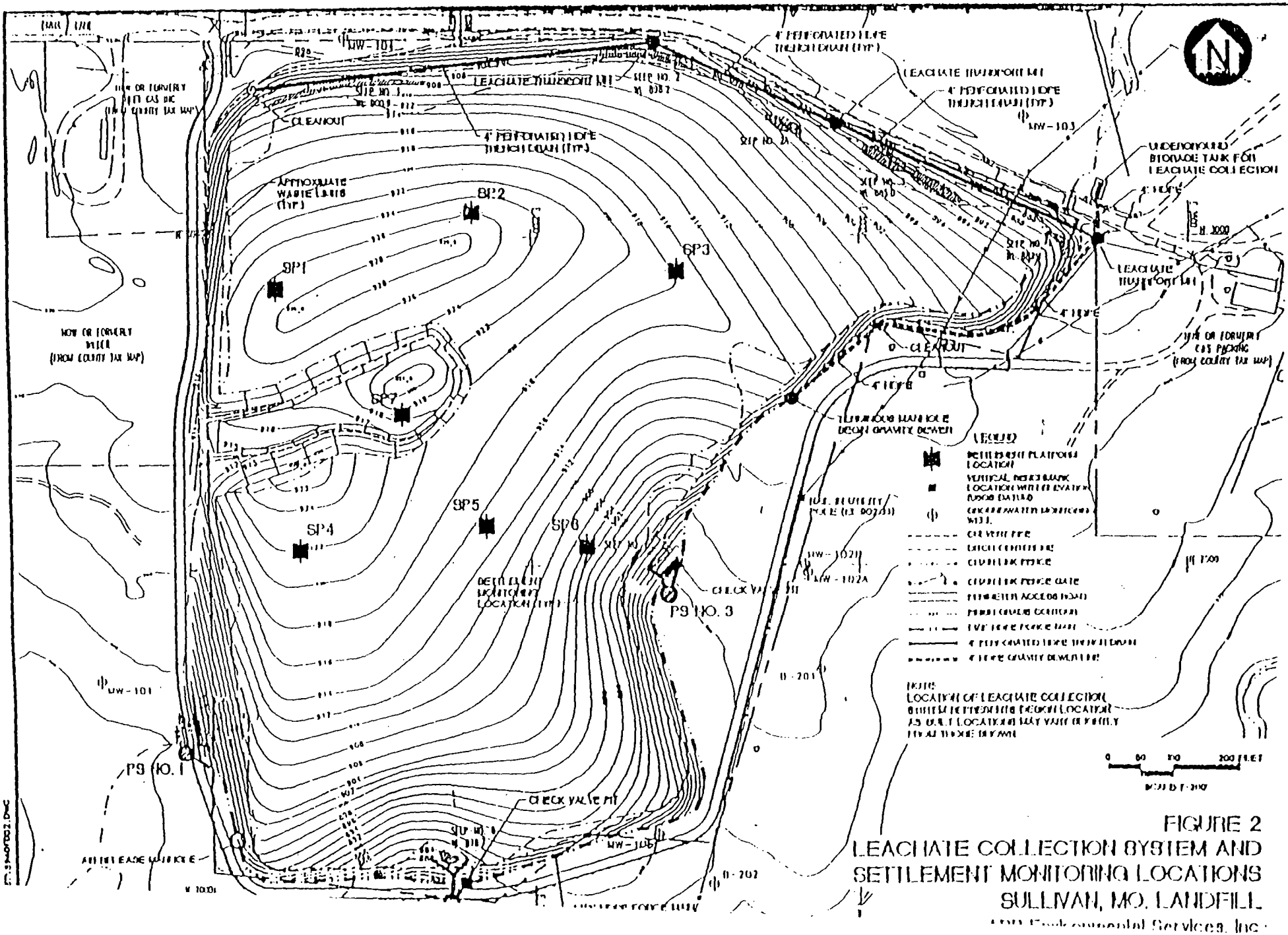

FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 3-4-2003 Weather Conditions: Cloudy

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	6-2002

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: Bob Dahl

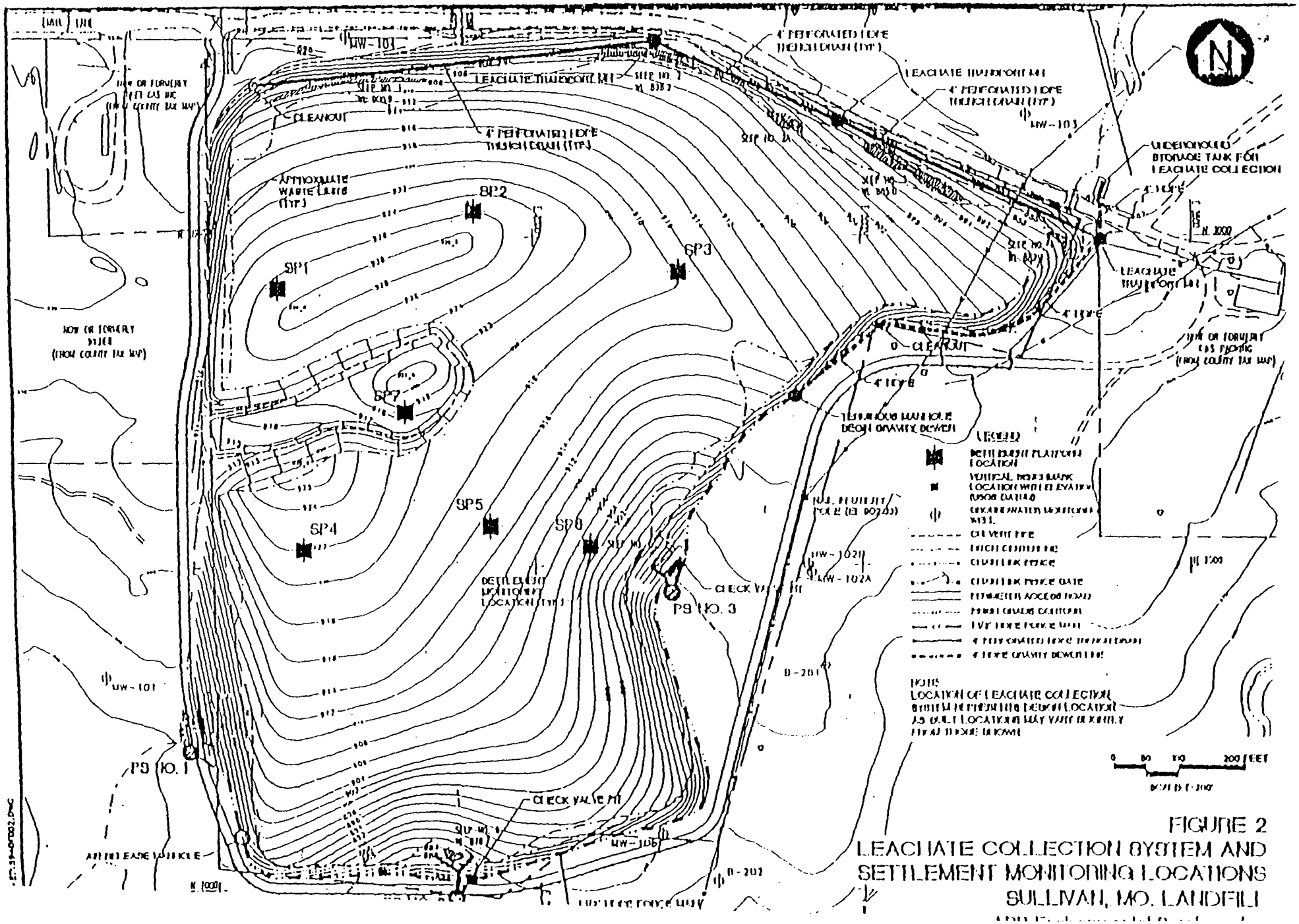

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 5-6-2003 Weather Conditions: Cloudy

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	June 6 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: BAG Hahn

8940-02

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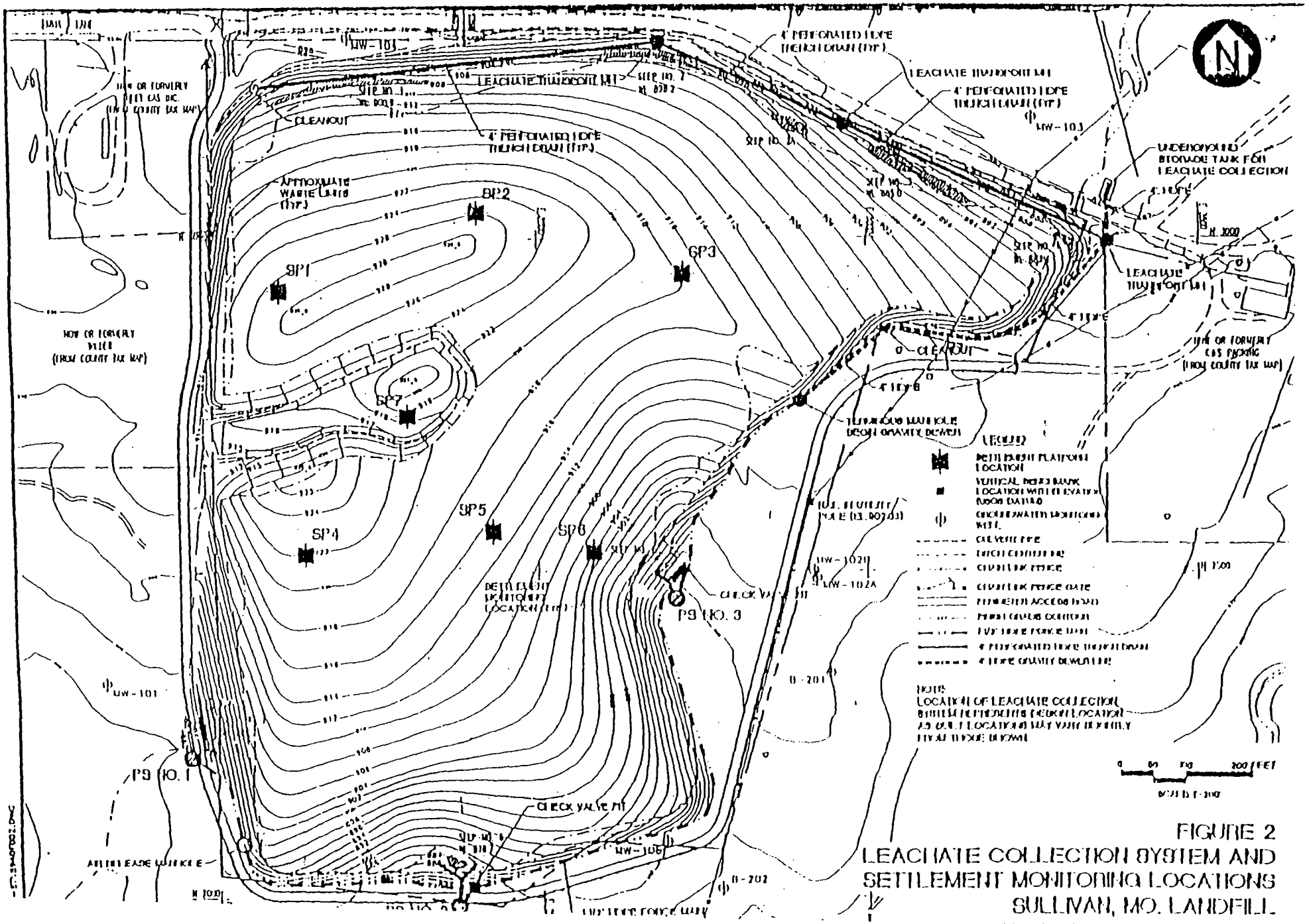

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 5-3-2003 Weather Conditions: Rain & Cloudy

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	May 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: Bob Hah

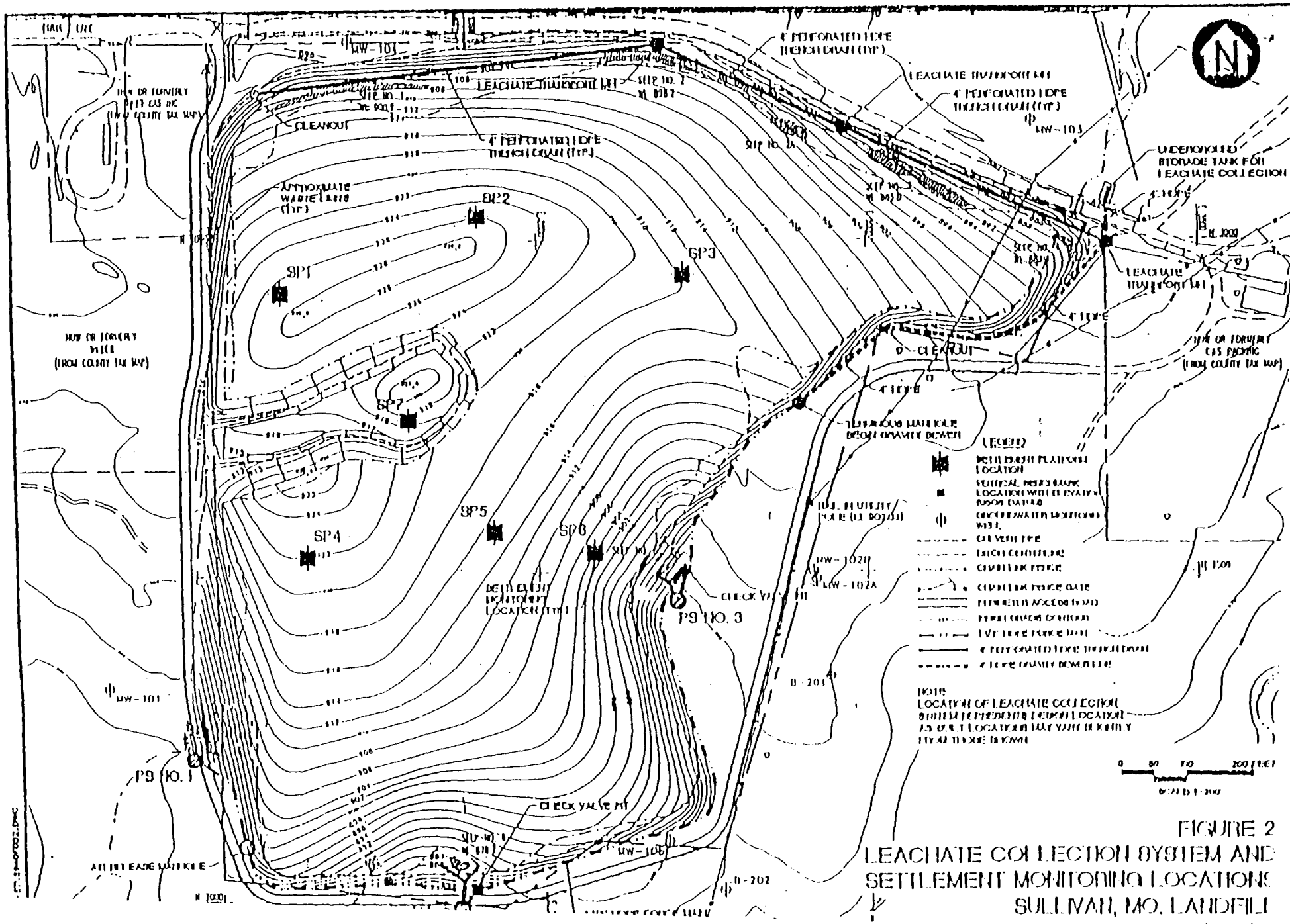

FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 8-5-2003 Weather Conditions: Clear Sunny

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	Feed My Friends
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	May 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	Has Some Fresh Used Holes Around
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	Need 2 Bales of Hay Moved Fr Emma Lane Ditch + One on Side Ditch One From Back Fence Near #1 Pump Station Need All Hay Remo

10. Describe any specific actions taken to address concerns listed above:

Feed Around Gas Vent with New Holes

Will Call Larry + Talk about Having Roger Remove Hay + See Then If we Can Get This Moved By Fall

Inspected by: BOC Hal

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8940-02

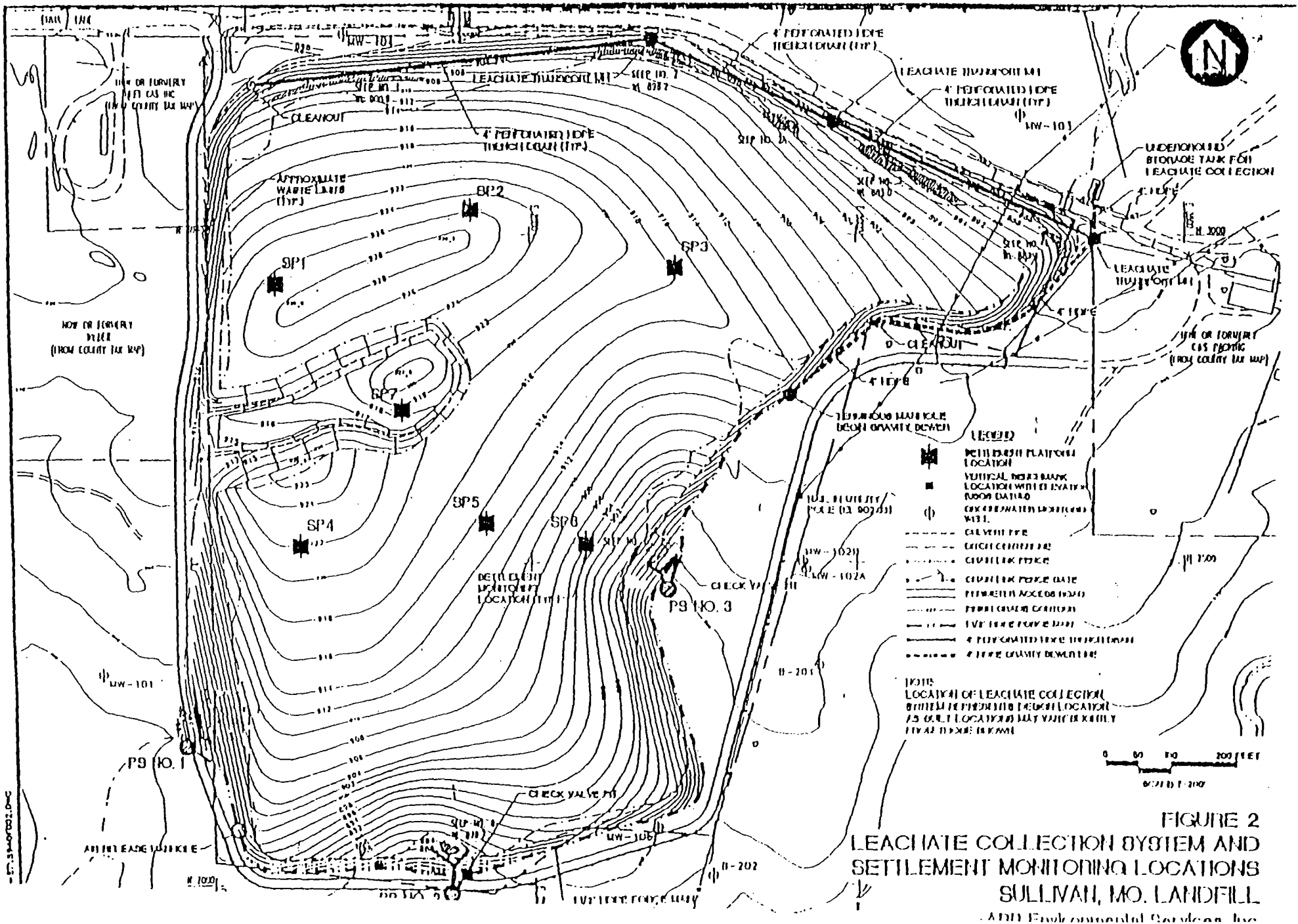

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

ARD Environmental Services, Inc.

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 9-9-2003 Weather Conditions: Clear Sunny

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	Put up New ones 12 Total
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	Hole at Printer Landfill Bad Hole
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	Aug 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	Need to Trim out of Paper
6. Gas Vent Risers (16) Undisturbed	Also Need to Cut & Pull Trees & Weeds
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Got Live Trap From Animal Control Officer Bought Bag of Carrotts & Head Lettuce & Set Trap. Had Keys Maid For Gate & Gave Officers a Key

Inspected by: B O Hahn

8940-02

W0029544.080

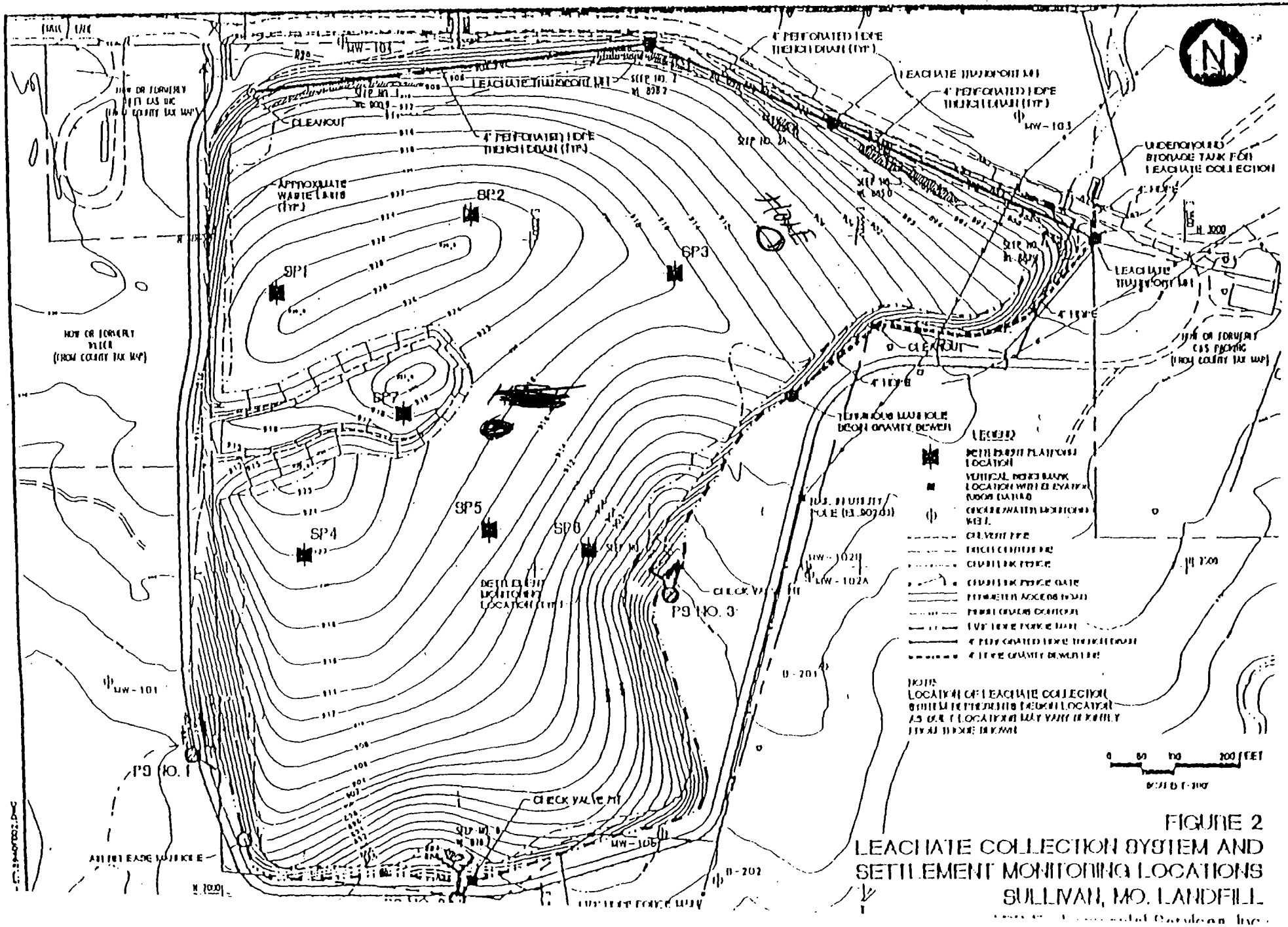

FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 10-10-03 Weather Conditions: Cloudy

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	Caught 1 Ground Hog & Trap after last Insp
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	Aug 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	Still Need Bag Removed

10. Describe any specific actions taken to address concerns listed above:

Inspected by: BB Blah

W0029544.080

8940-02

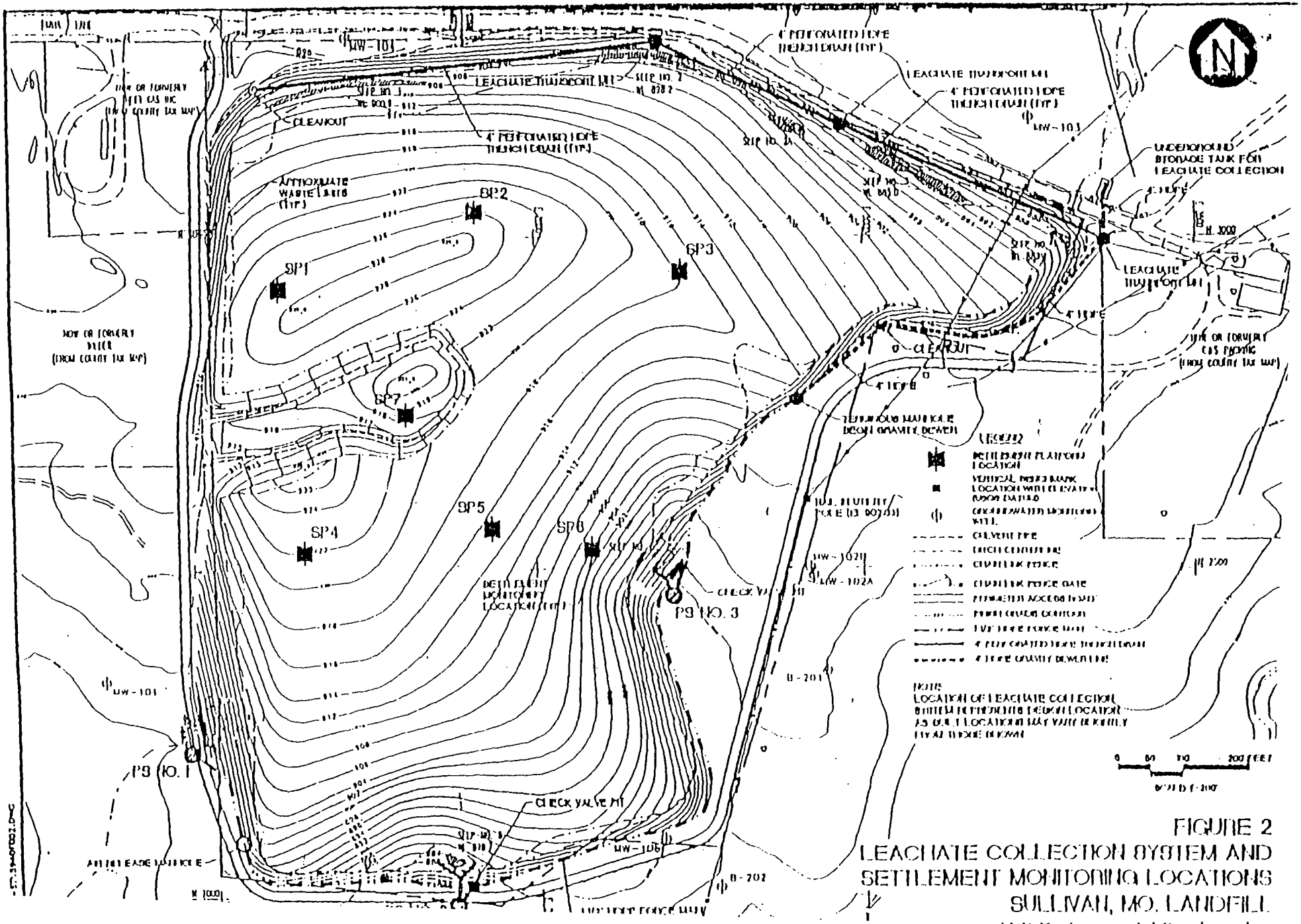

FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 11-5-2003 Weather Conditions: CLOUDY COLD

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	Aug 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	Still Need Hay Removed

10. Describe any specific actions taken to address concerns listed above:

Inspected by: Bob Blahm

W0029544.080

8940-02

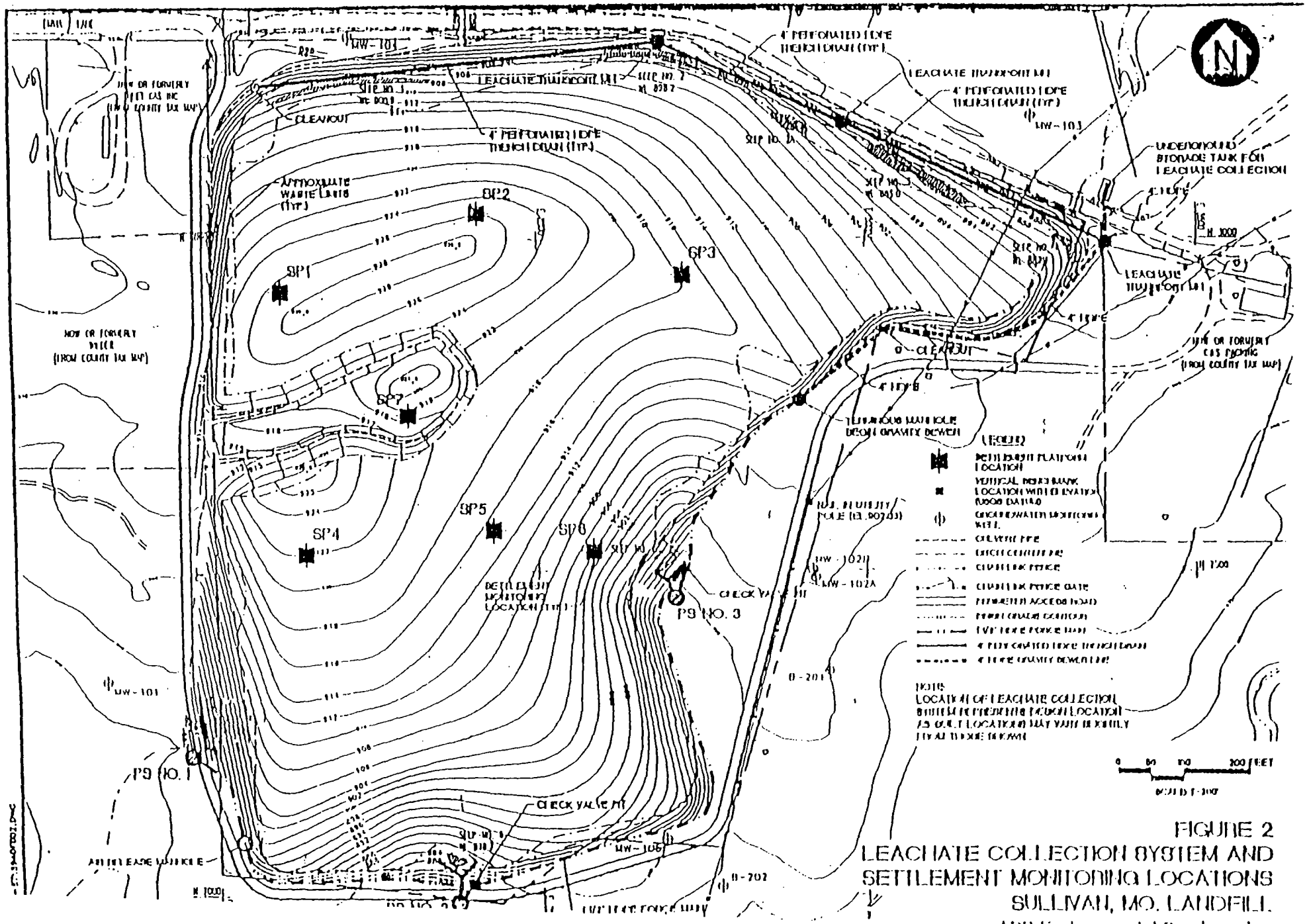

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 1-12-2004 Weather Conditions: Clear

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	Aug 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	ok
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: [illegible]

W0029544.080

8940-02

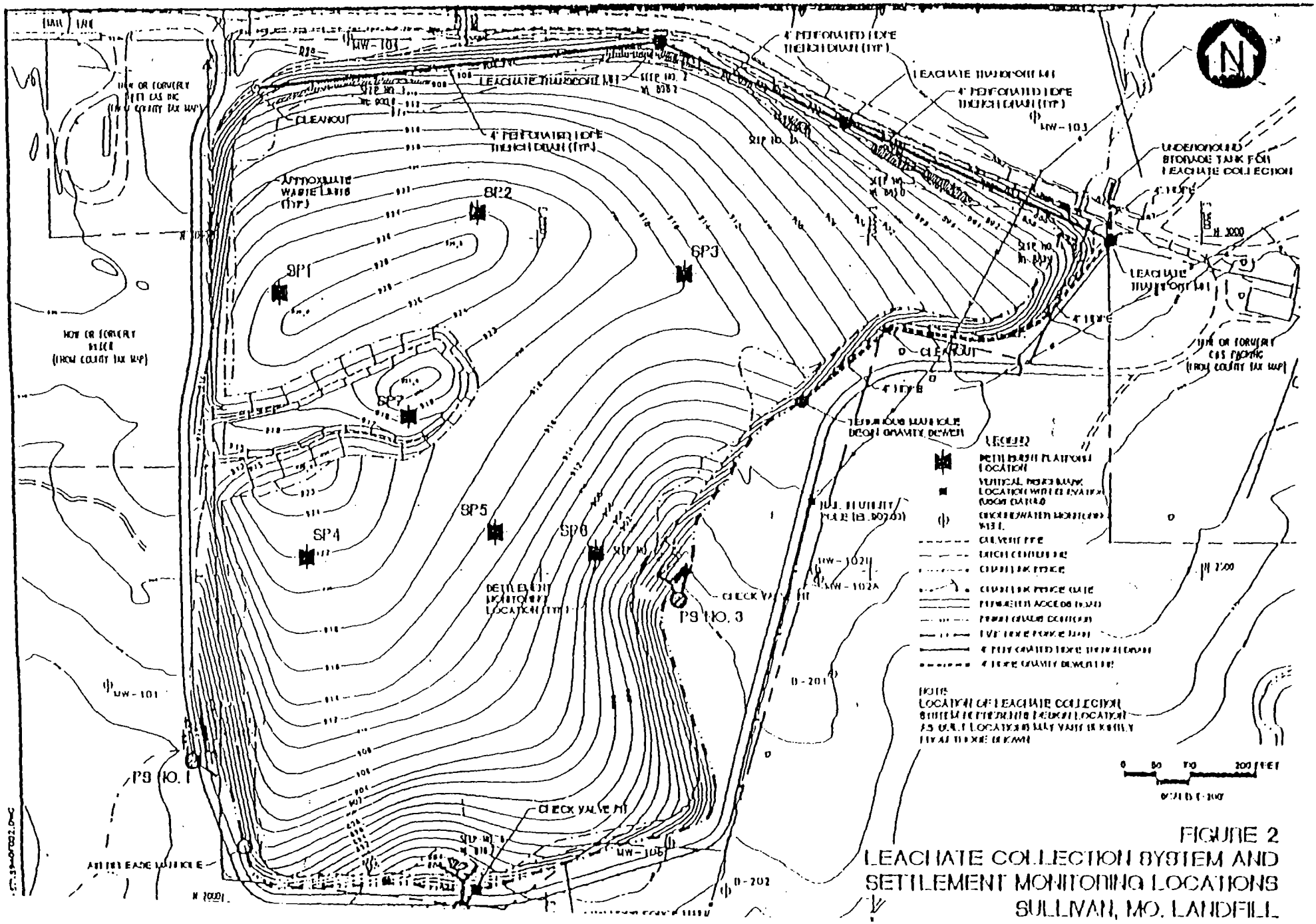

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 2-11-2004 Weather Conditions: Clear

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	NO
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	Still Hay In Ditch 2 Bales
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	X
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	Aug 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Waited to Inspect Was Covered with Ice & Snow
Road Still Slick In Spots

Bought Chain & Lock Gate

Inspected by: [signature]

W0029544.080

8940-02

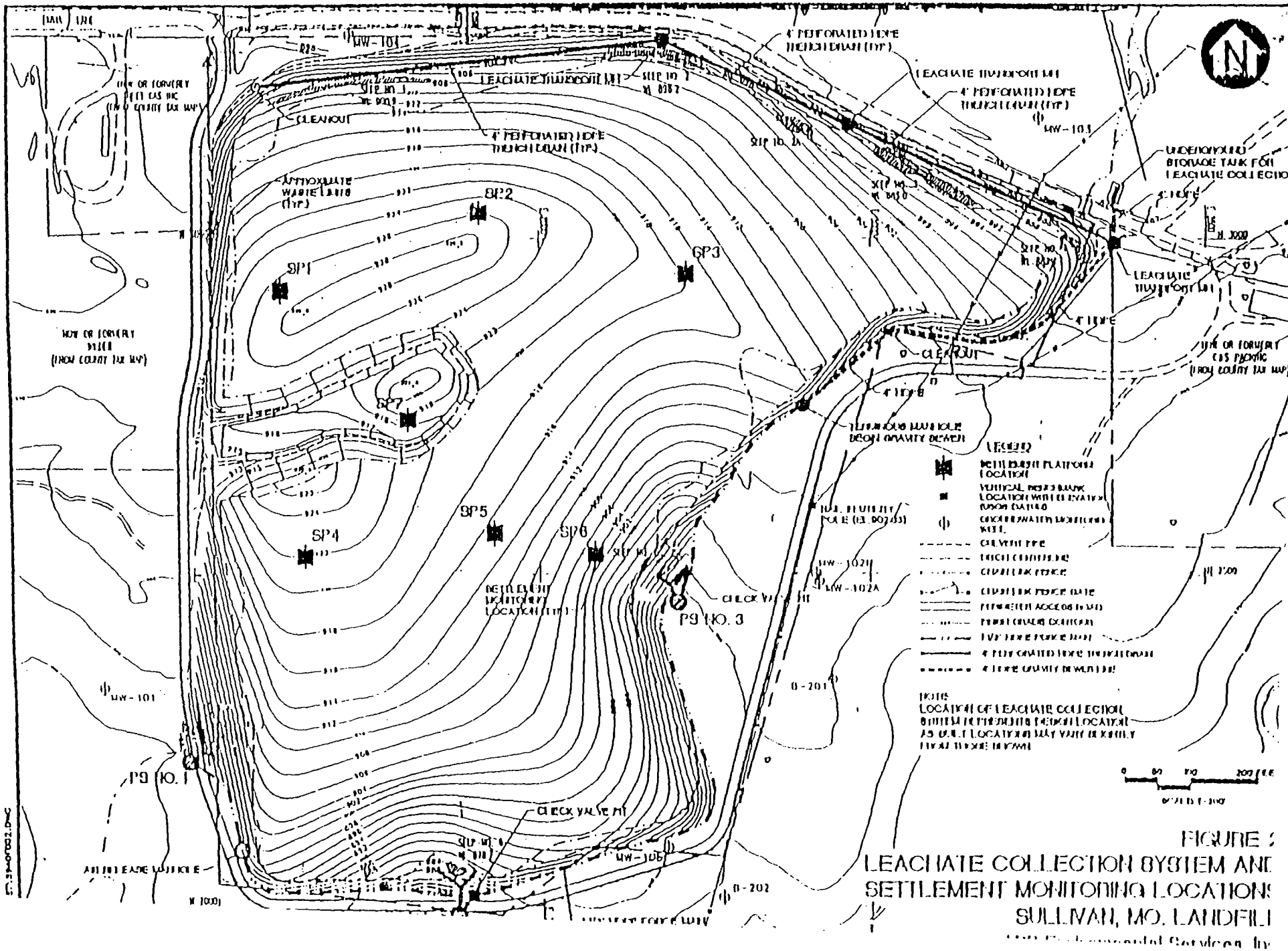

FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 4-6-2004 Weather Conditions: Cloudy & Light Rain

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	Put out some food around blo
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	Aug 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	Some Field Mice around
7. Perimeter Drain Outlets Clear	
8. Groundwater Monitoring Wells (9) Undisturbed	
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Put [redacted] Food out For Mice

Inspected by: Bob Haber

8940-02

W0029544.080

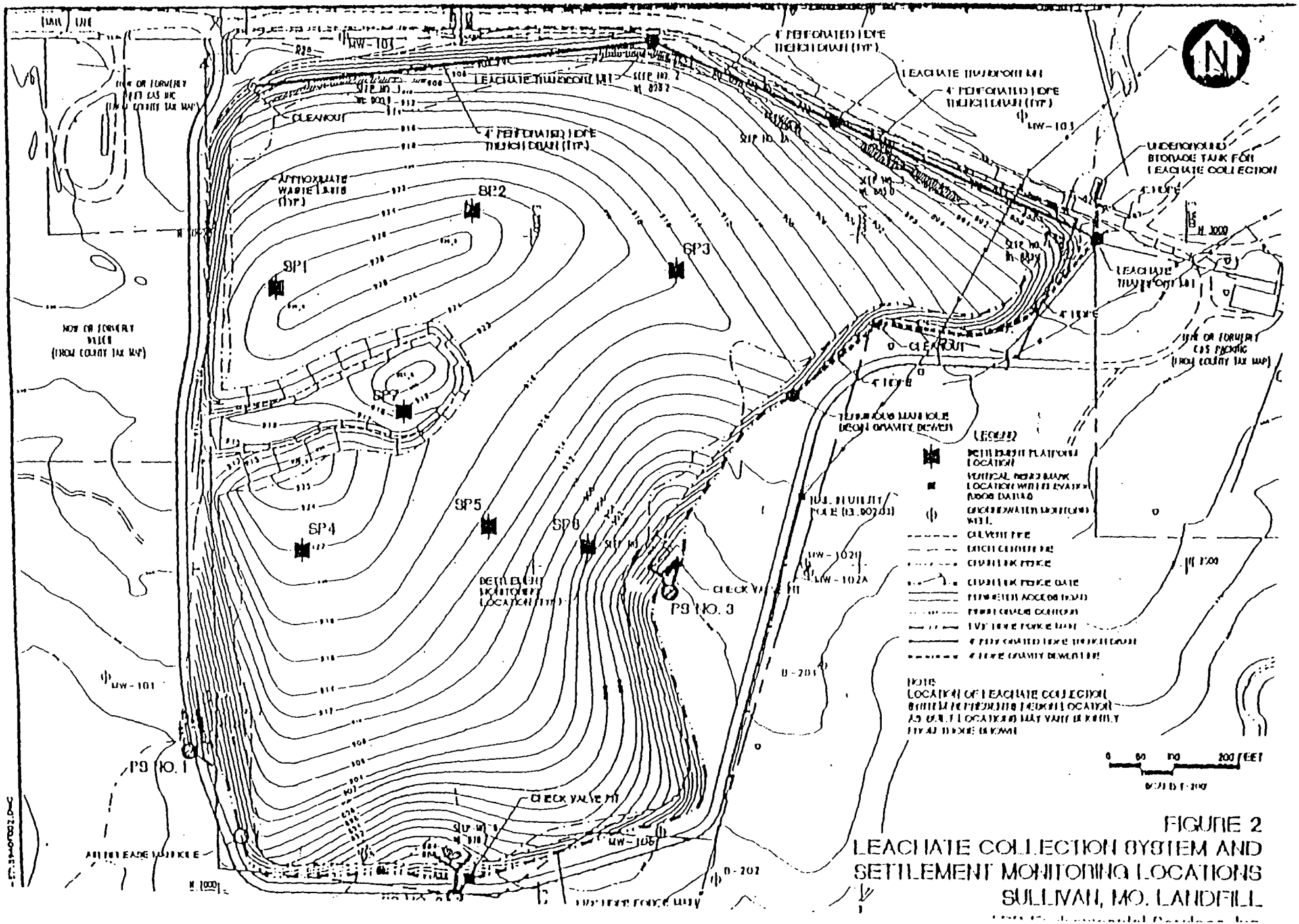

FIGURE 2
LEACHATE COLLECTION SYSTEM AND
SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

Landfill Maintenance Report

Rain Fall

SULLIVAN LANDFILL

Inspection Checklist

Date: 5-10-2004 Weather Conditions: Clear & Sunny

ITEM DESCRIPTION	COMMENT
1. Site Security	
a. Gates Closed/Locks Secure	OK
b. Fence/Warning Signs Secure	OK
c. Evidence of Site Vandalism	OK
2. Erosion Control	
a. Cap Sideslopes Intact (no erosion)	OK
b. Signs of Burrowing Animals	OK
c. Emma Lane Culverts Free of Sediment/Debris	OK
d. Drainage Ditches Free of Debris	OK
3. Leachate Collection	
a. Latest Volume and Date Removed from Tank	
b. Current Level in Tank	
c. Pump Sta. #1 Operational	
d. Pump Sta. #2 Operational	
e. Pump Sta. #3 Operational	
4. Date of Last Grass Mowing	Aug 2003

SULLIVAN LANDFILL

Inspection Checklist (continued)

ITEM DESCRIPTION	COMMENT
5. Settlement Platform Risers (7) Undisturbed	OK
6. Gas Vent Risers (16) Undisturbed	OK
7. Perimeter Drain Outlets Clear	OK
8. Groundwater Monitoring Wells (9) Undisturbed	OK
9. Miscellaneous	

10. Describe any specific actions taken to address concerns listed above:

Inspected by: BDK Kahn

8940-02

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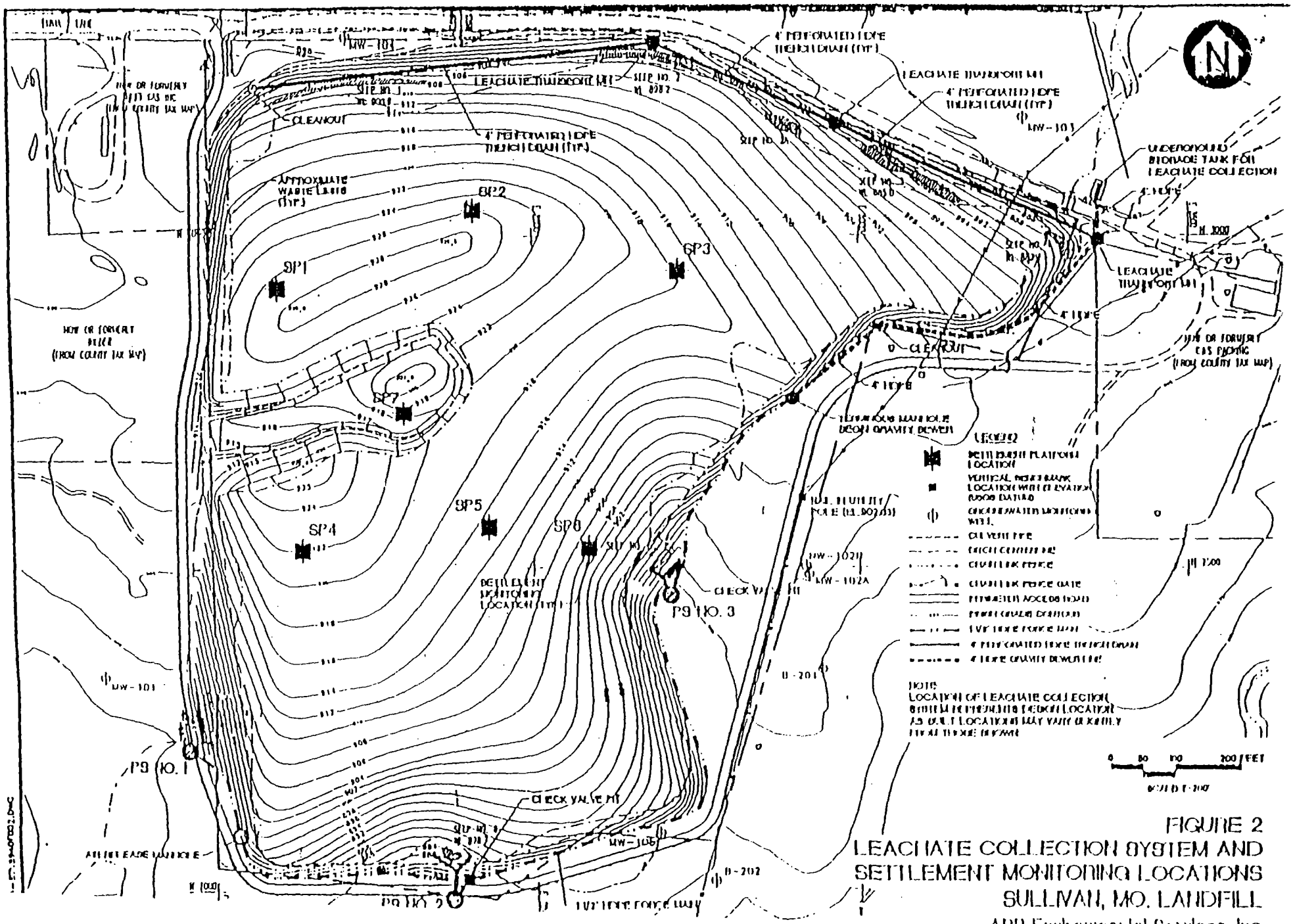

FIGURE 2
LEACHATE COLLECTION SYSTEM AND SETTLEMENT MONITORING LOCATIONS
SULLIVAN, MO. LANDFILL

ABB Environmental Services, Inc.

Landfill Maintenance Report

Rain Fall