THE COLLINS LAW FIRM PC

US EPA RECORDS CENTER REGION 5
486620

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June 5, 2009

VIA FIRST CLASS MAIL

Mr. Steven Faryan
US EPA Region 5
Mail Code: MF-10J
77 W. Jackson Blvd.
Chicago, IL 60604

Re: Mallard North

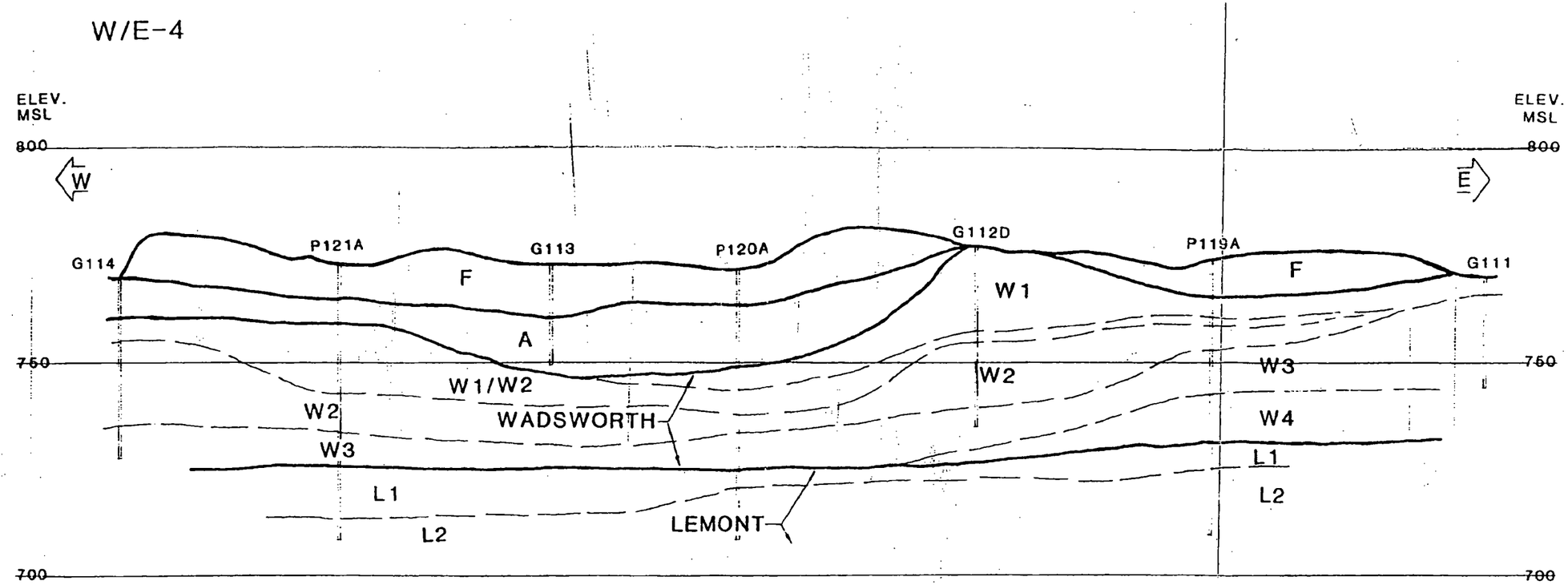
Dear Steve:

Enclosed are the documents that you requested.

Very truly yours,

Edward J. Manzke

EJM/raa
Enclosures



MALLARD LAKE CROSS SECTION (North)

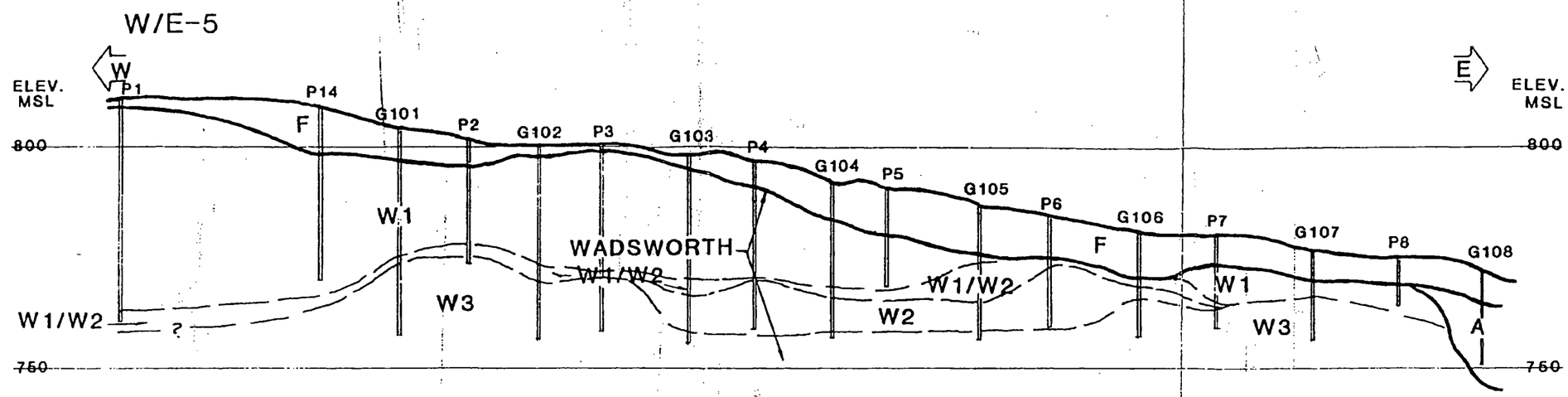
Horiz. Scale 1"/100'
Vert. Scale 1"/25'

SOURCE: BOGNER, 1988 FIGURE 8A.

EMCON

FIGURE 2-2

FPD 016102



MALLARD LAKE CROSS SECTION (North)

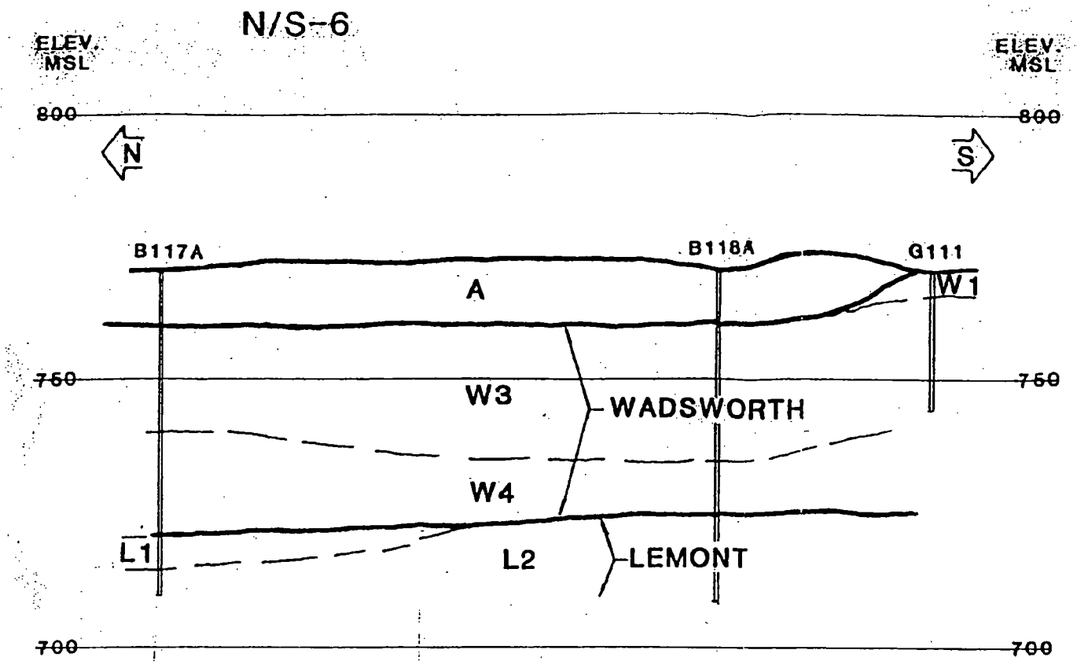
Horiz. Scale 1"/100'
Vert.Scale 1"/25'

SOURCE: BOGNER, 1988 FIGURE 8B.

EMCON

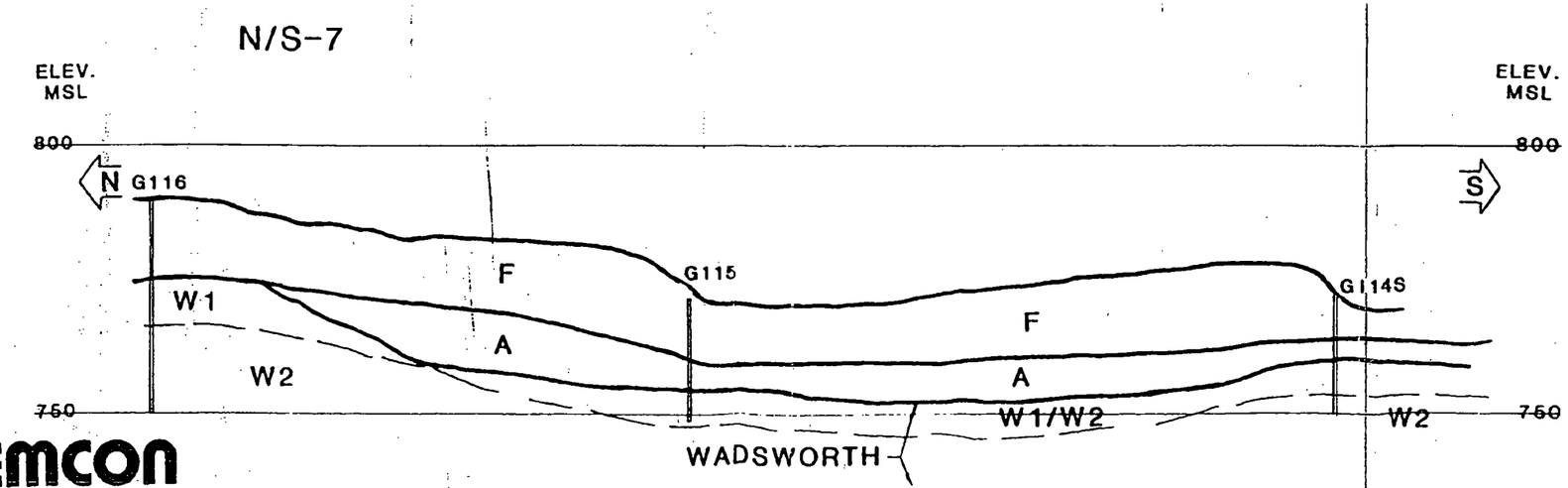
FIGURE 2-3

FPD 016103



MALLARD LAKE CROSS SECTION (North)
Horiz. Scale 1"/100'
Vert. Scale 1"/25'

SOURCE: BOGNER, 1988 FIGURE 8C, 8D.



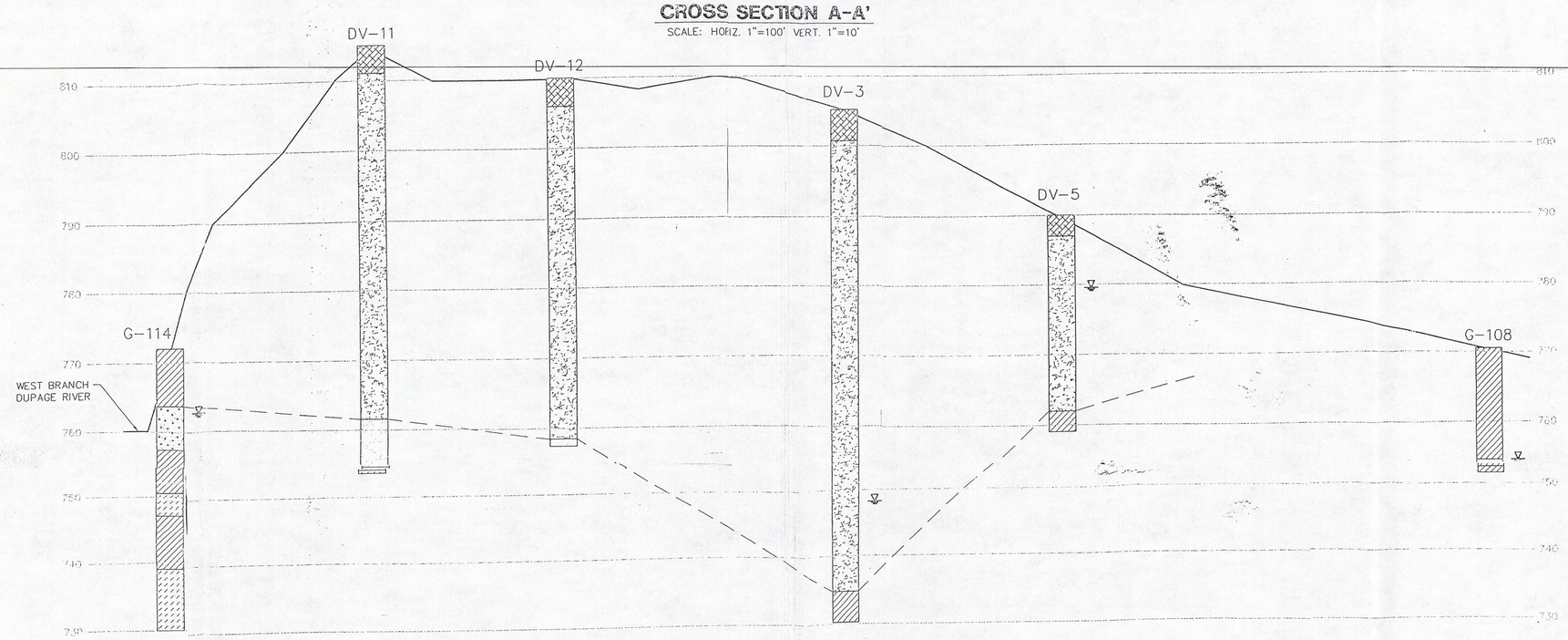
EMCON

FIGURE 2-4

FPD 016104

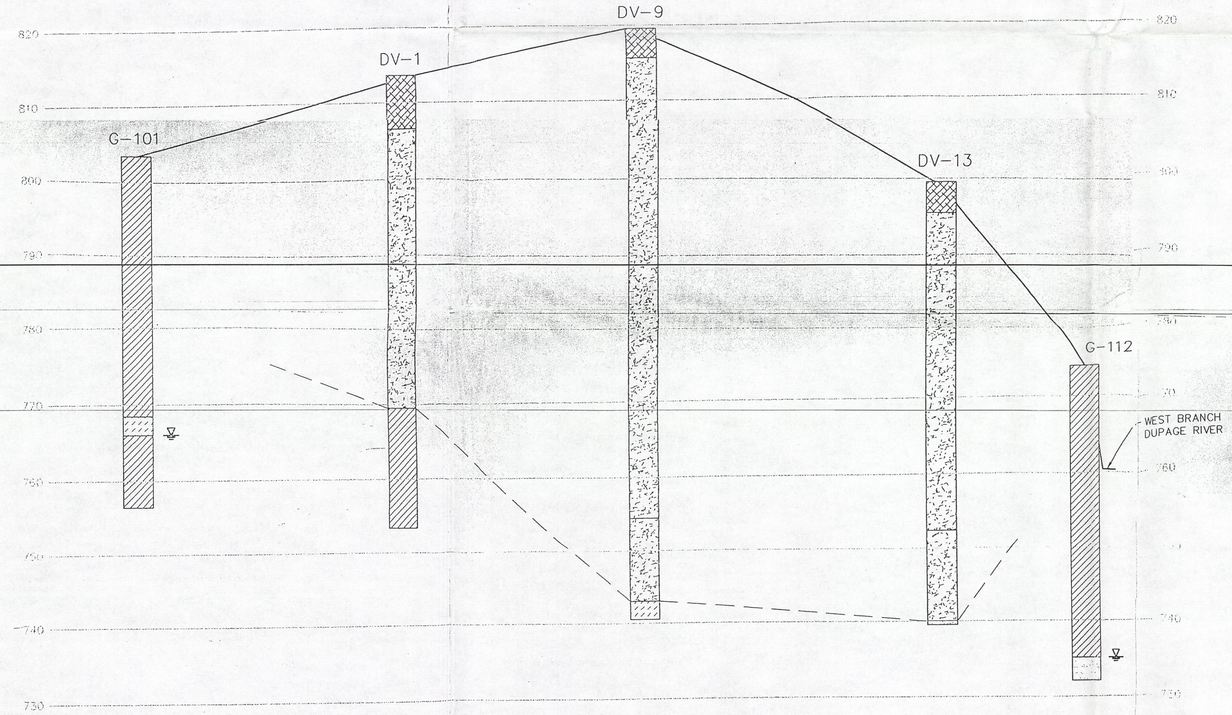
CROSS SECTION A-A'

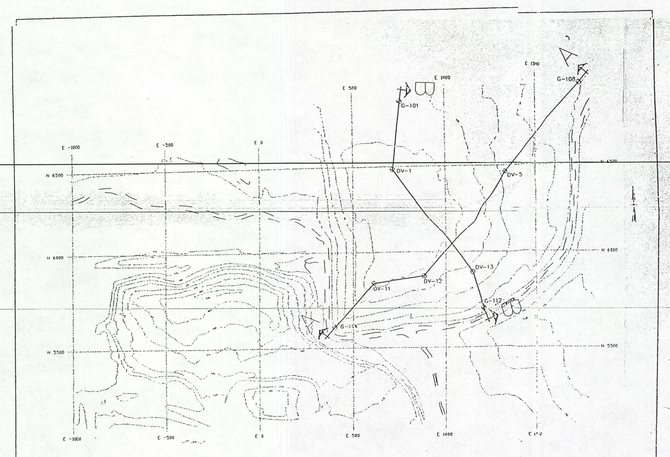
SCALE: HORIZ. 1"=100' VERT. 1"=10'



CROSS SECTION B-B'

SCALE: HORIZ. 1"=100', VERT. 1"=10'





LOCATION MAP

SCALE: 1"=400'

KEY

- CLAY FILL
- SAND & GRAVEL
- CLAY
- REFUSE
- SILT
- SAND
- GROUNDWATER LEVEL RECORDED DURING DRILLING
- ESTIMATED BASE OF FILL

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 8/10/95 DWN BY PPV DES BY PLV CHK BY APP BY

EMCON

MALLARD NORTH LANDFILL
HANOVER PARK, ILLINOIS

GEOLOGIC CROSS SECTIONS
A - A' AND B - B'

DRAWING NO. 2-5

PROJECT NO. 85057030

FPD 01610

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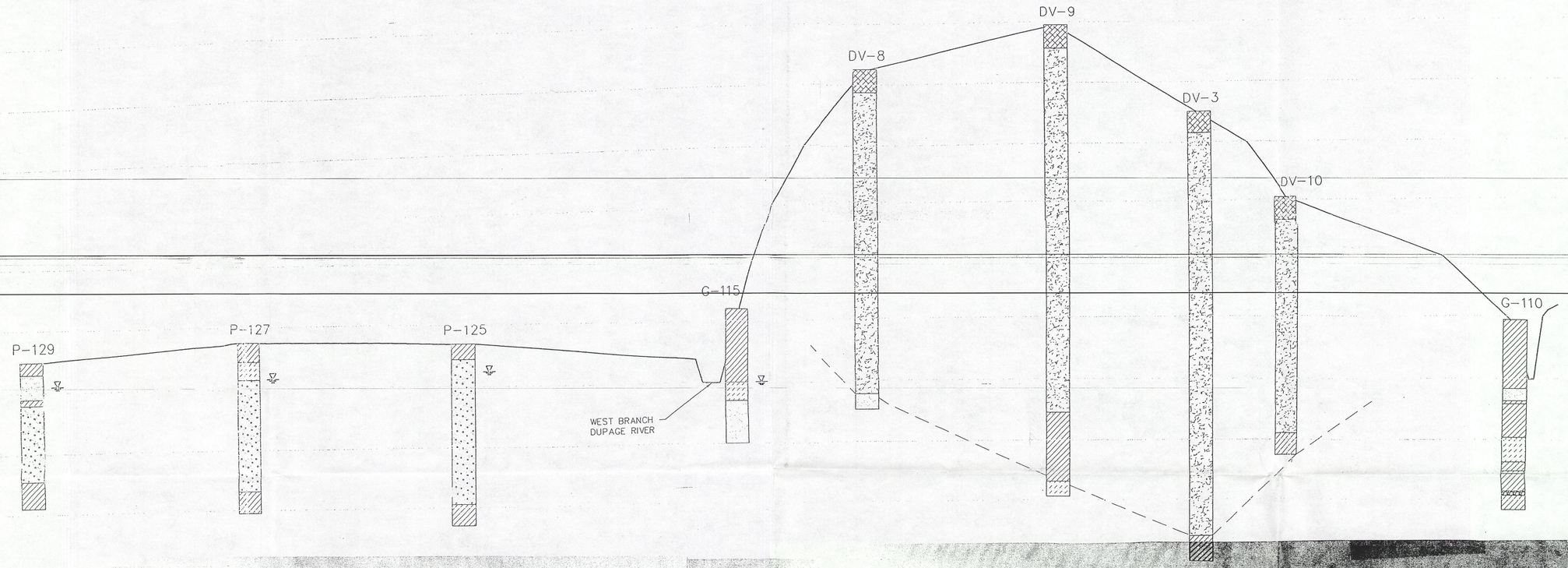
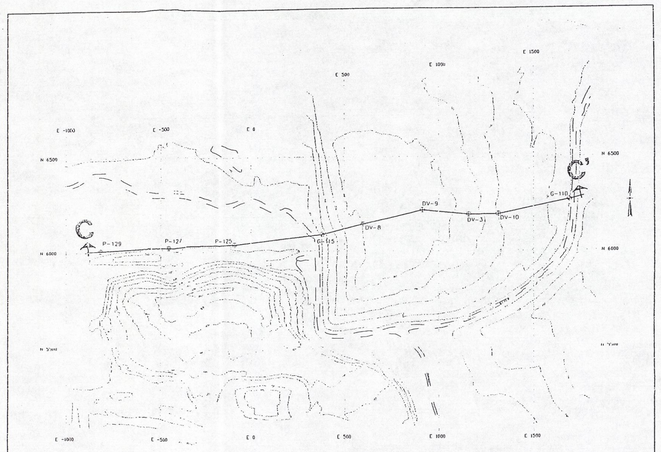
CROSS SECTION C-C'

SCALE: HORIZ. 1"=100', VERT. 1"=10'





LOCATION MAP

SCALE: 1"=400'

KEY

- CLAY FILL
- SAND & GRAVEL
- CLAY
- REFUSE
- SILT
- SAND
- GROUNDWATER LEVEL RECORDED DURING DRILLING
- ESTIMATED BASE OF FILL

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

DATE OF ISSUE 8/10/95 — DWN BY PPV — DES BY PLV — CHK BY — APP BY

EMCON

MALLARD NORTH LANDFILL
HANOVER PARK, ILLINOIS

GEOLOGIC CROSS SECTION C - C'

DRAWING NO. 2-6

PROJECT NO. 85057030

FPD 016106

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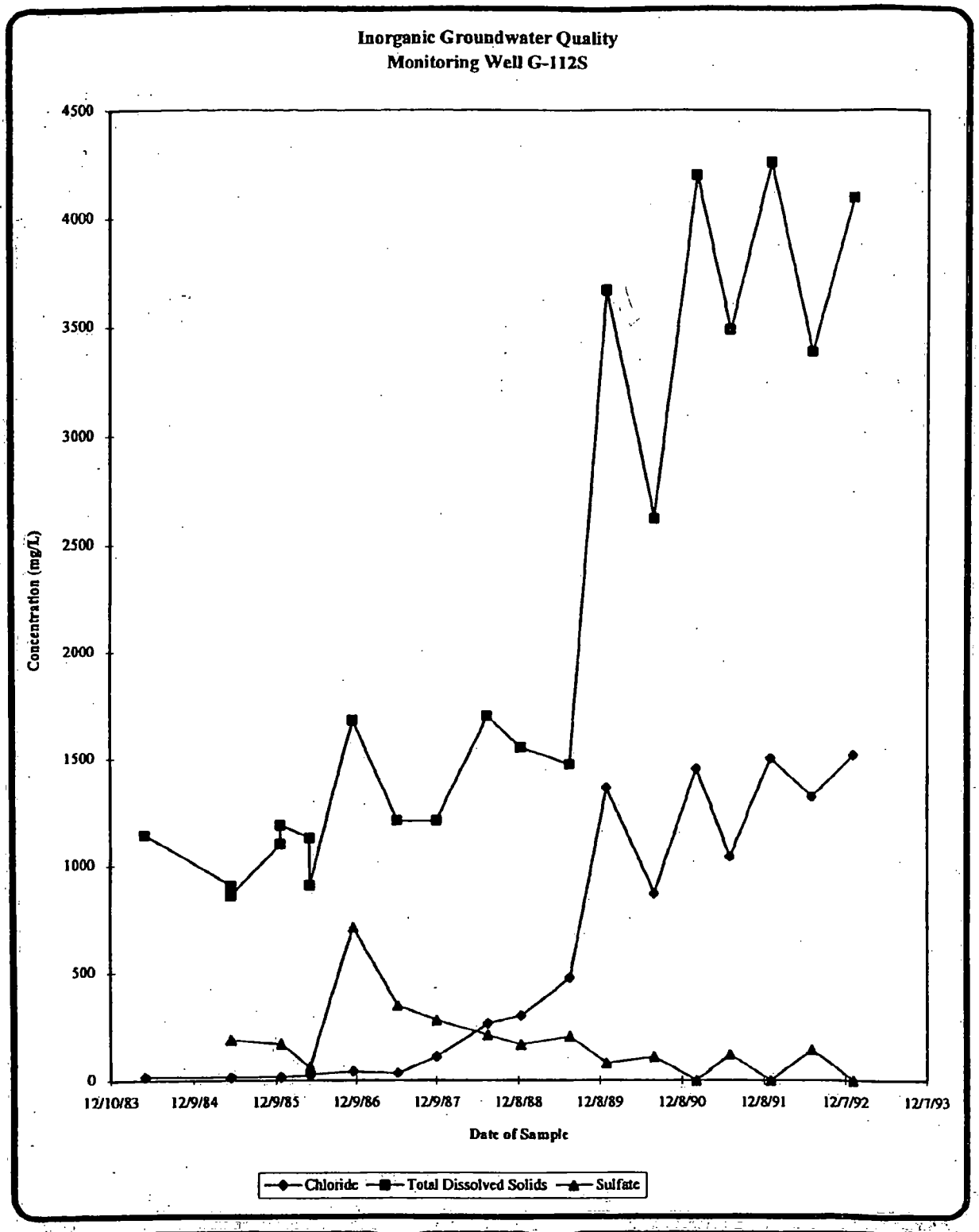

EMCON

DATE 9/29/95
DWN. PPV
APPR.
REVIS.
PROJECT NO.
85057030

FIGURE 3-1
MALLARD NORTH
HANOVER PARK, ILLINOIS
INORGANIC GROUNDWATER QUALITY
MONITORING WELL G-112S

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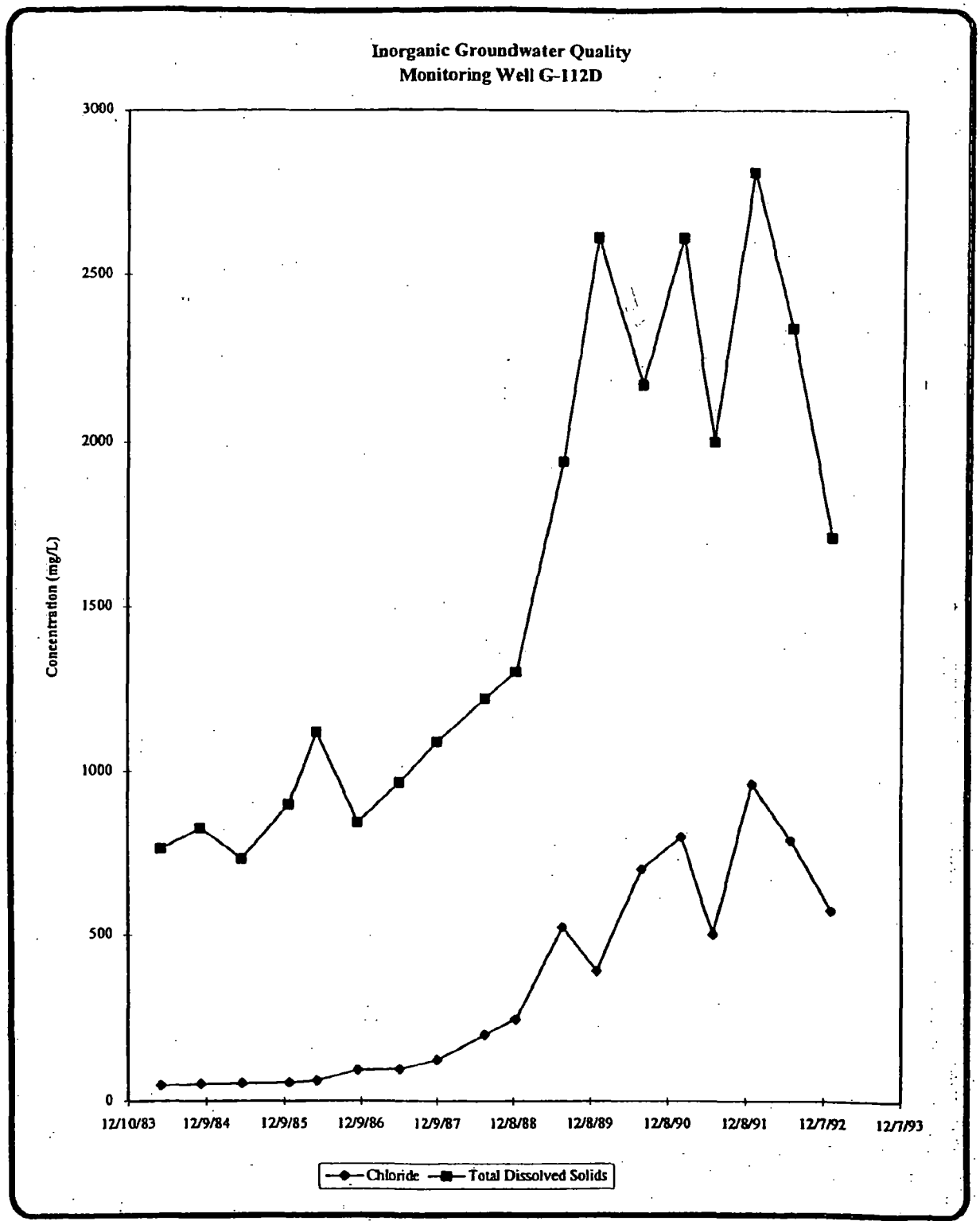

EMCON

DATE 9/29/95
DWN. PPV
APPR.
REVIS.
PROJECT NO. 85057030

FIGURE 3-2
MALLARD NORTH
HANOVER PARK, ILLINOIS
INORGANIC GROUNDWATER QUALITY
MONITORING WELL G-112D

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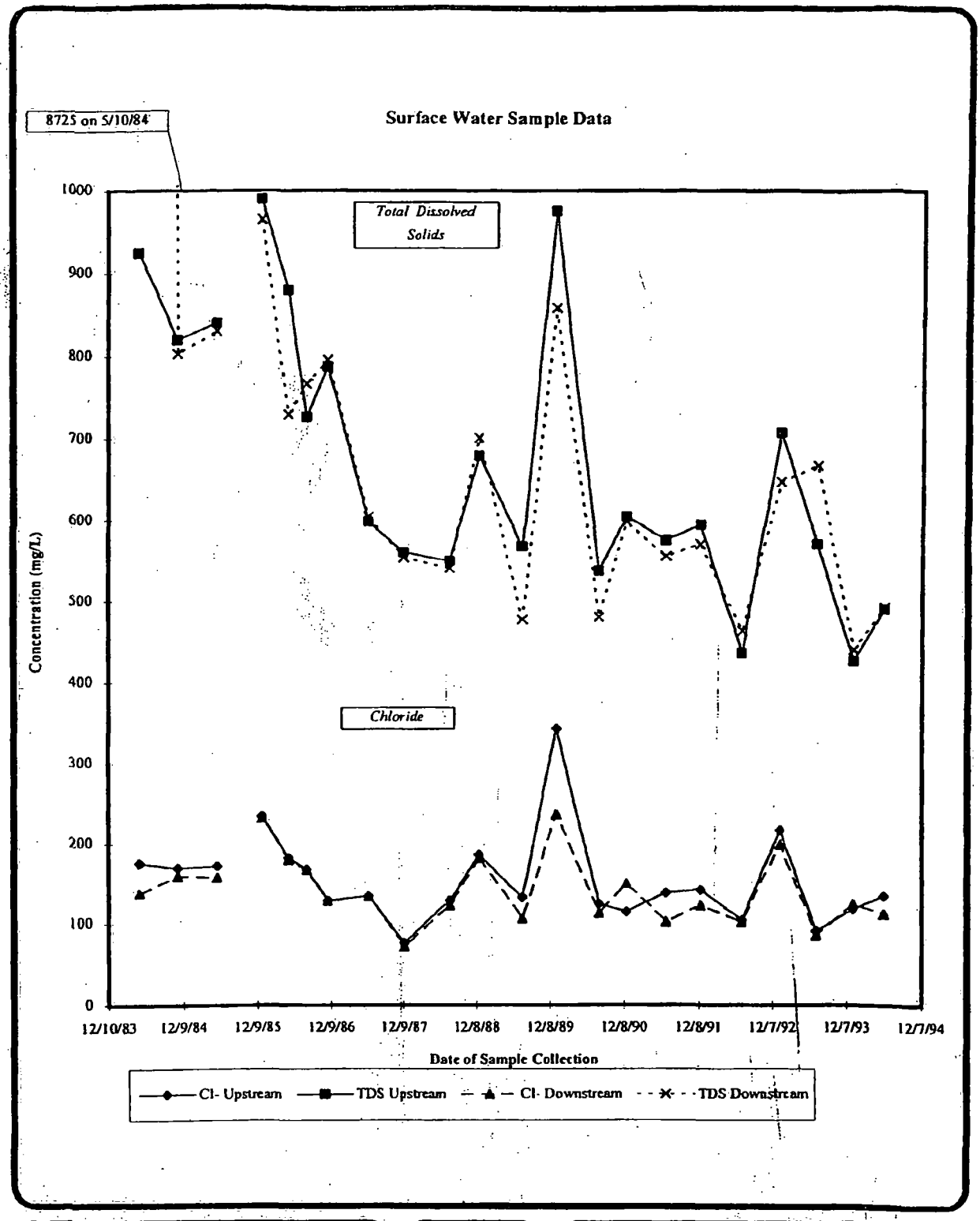
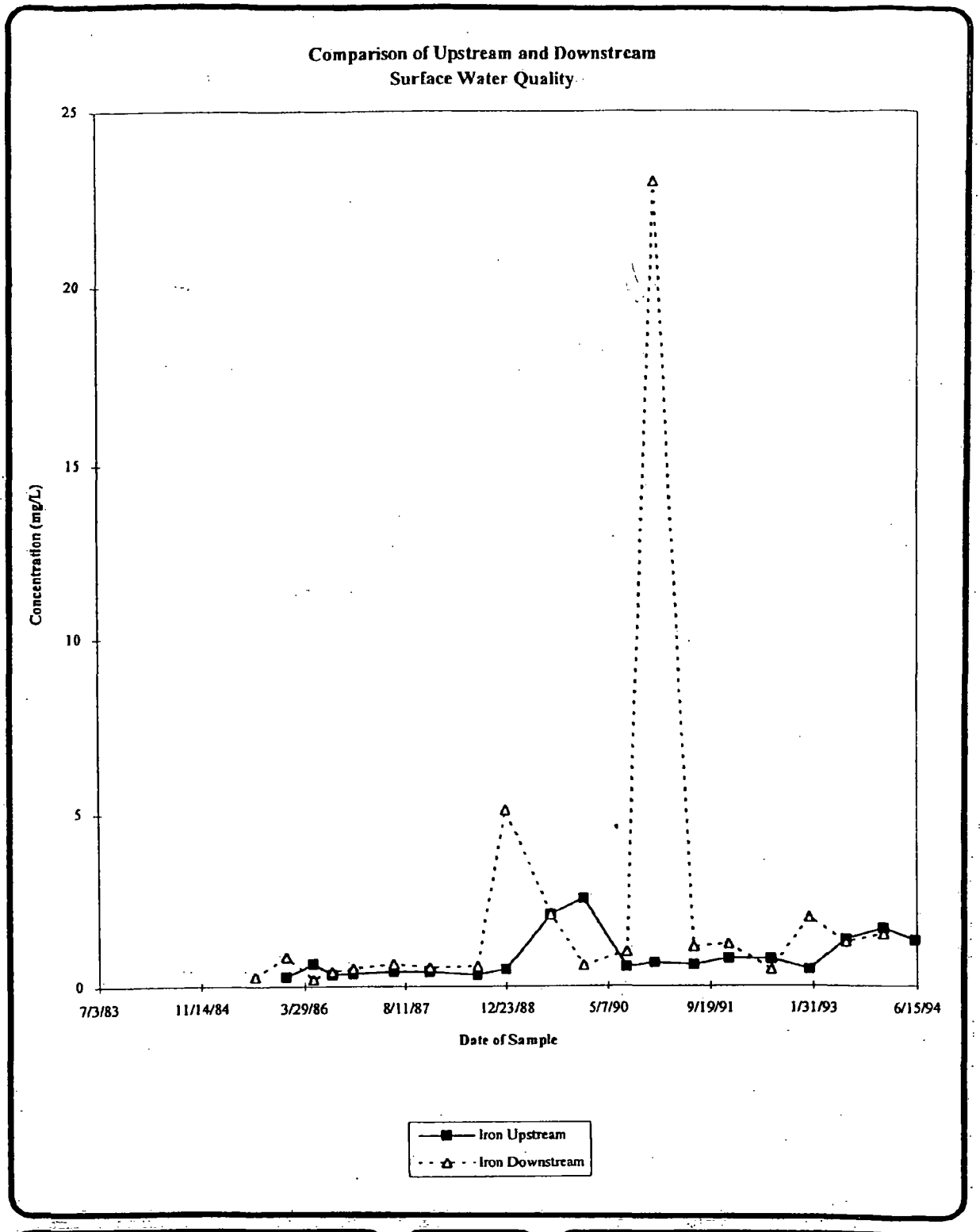


EMCON

DATE 10/31/95
DWN. PPV
APPR.
REVIS.
PROJECT NO.
85057030

FIGURE 3-3
MALLARD NORTH LANDFILL
HANOVER PARK, ILLINOIS

SURFACE WATER SAMPLE DATA



EMCON

DATE 9/29/95
DWN. PPV
APPR.
REVIS.
PROJECT NO.
85057030

FIGURE 3-4
MALLARD NORTH LANDFILL
HANOVER PARK, ILLINOIS

SURFACE WATER SAMPLE
DATA - IRON

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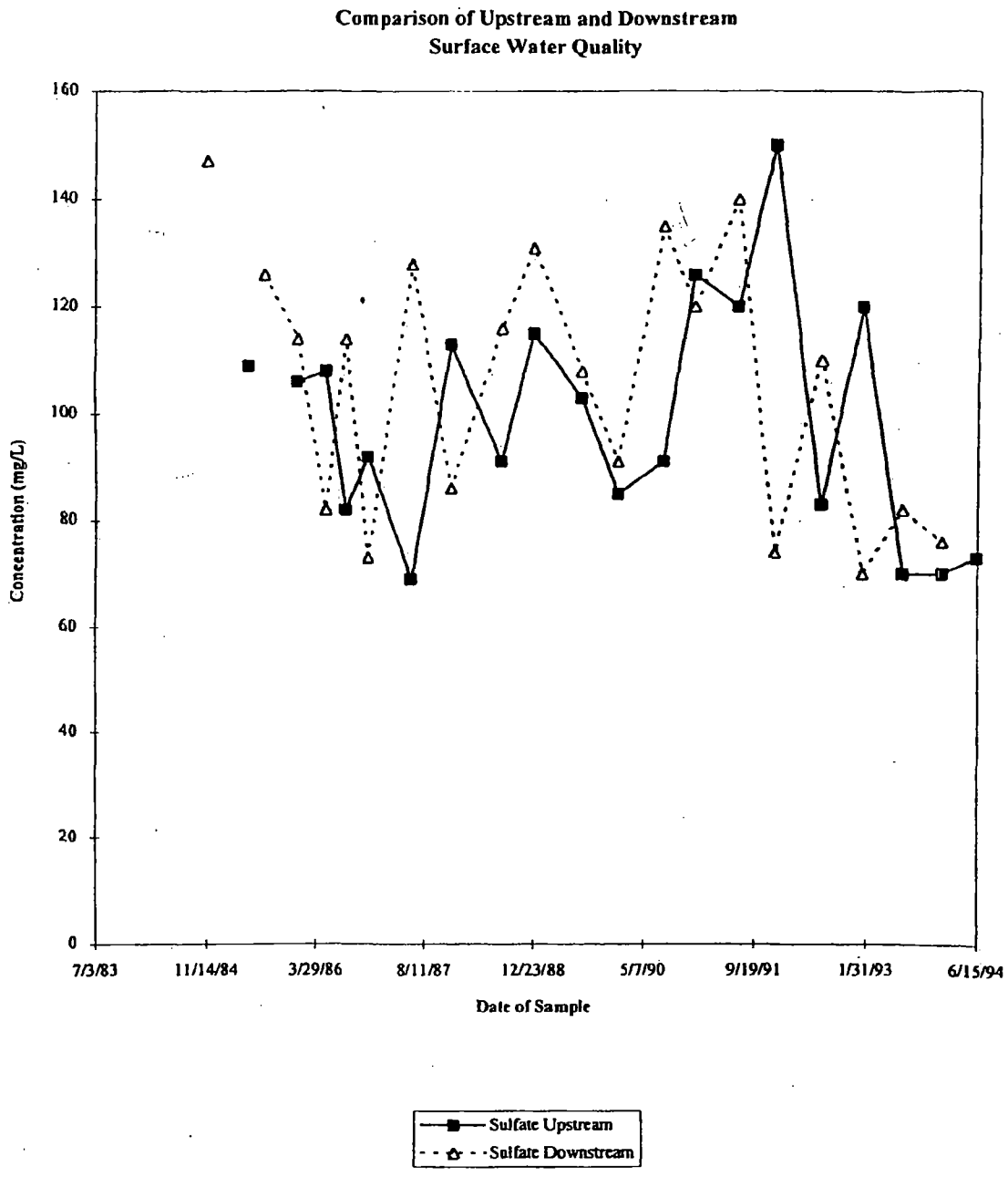


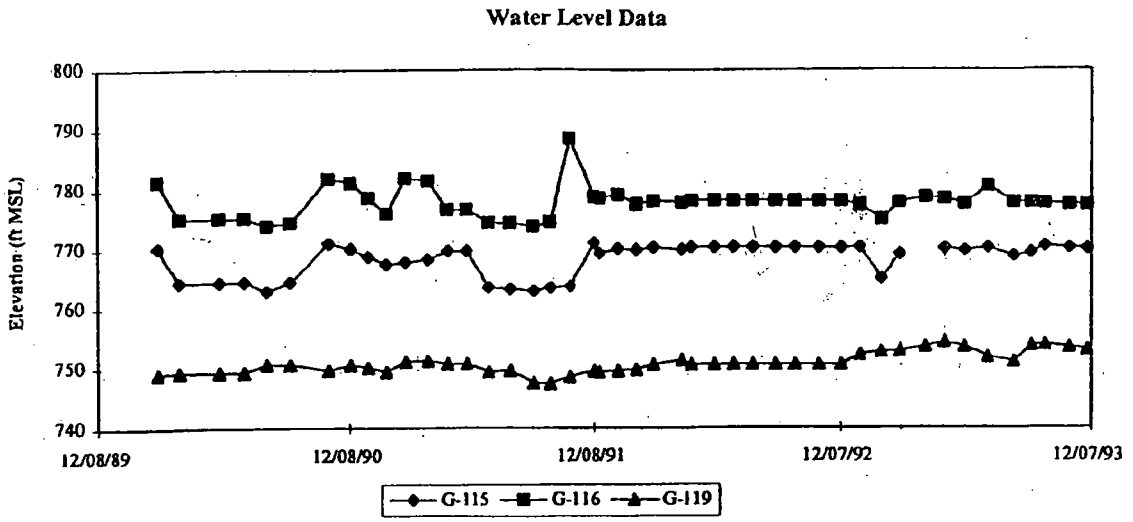
EMCON

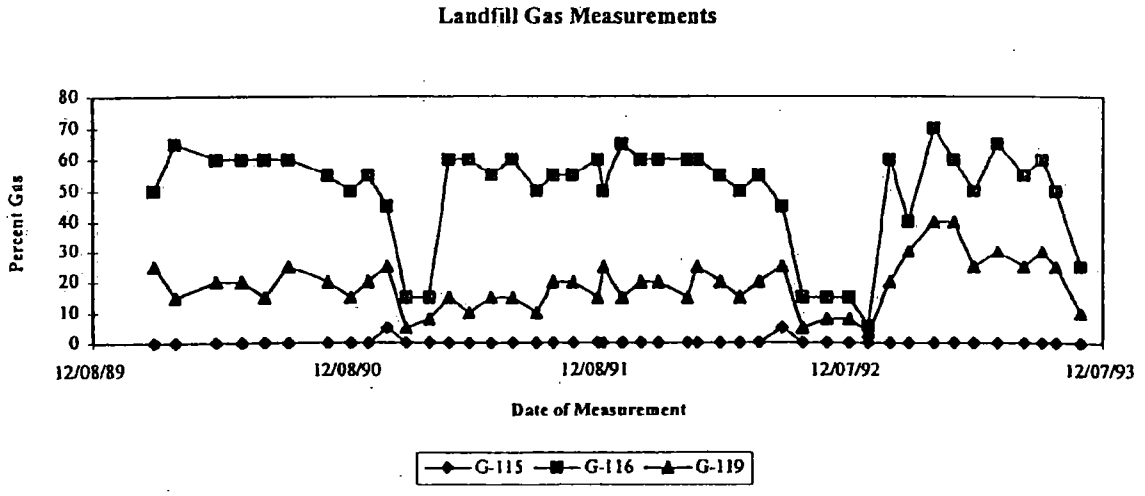
DATE 9/29/95
DWN. PPV
APPR.
REVIS.
PROJECT NO.
85057030

FIGURE 3-5
MALLARD NORTH LANDFILL
HANOVER PARK, ILLINOIS.

SURFACE WATER SAMPLE DATA - SULFATE

F:\DWG\85057030\LIMNSL02.DWG PLOT 1=1

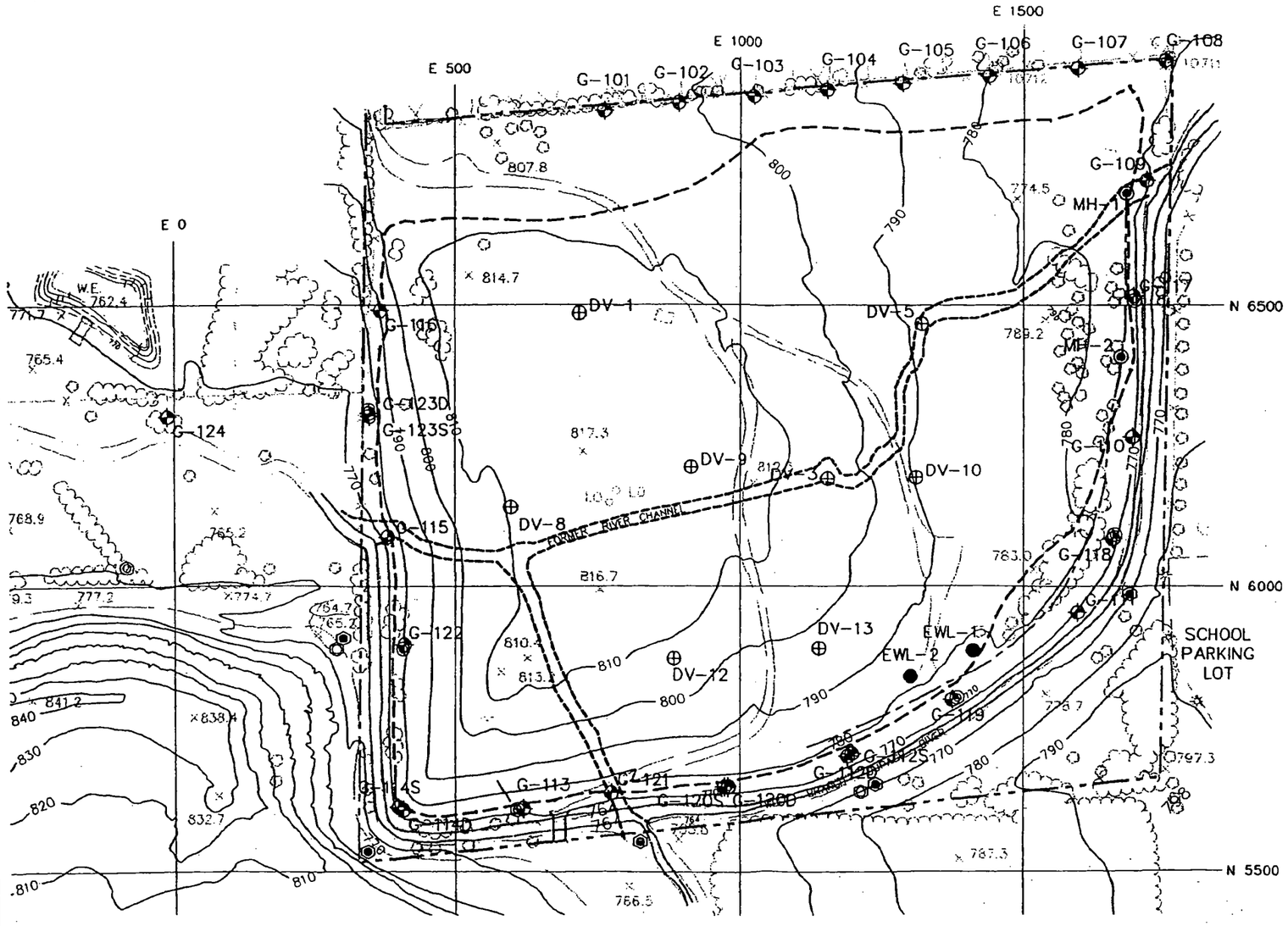




EMCON

DATE 10/31/95
DWN. PPV
APPR.
REVIS.
PROJECT NO.
85057030

FIGURE 3-6
MALLARD NORTH LANDFILL
HANOVER PARK, ILLINOIS
WATER LEVEL AND LANDFILL GAS DATA



LEGEND

- 790 — EXISTING CONTOUR 10'
- G-124 — MONITORING WELL LOCATION
- P-125 — LIQUID PROBE LOCATION
- EWL-1 — LEACHATE EXTRACTION WELL
- DV-12 — GAS VENT LOCATION
- BRIDGE
- PROPERTY LINE
- APPROXIMATE LIMIT OF REFUSE
- LEACHATE COLLECTION SYSTEM
- MH-1 — LEACHATE COLLECTION SYSTEM MANHOLE
- SHALLOW BORING (25')
- DEEP BORING (50')

NOTES:

1. TOPOGRAPHIC MAP PROVIDED BY MARTINEZ CORP. DATE OF CONTOURS 11/94.
2. WASTE LIMIT ALONG NORTHERN AND SOUTHEASTERN LANDFILL PERIMETER BASED UPON EXHIBIT 2.2 OF THE REPORT "MALLARD NORTH STABILIZATION STUDY" BY ENVIRODYNE ENGINEERS, INC., MAY 23, 1989. WASTE LIMIT ALONG THE REMAINING LANDFILL PERIMETER IS ESTIMATED FROM BORINGS AND TOPOGRAPHY AND MH-1 AND MH-2. SOME WASTE MAYBE FOUND BEYOND THE ESTIMATED LIMITS SHOWN.

200 0 200
SCALE FEET

EMCON

DATE 5/16/96
DWN PPV
APP
REV

MALLARD NORTH LANDFILL
HANOVER PARK, ILLINOIS

PROPOSED HYDROPUNCH SAMPLE LOCATIONS

FIGURE
6-1
PROJECT NO.
85057030.000

EXE-LISLE1/DATA: F:\DWG\85057030\LMNHS01.dwg Xrefs: BASEMAP
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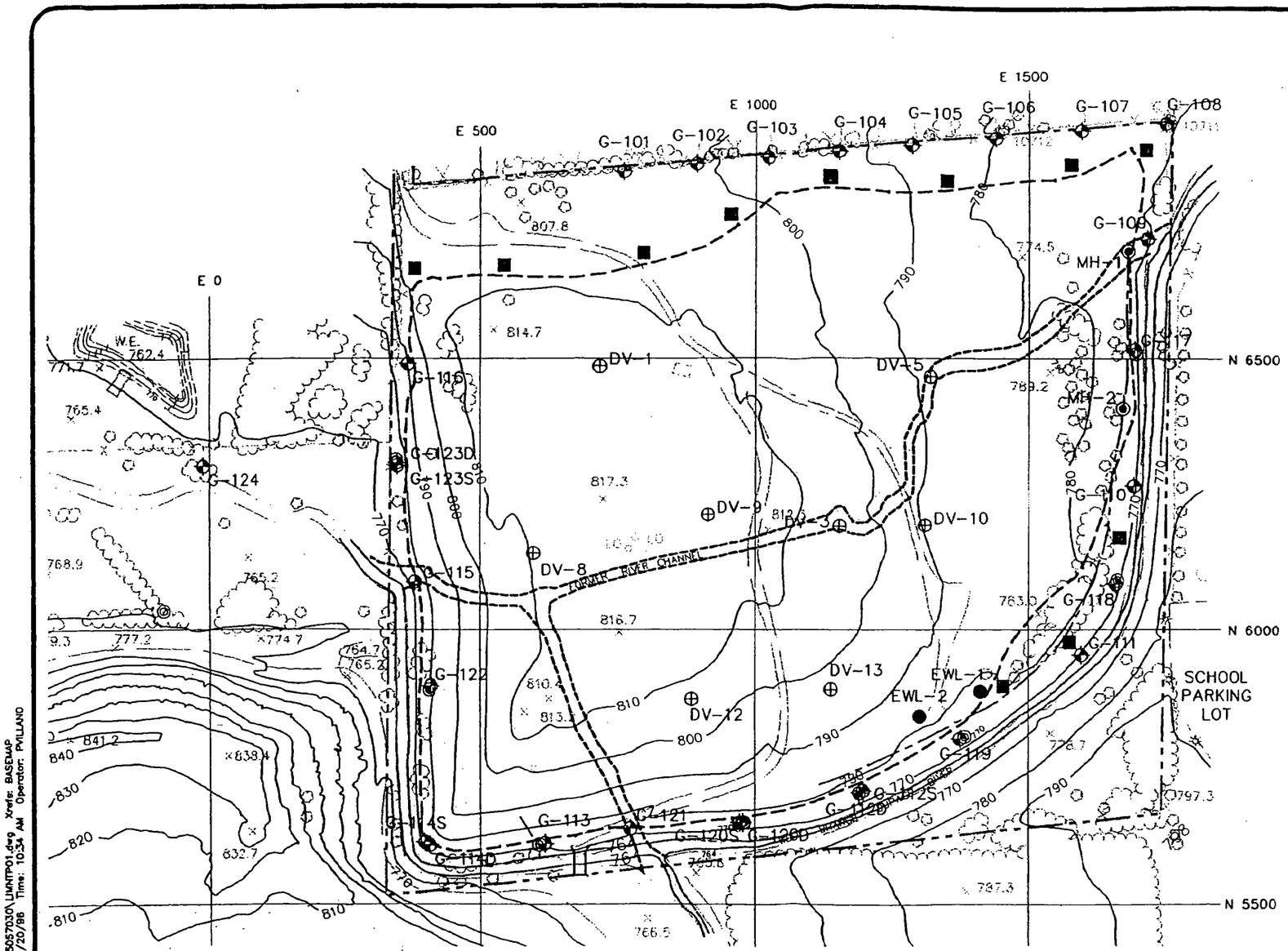

LEGEND

- 790 — EXISTING CONTOUR 10'
- G-124 — MONITORING WELL LOCATION
- P-125 — LIQUID PROBE LOCATION
- EWL-1 — LEACHATE EXTRACTION WELL
- DV-12 — GAS VENT LOCATION
- BRIDGE
- PROPERTY LINE
- APPROXIMATE LIMIT OF REFUSE
- LEACHATE COLLECTION SYSTEM
- MH-1 — LEACHATE COLLECTION SYSTEM MANHOLE
- TEST PIT

NOTES:

1. TOPOGRAPHIC MAP PROVIDED BY MARTINEZ CORP. DATE OF CONTOURS 11/94.
2. WASTE LIMIT ALONG NORTHERN AND SOUTHEASTERN LANDFILL PERIMETER BASED UPON EXHIBIT 2.2 OF THE REPORT "MALLARD NORTH STABILIZATION STUDY" BY ENVIRODYNE ENGINEERS, INC., MAY 23, 1989. WASTE LIMIT ALONG THE REMAINING LANDFILL PERIMETER IS ESTIMATED FROM BORINGS AND TOPOGRAPHY AND MH-1 AND MH-2. SOME WASTE MAYBE FOUND BEYOND THE ESTIMATED LIMITS SHOWN.

200 0 200
SCALE FEET

EMCON

DATE 5/16/96
DWN PPV
APP
REV

MALLARD NORTH LANDFILL
HANOVER PARK, ILLINOIS

PROPOSED TEST PIT LOCATIONS

FIGURE 6-2
PROJECT NO. 85057030.000

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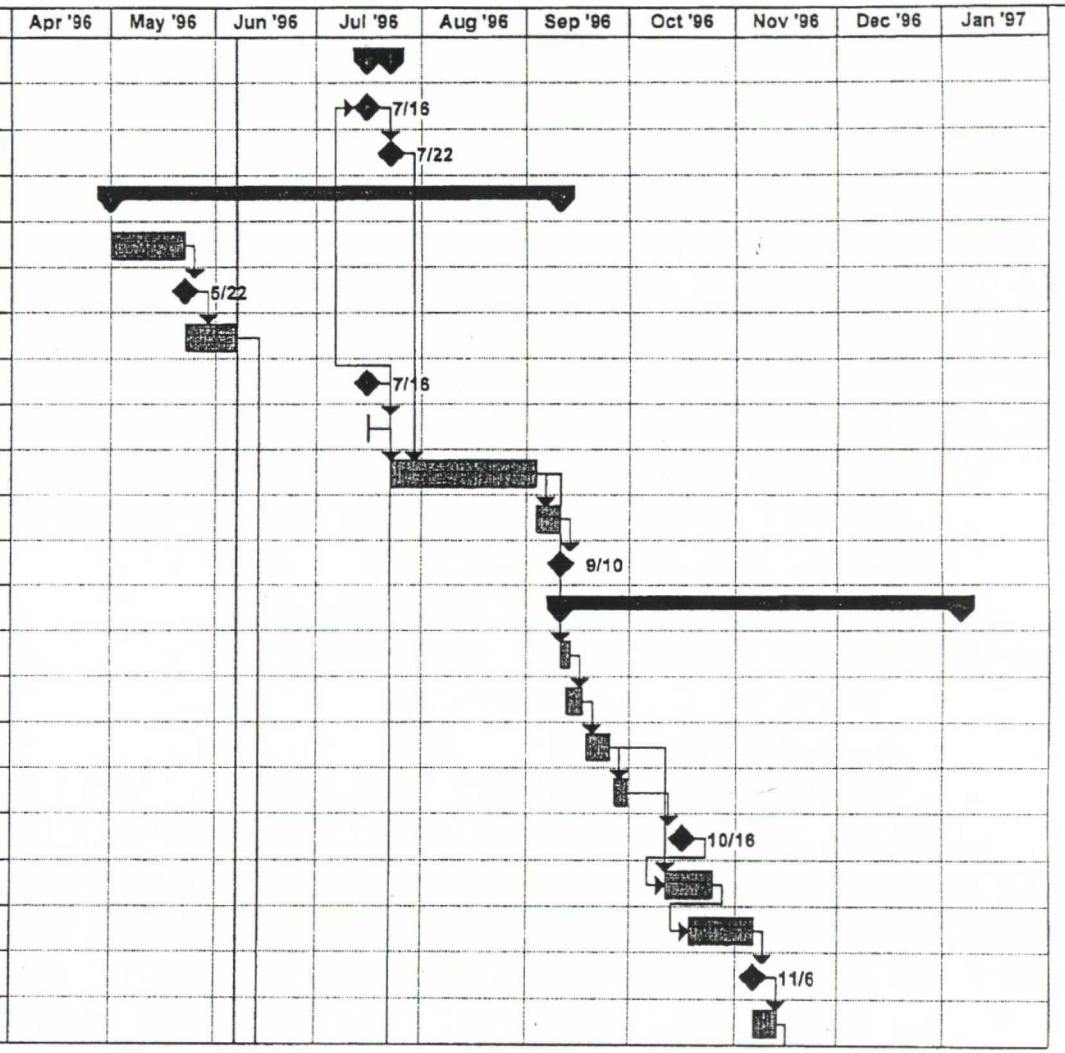
FPD 016115

Figure 7-1
Preliminary Project Schedule - Mallard North Landfill Investigation and Remedial Design

ID	Task Name	Start	Finish
1	**Voluntary Cleanup Application**	**7/16/96**	**7/22/96**
2	Submit Application	7/16/96	7/16/96
3	Application Approved	7/22/96	7/22/96
4	**Work Plan**	**5/1/96**	**9/10/96**
5	Work Plan Preparation	5/1/96	5/22/96
6	Draft to District	5/22/96	5/22/96
7	District Review	5/23/96	6/6/96
8	Work Plan Approved by District	7/16/96	7/16/96
9	Draft Work Plan to IEPA	7/16/96	7/16/96
10	IEPA Review	7/23/96	9/3/96
11	Work Plan Revisions	9/4/96	9/10/96
12	Final Work Plan	9/10/96	9/10/96
13	**Task 1 - Site Investigation**	**9/11/96**	**1/6/97**
14	HydroPunch Sampling	9/11/96	9/13/96
15	HydroPunch Data Received	9/12/96	9/17/96
16	Well Installation	9/18/96	9/25/96
17	Well Development/Sampling	9/26/96	9/30/96
18	Lab Data Received	10/16/96	10/16/96
19	Data Evaluation	10/11/96	10/25/96
20	Report Preparation	10/18/96	11/6/96
21	Draft Report to District	11/6/96	11/6/96
22	District Review	11/6/96	11/13/96



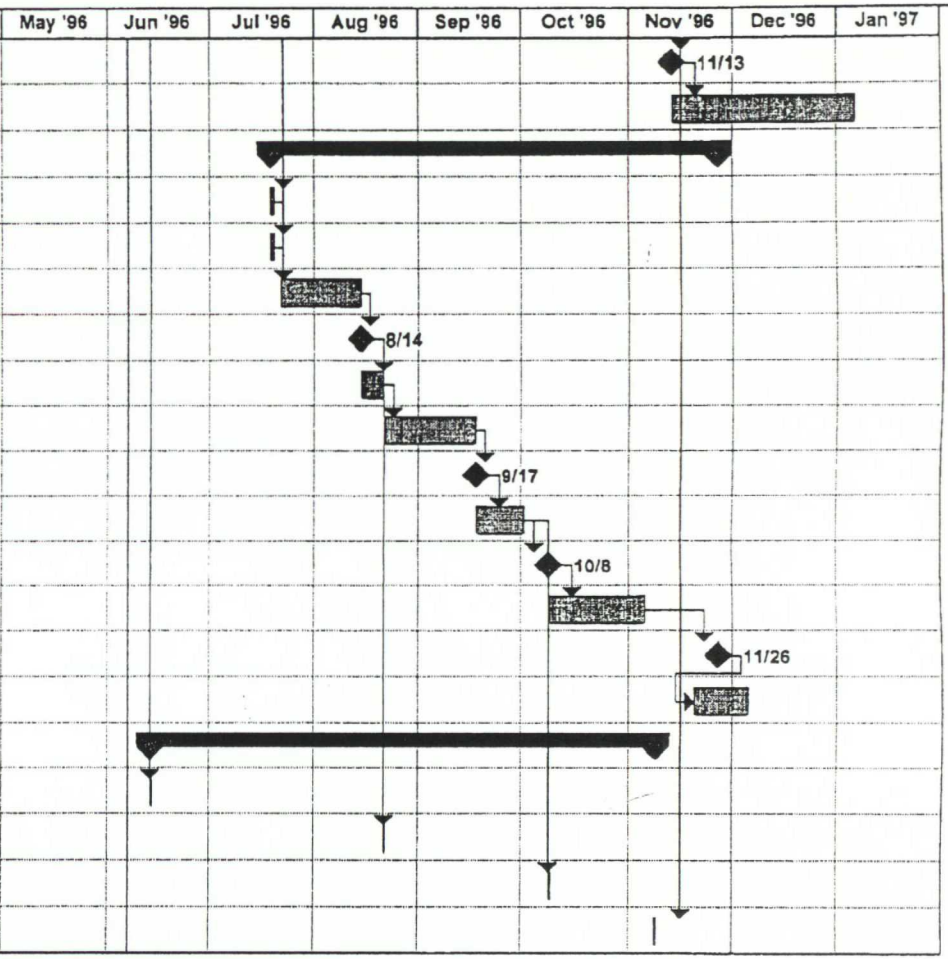
Project: 85057-030.000 Task 6
Date: 6/7/96

Task | Milestone | Summary | Progress

FPD 016116

Figure 7-1
Preliminary Project Schedule - Mallard North Landfill Investigation and Remedial Design

ID	Task Name	Start	Finish
23	Final Report to IEPA	11/13/96	11/13/96
24	IEPA Review	11/13/96	1/6/97
25	**Task 2 - Landfill Cover Design**	**7/19/96**	**11/26/96**
26	Test Pits	7/19/96	7/19/96
27	Cover Borings	7/19/96	7/19/96
28	Preliminary Design	7/22/96	8/14/96
29	Pre-Design Submittal	8/14/96	8/14/96
30	District Review	8/15/96	8/21/96
31	Pre-Final Design	8/22/96	9/17/96
32	Pre-Final Design Submittal	9/17/96	9/17/96
33	District Review	9/18/96	10/1/96
34	Final Design to IEPA	10/8/96	10/8/96
35	IEPA Review	10/9/96	11/5/96
36	Final Approved Design	11/26/96	11/26/96
37	**Task 3 - Bid Solicitation & Evaluation**	11/20/96	12/5/96
38	**Task 4 - Meetings**	**6/14/96**	**11/8/96**
39	Meeting No. 1	6/14/96	6/14/96
40	Meeting No. 2	8/22/96	8/22/96
41	Meeting No. 3	10/9/96	10/9/96
42	Meeting No. 4	11/8/96	11/8/96



Project: 85057-030.000 Task 6
Date: 6/7/96

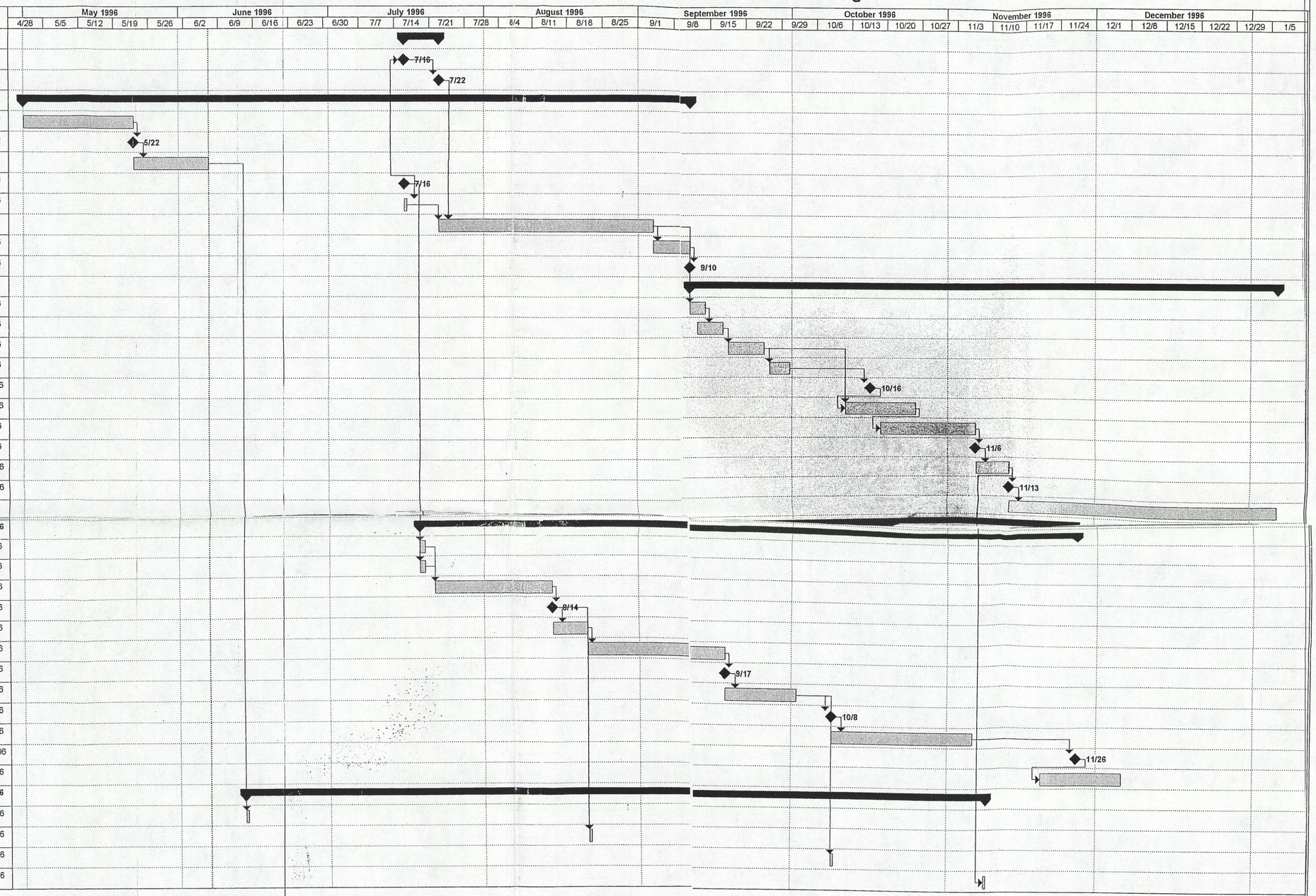
Task | Milestone | Summary | Progress

FPD 016117

Figure 7-1

Preliminary Project Schedule - Mallard North Landfill Investigation and Remedial Design

ID	Task Name	Start	Finish
1	**Voluntary Cleanup Application**	**7/16/96**	**7/22/96**
2	Submit Application	7/16/96	7/16/96
3	Application Approved	7/22/96	7/22/96
4	**Work Plan**	**5/1/96**	**9/10/96**
5	Work Plan Preparation	5/1/96	5/22/96
6	Draft to District	5/22/96	5/22/96
7	District Review	5/23/96	6/6/96
8	Work Plan Approved by District	7/16/96	7/16/96
9	Draft Work Plan to IEPA	7/16/96	7/16/96
10	IEPA Review	7/23/96	9/3/96
11	Work Plan Revisions	9/4/96	9/10/96
12	Final Work Plan	9/10/96	9/10/96
13	**Task 1 - Site Investigation**	**9/11/96**	**1/6/97**
14	HydroPunch Sampling	9/11/96	9/13/96
15	HydroPunch Data Received	9/12/96	9/17/96
16	Well Installation	9/18/96	9/25/96
17	Well Development/Sampling	9/26/96	9/30/96
18	Lab Data Received	10/16/96	10/16/96
19	Data Evaluation	10/11/96	10/25/96
20	Report Preparation	10/18/96	11/6/96
21	Draft Report to District	11/6/96	11/6/96
22	District Review	11/6/96	11/13/96
23	Final Report to IEPA	11/13/96	11/13/96
24	IEPA Review	11/13/96	1/6/97
25	**Task 2 - Landfill Cover Design**	**7/19/96**	**11/26/96**
26	Test Pits	7/19/96	7/19/96
27	Cover Borings	7/19/96	7/19/96
28	Preliminary Design	7/22/96	8/14/96
29	Pre-Design Submittal	8/14/96	8/14/96
30	District Review	8/15/96	8/21/96
31	Pre-Final Design	8/22/96	9/17/96
32	Pre-Final Design Submittal	9/17/96	9/17/96
33	District Review	9/18/96	10/1/96
34	Final Design to IEPA	10/8/96	10/8/96
35	IEPA Review	10/9/96	11/5/96
36	Final Approved Design	11/26/96	11/26/96
37	**Task 3 - Bid Solicitation & Evaluation**	11/20/96	12/5/96
38	**Task 4 - Meetings**	**6/14/96**	**11/8/96**
39	Meeting No. 1	6/14/96	6/14/96
40	Meeting No. 2	8/22/96	8/22/96
41	Meeting No. 3	10/9/96	10/9/96
42	Meeting No. 4	11/8/96	11/8/96



Project: 85057-030.000 Task 6
Date: 6/7/96

Task | Milestone | Summary | Progress

TABLES

FPD 016118

Table 2-1

Hydraulic Conductivity Data
Mallard North Landfill, Hanover Park, Illinois

Sample I.D	Location	Depth (cm)	Hydraulic conductivity (cm/sec)		Bulk density (g/cm^3)
			High	Low	
S-4	Fracture	4	2.99×10^{-3}	6.39×10^{-4}	0.99
D-7	Fracture	5	4.21×10^{-3}	6.85×10^{-4}	0.94
D-12	West side	5	4.39×10^{-5}	6.20×10^{-6}	1.29
D-2	West side	5	3.09×10^{-5}	1.10×10^{-6}	1.39
S-3	Pond area	7	1.20×10^{-3}	1.10×10^{-4}	1.13
S-14	Gully	7	2.10×10^{-6}	2.19×10^{-7}	2.01
S-9	Fracture	8	1.05×10^{-2}	9.00×10^{-7}	NA
S-13	Pond area	8	1.02×10^{-3}	6.00×10^{-5}	1.16
S-7	Non-fractured	8	4.75×10^{-4}	4.43×10^{-5}	1.17
S-8	Non-fractured	8	8.85×10^{-4}	9.43×10^{-5}	1.23
S-21	Area D	8	9.49×10^{-4}	5.15×10^{-4}	1.26
S-10	Fracture	8	5.15×10^{-5}	1.36×10^{-7}	1.26
S-19	Non-fractured	8	8.80×10^{-4}	2.58×10^{-4}	1.36
S-5	Dead area	8	3.62×10^{-3}	1.54×10^{-5}	1.38
S-11	Near fracture	8	5.76×10^{-4}	3.32×10^{-5}	1.41
S-12	Pond area	8	3.12×10^{-5}	1.00×10^{-7}	1.83
S-18	Coarse top	8	4.49×10^{-4}	5.00×10^{-8}	1.90
D-6	Pond area	20	5.66×10^{-4}	4.85×10^{-5}	1.16
S-20	Fracture	20	1.51×10^{-4}	1.00×10^{-7}	1.38
S-24	Area A	25	9.90×10^{-6}	1.70×10^{-6}	1.36
D-3	Central	25	6.00×10^{-7}	1.00×10^{-7}	1.83
D-13	West slope	30	6.36×10^{-4}	7.38×10^{-5}	1.64
S-15	Gully	30	NA	2.84×10^{-8}	1.79
D-9	South slope	30	5.58×10^{-8}	NA	1.94
S-23	Area A	30	3.34×10^{-8}	2.26×10^{-8}	1.74
S-22	Area D	35	5.84×10^{-8}	3.84×10^{-8}	1.63

Source: Booth and Price, 1988.
NA - not available.

Table 3-1

Monitoring Well Construction Details (7/3/89)
Mallard North Landfill, Hanover Park, Illinois

Location	North Coordinate	East Coordinate	Top of Rim	Top of PVC	Ground Elevation	Depth (ft bls)	Well Screen Interval
G-101	-10.41	393.86	806.01	805.96	804.10	47.0	762.10-757.10
G-102	-8.66	526.36	802.24	802.26	800.56	43.0	762.56-757.56
G-103	-9.37	660.58	798.72	798.83	797.84	41.0	761.84-756.84
G-104	-10.52	791.59	793.81	793.84	792.94	35.0	762.94-757.94
G-105	-10.64	924.92	787.79	787.75	786.41	29.0	762.41-757.41
G-106	-10.21	1077.36	781.50	781.50	780.43	23.0	762.43-757.43
G-107	-10.29	1232.36	777.83	777.84	776.06	19.0	761.80-756.80
G-108	-10.40	1386.79	773.67	773.51	771.57	19.0	757.57-752.57
G-109	-221.63	1333.71	771.19	771.27	770.44	18.0	761.94-752.44
G-110	-670.46	1268.18	770.97	770.94	771.32	29.0	767.32-742.32
G-111	-973.60	1144.02	772.70	772.52	769.80	26.0	
G-112S	-1184.24	728.50	776.12	775.82	774.44	24.0	755.44-750.44
G-112D	-1187.76	720.69	775.83	775.20	773.77	42.0	
G-113			774.98	774.91	772.73	22.0	
G-114S	-1203.39	-79.51	772.82	772.36	770.08	20.0	
G-114D	-1208.91	-70.97	773.25	772.86	771.17	42.0	734.17-729.17
G-115	-727.73	-53.65	774.59	774.48	772.10	22.0	755.10-750.10
G-116	-326.25	-30.11	792.69	792.63	790.70	38.0	757.10-752.10
G-117	-426.68	1293.99	772.95	772.09	770.57	22.5	753.07-748.07
G-118	-849.43	1218.54	771.35	771.26	769.42	22.5	751.92-746.92
G-119	-1106.98	911.86	776.71	776.47	775.08	33.5	746.58-741.58
G-120S	-1221.10	495.00	774.79	774.70	772.67	25.5	752.17-747.17
G-120D	-1221.21	498.15	774.71	774.72	772.69	52.0	725.69-720.69
G-121	-1226.44	141.70	774.72	774.65	772.79	25.0	752.79-747.79
G-122	-921.74	-42.04	781.82	781.70	779.87	28.0	756.87-751.87
G-123S	-510.19	-67.51	777.93	777.91	776.23	18.0	763.23-758.23
G-123D	-504.86	-67.39	777.94	777.73	776.44	35.0	742.44-741.44
G-124	-478.07	-425.02			764.70	32.2	737.50-732.50

Elevations in feet Mean Sea Level
Negative (-) Coordinates are South and West
ft bls - feet below land surface

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Table 3-2

Liquid Probe Construction Details
Mallard North Landfill, Hanover Park, Illinois

Location	North Coordinate	East Coordinate	Top of Casing	Top of PVC	Ground Elevation	Depth (ft bls)	Screened Interval
P-117A	-430.73	1293.70	772.82	772.67	770.59	60.0	712.59-710.59
P-117B	-433.79	1292.39	772.97	772.82	770.81	51.5	721.31-719.31
P-117C	-436.79	1291.78	772.95	772.39	770.85	40.0	732.85-730.85
P-118A	-839.61	1224.28	771.43	771.24	769.05	60.0	711.05-709.05
P-118B	-845.57	1220.77	771.42	771.43	769.76	48.0	723.76-721.76
P-118C	-842.79	1222.30	771.71	771.46	769.20	40.0	731.20-729.20
P-119A	-1104.18	925.64	776.20	776.16	774.13	65.0	711.13-709.13
P-119B	-1104.70	920.65	776.58	776.48	774.31	55.0	721.31-719.31
P-119C	-1105.30	916.36	777.01	776.82	774.93	45.0	731.93-729.93
P-120A	-1221.25	503.59	774.70	774.47	772.64	64.0	710.64-708.64
P-120C	-1221.27	499.94	775.05	774.71	772.69	39.0	735.69-733.69
P-121A	-1226.76	126.69	774.75	774.77	772.56	64.0	710.56-708.56
P-121B	-1227.78	131.51	774.59	774.55	772.61	51.0	723.61-721.61
P-121C	-1227.23	135.56	774.68	774.58	772.83	38.0	736.83-734.83
P-122A	-933.67	-47.43	781.03	780.73	779.05	68.0	713.05-711.05
P-122B	-929.25	-45.35	781.67	781.51	779.59	63.0	718-59-716.59
P-122C	-925.94	-44.47	781.54	781.45	779.84	33.0	748.84-746.84
P-123A	-496.10	-69.29	777.58	777.58	775.83	60.4	717.43-715.43
P-123B	-499.13	-67.72	778.05	777.93	776.32	45.3	733.02-731.02
P-125	-738.69	-523.70	769.14	769.11	767.00	30.0	745.30-743.10
P-126A	-320.80	-808.09	767.86	768.03	765.30	99.0	670.30-667.30
P-126B	-325.57	-808.15	767.88	768.04	765.30	69.5	700.70-698.50
P-126C	-329.84	-808.12	768.13	768.18	765.10	46.5	722.80-720.60
P-126D	-333.01	-808.20	767.98	768.11	765.10	30.0	738.10-735.90
P-127	-711.79	-889.99	769.61	769.67	767.50	28.0	745.00-742.80
P-128	-270.70	-1209.56	766.17	766.13	764.00	30.0	741.70-739.50
P-129	-700.89	-1257.80	767.04	766.95	764.90	24.0	744.60-742.40

Elevations in feet Mean Sea Level
Negative (-) Coordinates are South and West
Ground elevations measured 11/87.
ft bls - feet below land surface

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Table 3-3

Monitoring Wells in Which VOCs Have Been Detected
Mallard North Landfill, Hanover Park, Illinois

Chemical	G101	G102	G112D	G112S	G116	G119	G122	G123D
Benzene	X	X		X	X		X	X
Chlorobenzene		X						
1,2-Dichloroethane			X	X				
1,1,1-Trichloroethane				X	X		X	
1,1-Dichloroethane			X	X		X		
Chloroform						X		
1,1-Dichloroethylene				X				
trans-1,2-Dichloroethylene				X				
1,2-Dichloropropane				X				
Ethylbenzene				X				
Dichlorobromethane								
Tetrachloroethylene							X	
Trichloroethylene				X	X			
cis-1,2-Dichloroethylene			X	X		X		
Xylenes				X		X		

X - Chemical detected at least once in monitoring well.

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Table 3-4

Groundwater Sample Data Summary - G-112S (East)
Mallard North Landfill, Hanover Park, Illinois

Parameter	5/28/85	8/2/85	1/3/86	5/14/86	11/25/86	Class I Standard [1]
Benzene	<1.0	<1.0	<1.0	4.3	9	5
1,2-Dichloroethane	18.3	25.3	20.5	23.4	10.4	5
1,1-Dichloroethane	16.9	15.4	8.5	7.2	4.8	NE
trans-1,2-Dichloroethene	2.7	3.3	1.9	2.6	1.9	NE
1,2-Dichloropropane	1	1.1	<1.0	1.3	<1.0	5
Tetrachloroethene	2.4	1	1.5	<1.0	1.8	5
Trichloroethene	7.7	12.7	6.4	13.3	6.7	5
cis-1,2-Dichloroethene	41	37.1	19.9	40	19.6	70
Xylenes	2	2	<1.0	3.8	2.3	10000

Parameter	11/26/86	6/15/87	7/26/88	7/9/92	1/12/93	Class I Standard [1]
Benzene	1.5	<1.0	<1.0	<1.0	3.9	5
1,2-Dichloroethane	7.5	5	2.1	3	2.3	5
1,1-Dichloroethane	2	1.7	2.1	3.2	2.7	NE
trans-1,2-Dichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	NE
1,2-Dichloropropane	<1.0	<1.0	<1.0	<1.0	<1.0	5
Tetrachloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	5
Trichloroethene	2.6	6.5	2.7	<1.0	<1.0	5
cis-1,2-Dichloroethene	7.4	4.3	4	1.6	2.6	70
Xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	10000

All values in units of ug/L (parts per billion)
[1] Groundwater standard from 35 IAC Part 620.
NE - Not established.

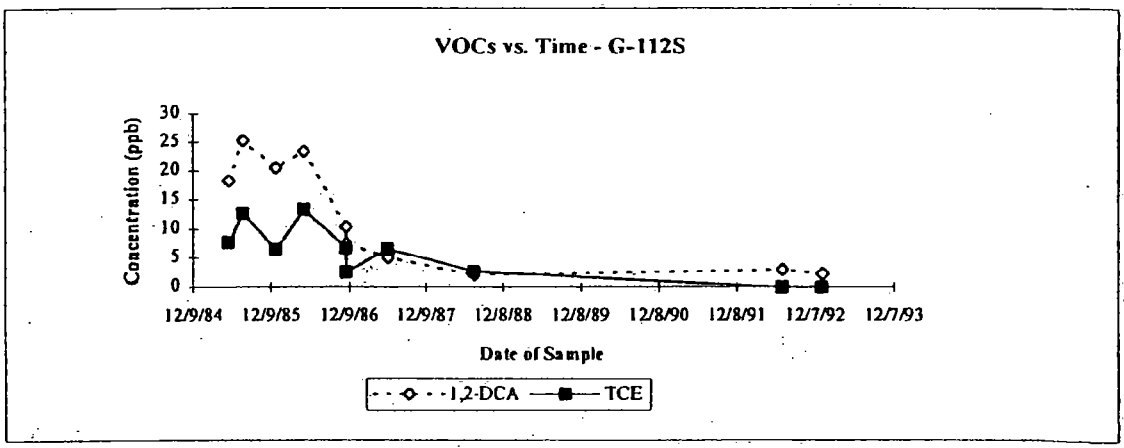

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Table 3-5

Inorganic Groundwater Quality Data
Mallard North Landfill, Hanover Park, Illinois

	Samples Above Class I Std./Total No. of Samples						
Well No.	Chloride	Iron	Lead	TDS	Sulfate	Boron	Cadmium
G-101	0/22	0/18	0/22	16/22	19/19	0/17	0/4
G-102	0/22	0/18	0/22	0/22	0/19	0/17	0/4
G-103	0/22	0/18	0/22	0/22	0/20	0/17	1/4
G-104	0/22	2/19	1/22	0/22	0/20	0/18	0/4
G-105	0/23	1/20	0/23	0/23	0/21	0/19	1/3
G-106	0/23	12/20	0/23	0/23	0/21	0/19	0/3
G-107	0/22	0/19	1/22	0/22	0/20	0/18	1/3
G-108	0/22	0/19	1/22	1/22	7/20	0/18	0/3
G-109	9/21	12/18	3/21	18/21	5/19	0/17	0/3
G-110	0/22	0/19	1/22	0/22	17/20	0/18	1/3
G-111	0/21	0/18	3/21	13/21	19/19	0/17	1/3
G-112S	10/20	5/17	1/20	13/21	1/19	1/15	0/3
G-112D	9/18	3/15	0/18	10/18	0/16	0/14	0/3
G-113	0/23	7/19	2/23	0/23	3/20	0/18	1/4
G-114S	13/24	3/20	2/24	13/24	2/21	1/19	1/4
G-114D	17/25	5/22	2/25	11/25	0/23	1/21	0/3
G-115	6/23	7/20	1/23	7/23	1/21	0/19	0/3
G-116	5/22	11/19	2/22	22/22	13/20	0/17	2/3
G-117	2/16	0/16	1/16	4/16	10/16	0/16	NA
G-118	0/15	0/15	1/15	4/15	11/15	0/15	NA
G-119	3/15	0/15	0/15	1/15	0/15	0/15	1/1
G-120S	5/17	7/15	1/15	4/15	0/15	0/15	NA
G-120D	0/16	0/16	1/16	1/16	0/16	0/16	NA
G-121	1/16	0/16	1/16	1/16	0/16	0/16	0/1
G-122	15/15	12/15	0/14	15/15	0/15	13/15	NA
G-123S	0/16	2/16	0/16	7/16	5/16	0/16	NA
G-123D	0/15	0/15	0/15	2/15	1/15	0/15	NA
G-124	0/15	0/15	1/15	0/15	0/15	0/15	NA

NA - Not analyzed.
Most recent Cadmium data from May 1985.

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Table 3-6

Leachate Sample Analytical Data
Mallard North Landfill, Hanover Park, Illinois

Constituent	*Date of Sample*		
	2/18/94	3/1/94 [1]	3/1/94 [2]
Benzene	0.014	0.0382	0.026
Chlorobenzene	0.0219	0.0198	0.017
Chloroethane	0.0127	<0.010	0.008 J
1,2-Dichlorobenzene	0.0015	0.0015	NA
1,4-Dichlorobenzene	0.0143	0.0137	NA
Ethylbenzene	0.0643	0.0578	0.043
Styrene	NA	NA	0.017
Toluene	0.0121	0.0252	0.018
Xylenes	0.0676	0.0584	0.055
Tetrahydrofuran	NA	NA	0.43
Total	0.208	0.215	0.176 [3]

Data in units of mg/L.
NA - not analyzed.
[1] analyzed by National Environmental Testing, Inc.
[2] analyzed by Heritage Laboratories, Inc.
[3] does not include tetrahydrofuran.

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Table 6-1

Cover Design Submittals
Mallard North Landfill, Hanover Park, Illinois

PRELIMINARY DESIGN

- Basis of Design Report
- 50% Construction Drawings
- Technical Specifications Outline

PRE-FINAL DESIGN

- Draft Design Report
- 90% Construction Drawings
- Draft Contract Documents and Technical Specifications
- Draft Construction Quality Assurance Plan
- Draft Operations and Maintenance Manual
- Draft Construction Schedule
- Draft Construction and O&M Cost Estimates
- Draft Construction Health and Safety Plan
- Draft Stormwater Management Report, If Required
- Draft Waste Disruption Permit, If Required

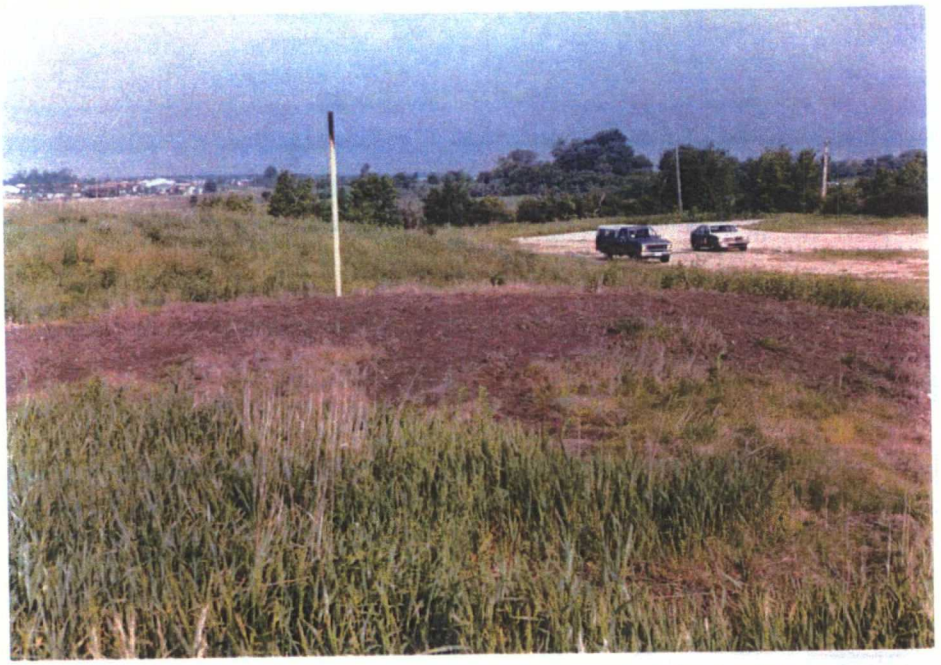
FINAL DESIGN

- Finalize Pre-final Design deliverables

Table 6-2

Cover Design - Preliminary Drawing List
Mallard North Landfill, Hanover Park, Illinois

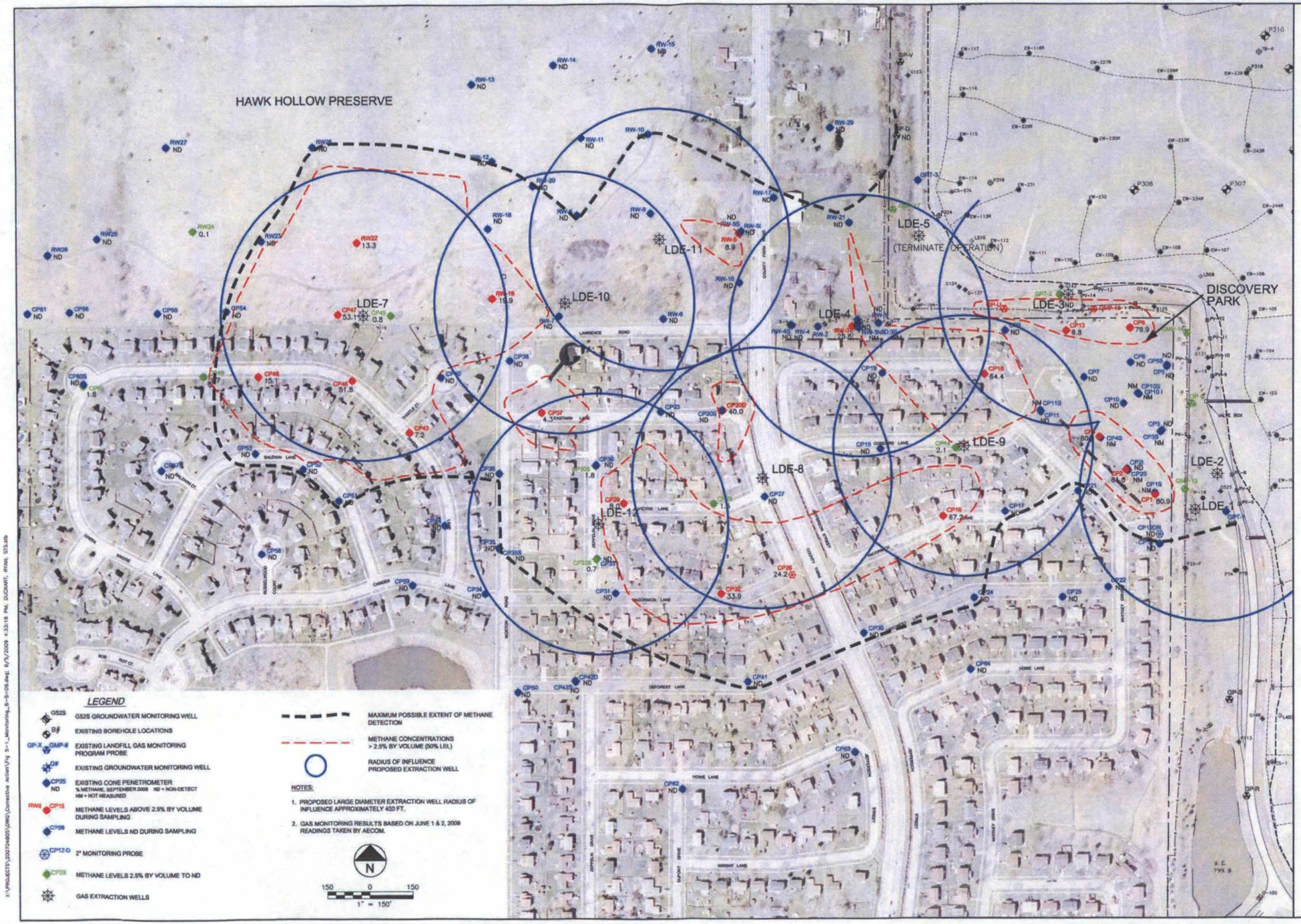
1. Existing Site Conditions (scale 1" = 100')
2. Final Grading Plan (scale 1" = 100')
3. Waste Relocation Plan (scale 1" = 100')
4. Gas Collection System Plan (scale 1" = 100')
5. Leachate Collection System Plan (scale 1" = 100')
6. Surface Water Management System Plan (scale 1" = 100')
7. Landscaping Plan (scale 1" = 100')
8. Landscaping Plan (scale 1" = 100')
9. Landfill Cross-Section (scale 1" = 100'H/10'V)
10. Landfill Cross-Section (scale 1" = 100'H/10'V)
11. Perimeter Access Road Profile (scale 1" = 100'H/10'V)
12. Perimeter Access Road Profile/Details (scale 1" = 100'H/10'V)
13. Final Cover Details
14. Gas Collection System Details
15. Leachate Extraction Well/ Sump Details
16. Leachate Collection System Details
17. Drainage Details



MALLARD N. 5/85
L.F. GAS DOME - KILLING VEGETATION

MALLARD N. 5/85
DEAD VEGETATION

MALLARD N. 5/85
VEGETATION DYING OFF → AGAIN!



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MALLARD LAKE LANDFILL
OFF SITE GAS COLLECTION SYSTEM UPDATE - JUNE 2009
DuPAGE COUNTY
HANOVER PARK, ILLINOIS
CURRENT METHANE LEVELS AND GAS EXTRACTION PLAN

Issued

Rev	Date	Description

Designed:

Drawn:	RLD	6/5/2009
Checked:	MGR	6/5/2009
Approved:	MGR	6/5/2009

PROJECT NUMBER
200704805

SHEET REFERENCE NUMBER
FIG A

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