M E M O R A N D U M

TO: Interested Water Utility

FROM: Iowa Department of Natural Resources

RE: Utility Notification of Subsurface Contamination - DNR Form 542-1531

An area contaminated with petroleum compounds may exist within your present or future water distribution system. The petroleum-based chemicals of concern include benzene, toluene, ethylbenzene, xylenes and other compounds found in gasoline, diesel and waste oil. These chemicals entered the ground from a release at the site referenced on the second line on DNR Form 542-1531. They are often transported in the direction of groundwater flow.

The main concern is for plastic drinking water lines within the current or predicted contamination zone (see attached form and maps). Where sufficient concentrations are present in soil or groundwater, plastic water line can degrade and benzene can diffuse through pipe walls and contaminate the water supply. This information is sent to you in response to present regulations (Iowa Administrative Code 135).

A risk-based corrective action (RBCA) assessment has been done at the site—either a Tier 1 or a Tier 2. At Tier 1, only a few samples are taken to try to identify the maximum contamination. If more assessment is needed, a Tier 2 is done where several samples are taken to see how far soil and groundwater contamination has spread. Therefore, if the attached maps are from Tier 1, they probably will show only a few soil and groundwater samples. If these maps are from Tier 2, they will show how far the actual contamination plume(s) have spread and computer-simulated contamination plume(s).

A standard DNR utility notification form (DNR Form 542-1531) and site map(s) are enclosed. The data may prove useful in planning if you change or expand your water distribution system near the referenced site.

The table on the front side of this form contains the maximum contamination levels found in the soil and groundwater at this site. Below these numbers is a row containing the Iowa Department of Natural Resources' Tier 1 levels.

IOWA DEPARTMENT OF NATURAL RESOURCES
UTILITY COMPANY NOTIFICATION

Complete form and submit it to: the utility company which supplies water service to the area **and** to the Underground Storage Tank Section, Iowa Department Of Natural Resources, 502 East Ninth Street, Des Moines, IA 50319-0034.
(PLEASE TYPE OR PRINT)

Responsible Party Name: RSC Phone: (515) 388 - 4534

Tank Site Name: RSC LUST No.: 9ltb93 Registration No.: 8811019

Address of Tank Site: 101 N Main Street City: Roland Zip Code: 50236

Utility Company Name: City of Roland Phone: (515) 388 - 4861

Address: P O Box 288 City: Roland State: IA Zip Code: 50236

LEGAL DESCRIPTION OF PROPERTY

SW ¼ SW ¼ SW ¼ Section No. 14

Township No. 85 N Range No. 23 W County Story

	Maximum Concentrations of Chemicals of Concern Remaining At the Site					
	Group 1				Group 2: Total Extractable Hydrocarbons	
	Benzene	Toluene	Ethylbenzene	Xylenes	Diesel	Waste Oil
Soil (ppm)	37.9	484	210		2400	
Tier 1 levels	1.8	120	43		10,500	
Groundwater (ppb)	12000	16000	4300	18000	140000	<20000
Tier 1 levels	290	7,300	3,700	73,000	75,000	40,000

Provide site maps showing the extent of soil and groundwater contamination in relation to all existing plastic water lines within 200 feet of the source of contamination. As described on the back of this form.

1. Will active corrective action for soil and/or groundwater to plastic water lines be required at the site? [ ] no [x] yes
2. If yes, what is the proposed corrective action? Air sparging

I certify that the foregoing information is true and correct to the best of my knowledge and agree to provide any additional information the department or utility company may need concerning this site.

Print Name, Address and Phone Number of Certified Groundwater Professional

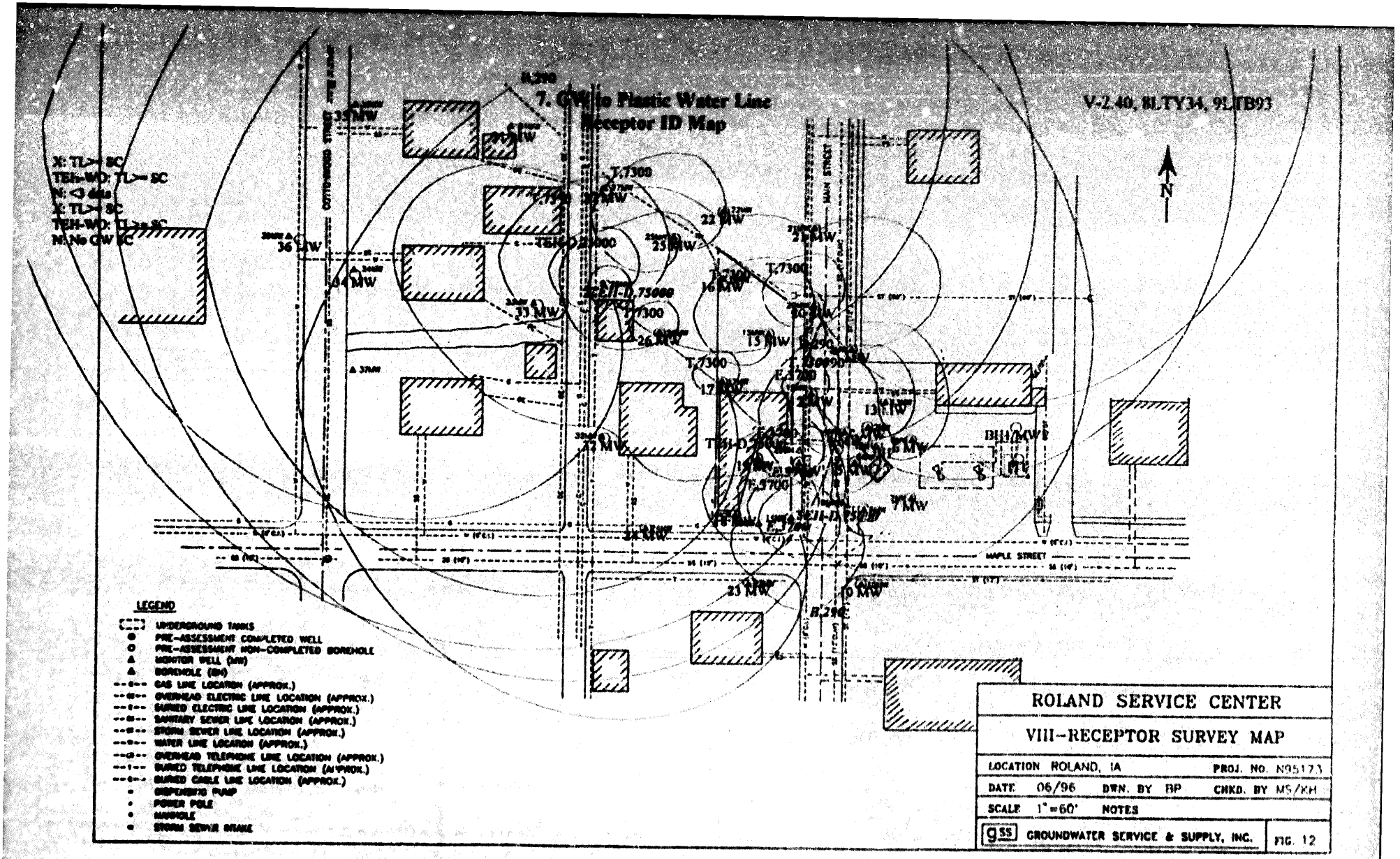
Groundwater Service & Supply, Inc.
2701 Convenience Boulevard
Ankeny, IA 50021
(515) 964 - 0304

Signature: _____

Date: _____

June 1998

DNR FORM 542-1531



ROLAND SERVICE CENTER

VIII–RECEPTOR SURVEY MAP

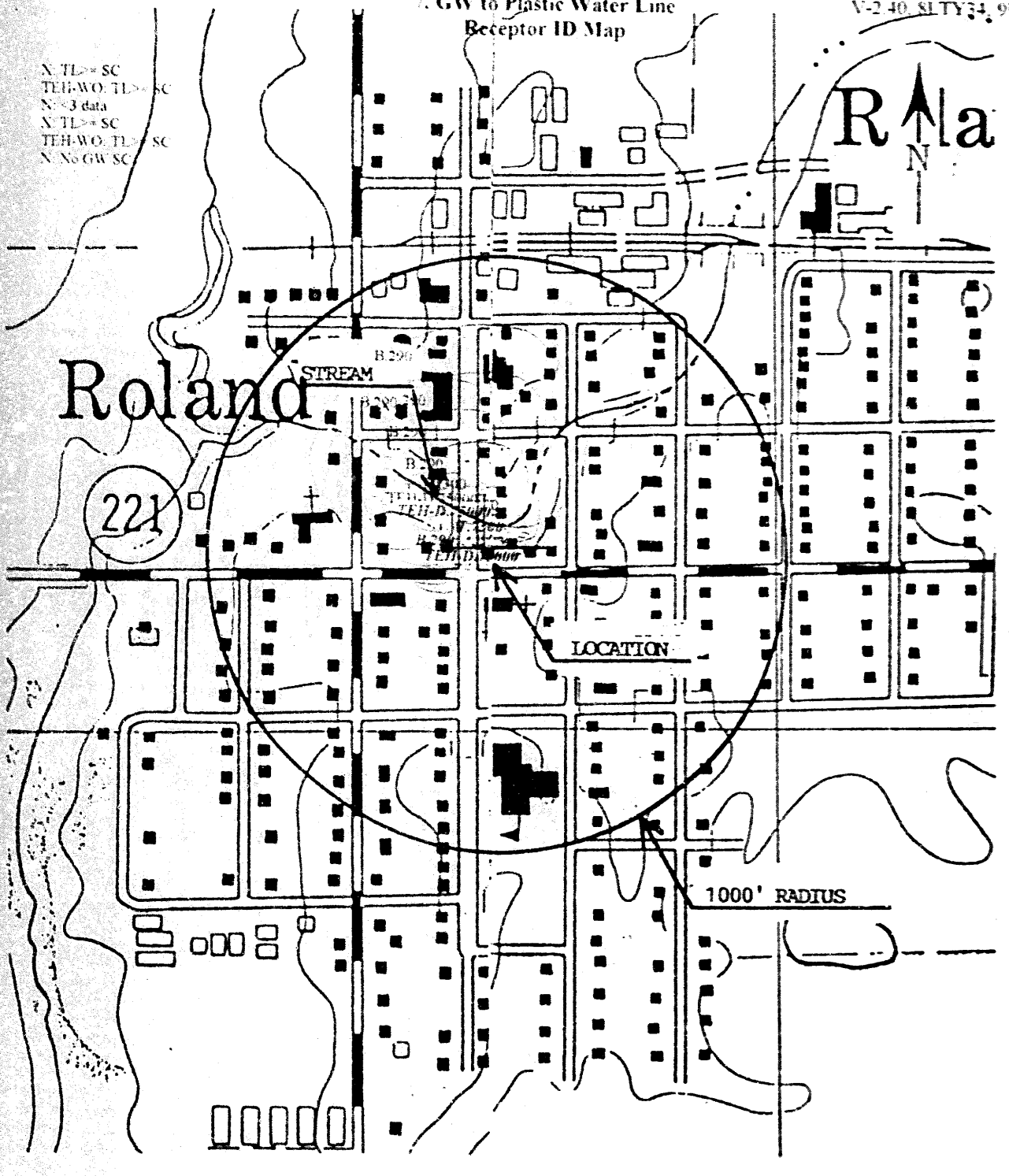
LOCATION ROLAND, IA			PROJ. NO. N95173
DATE 06/96	DWN. BY BP		CHKD. BY MS/KH
SCALE 1"=60'	NOTES		
GSS GROUNDWATER SERVICE & SUPPLY, INC.			FIG. 12

1 inch = 92.7 feet

7. GW to Plastic Water Line
Receptor ID Map

V-2 40 SLTY34 9LTB93

N: TL>= SC
TEH-WO: TL>= SC
N: <3 data
N: TL>= SC
TEH-WO: TL>= SC
N: No GW SC



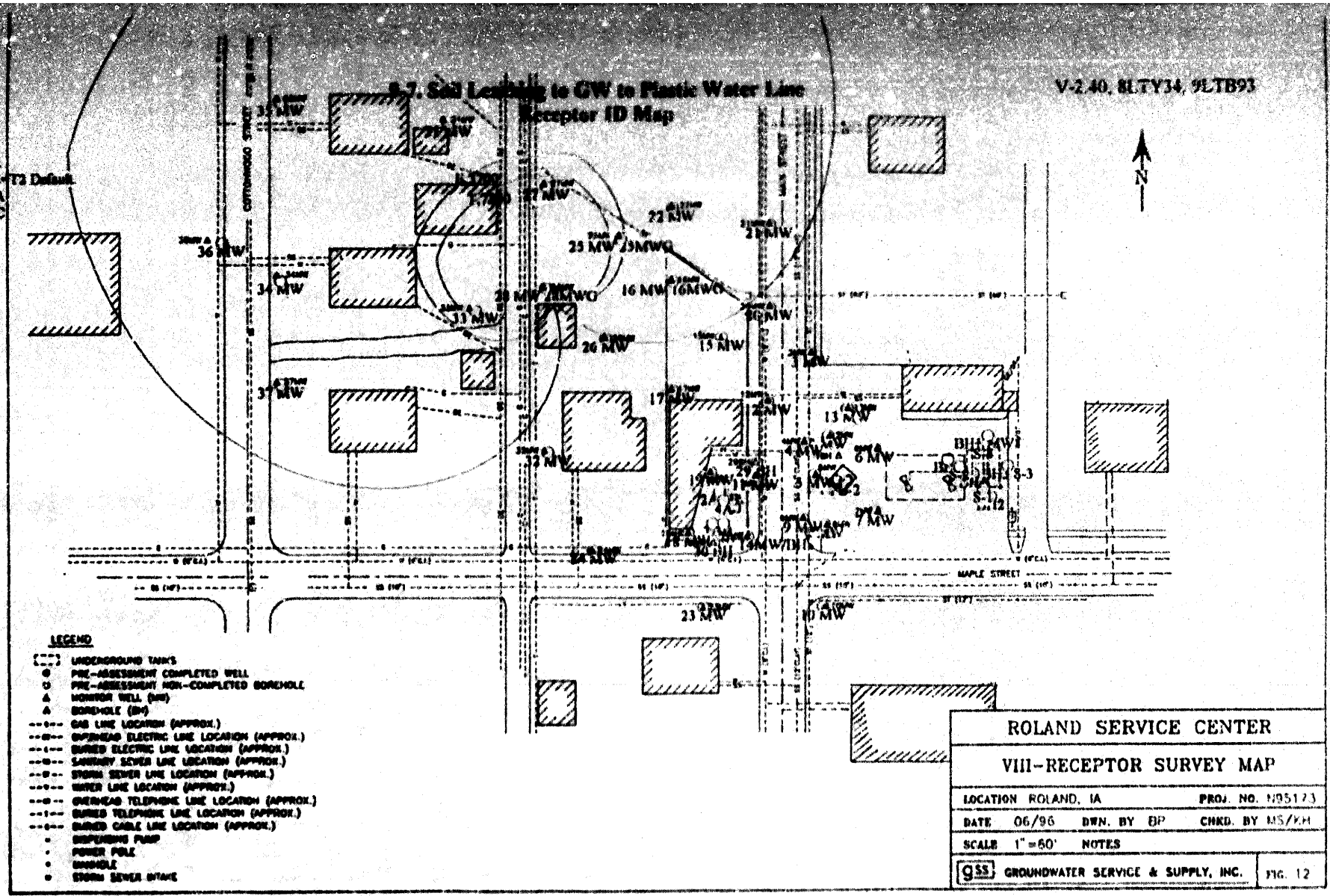
1 inch = 500 feet

CASEY'S GENERAL STORES, INC.		
LOCATION ROLAND, IA		PROJ. NO. A91851
DATE	DWN. BY RP	CHKD. BY
SCALE 1"=500'	NOTES	
gss GROUNDWATER SERVICE & SUPPLY, INC.		FIG.

8.7. Soil Leaching to GW to Plastic Water Line
Receptor ID Map

V-2.40, 8LTY34, 9LTB93

X: N/A
D: SS<<T2 Default
W: N/A
N: N/C



ROLAND SERVICE CENTER

VIII-RECEPTOR SURVEY MAP

LOCATION ROLAND, IA		PROJ. NO. N95173
DATE 06/96	DWN. BY BP	CHKD. BY MS/KH
SCALE 1"=60'	NOTES	
GSS GROUNDWATER SERVICE & SUPPLY, INC.		FIG. 12

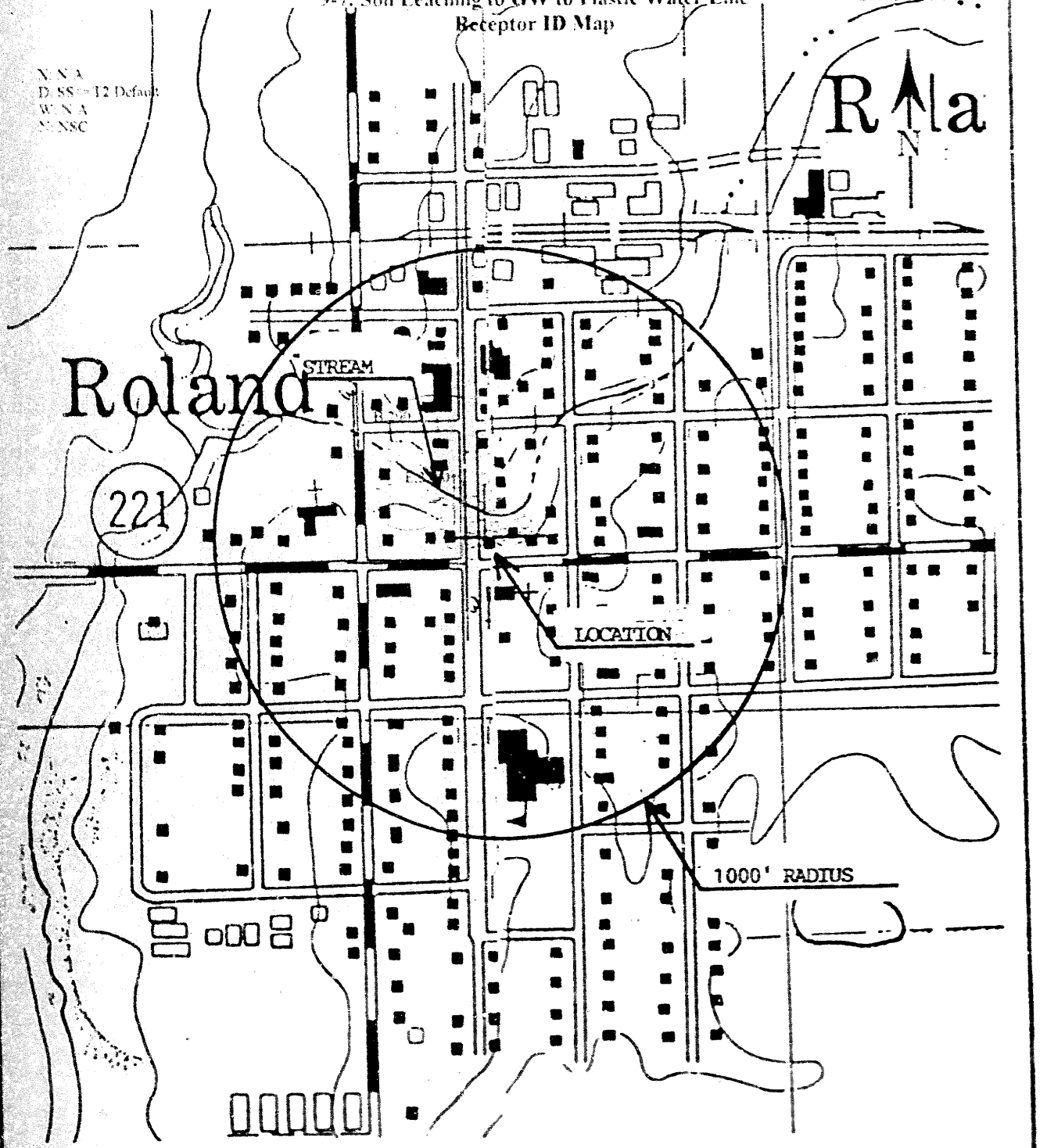
1 inch = 92.7 feet

9-7, Soil Leaching to GW to Plastic Water Line

Receptor ID Map

V-2 40, SLTY 34, 9LTB95

N: N/A
D: SS = 12 Default
W: N/A
C: NSC



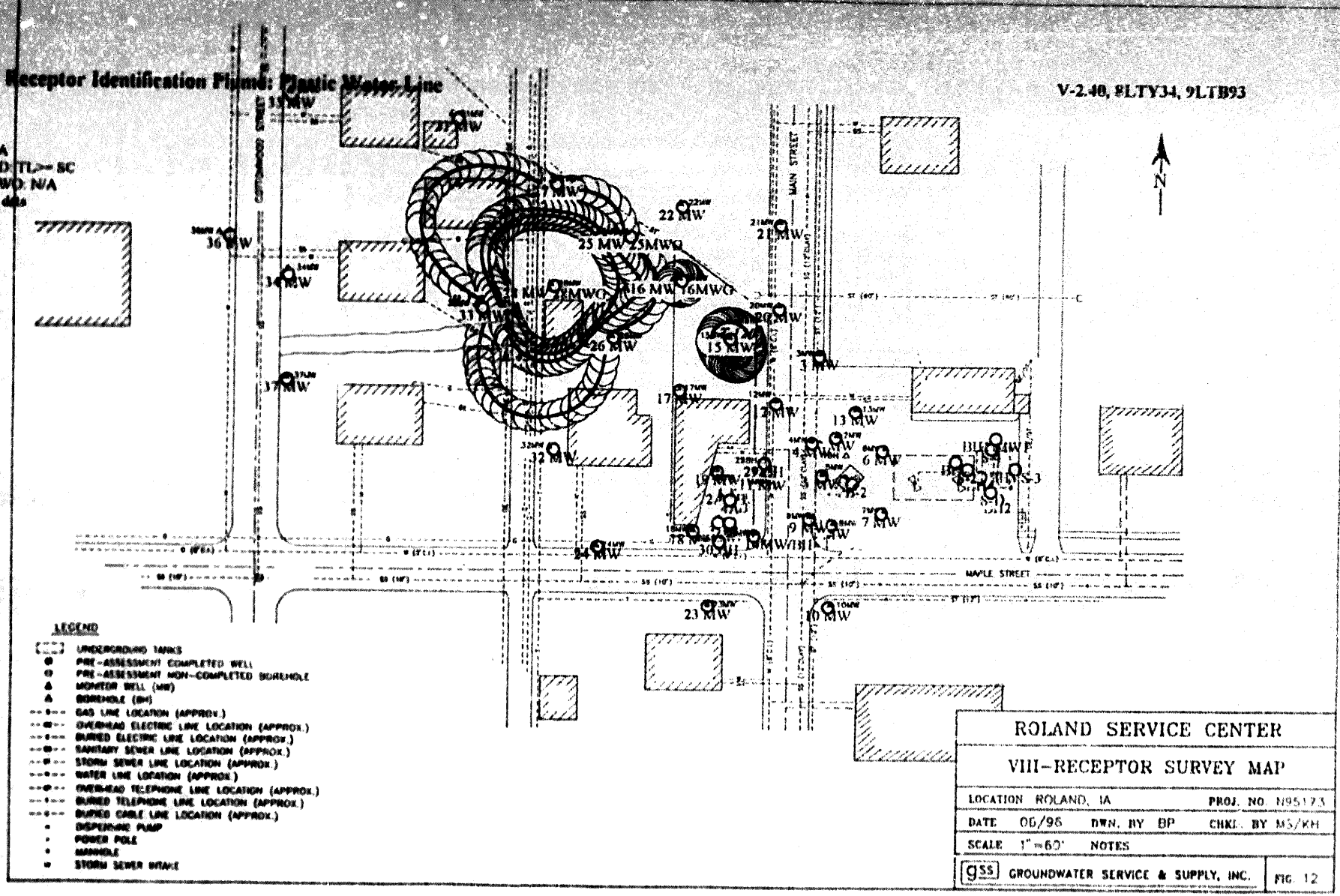
1 inch = 500 feet

CASEY'S GENERAL STORES, INC.			
LOCATION ROLAND, IA			PROJ. NO. A91H51
DATE	DWN. BY RP	CHKD. BY	
SCALE 1"=500'	NOTES		
gss GROUNDWATER SERVICE & SUPPLY, INC.			FIG.

Soil Receptor Identification Plume: Plastic Water Line

V-2.40, 8LTY34, 9LTB93

X: N/A
TEH-D TL>= SC
TEH-WD: N/A
N: <3 dds



ROLAND SERVICE CENTER

VIII–RECEPTOR SURVEY MAP

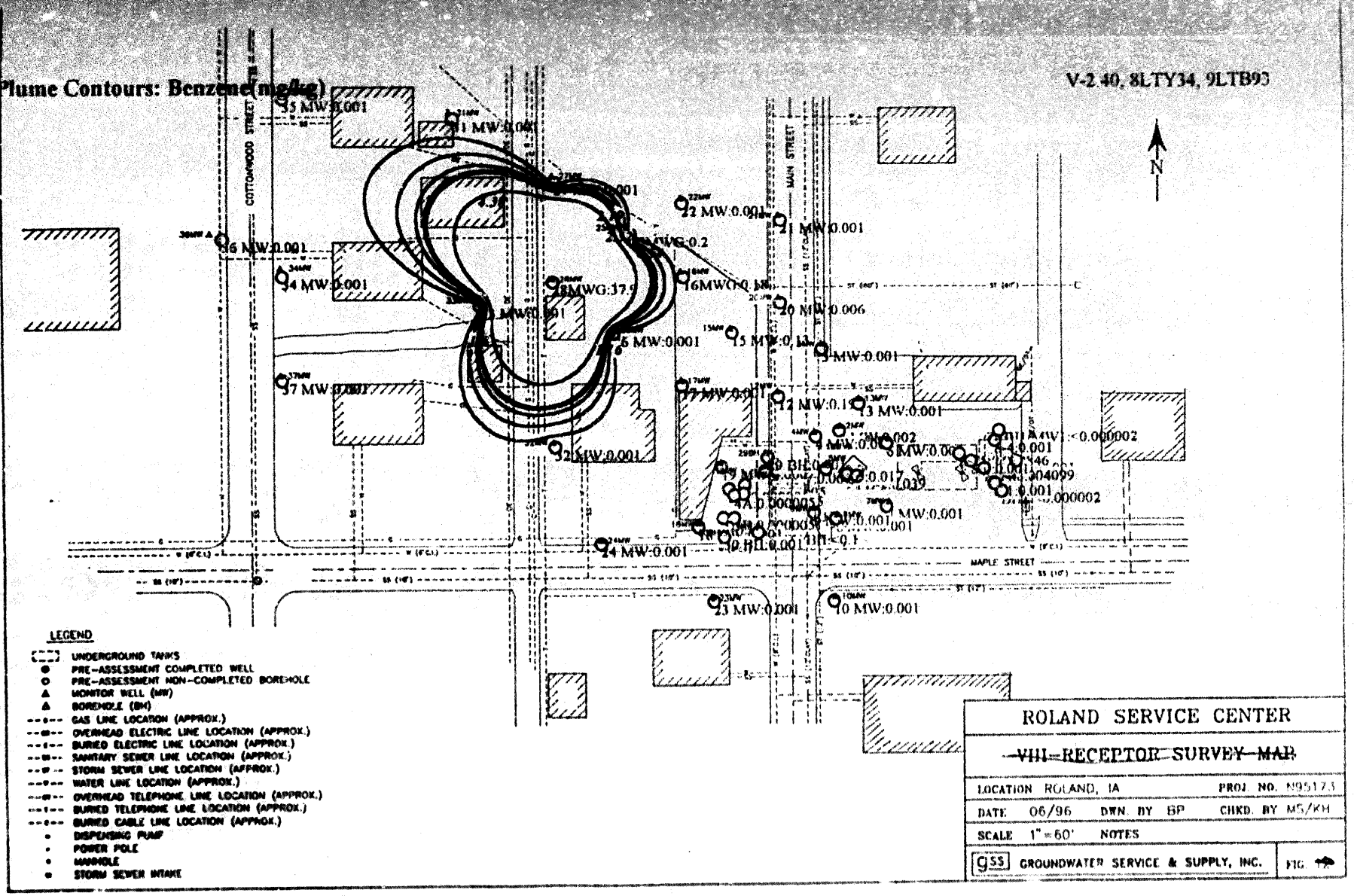
LOCATION ROLAND, IA		PROJ. NO. N95173
DATE 06/96	DWN. BY BP	CHKD. BY MS/KH
SCALE 1"=60'	NOTES	

GSS GROUNDWATER SERVICE & SUPPLY, INC. FIG. 12

1 inch = 92.7 feet

Soil Plume Contours: Benzene (mg/kg)

V-2.40, 8LTY34, 9LTB93

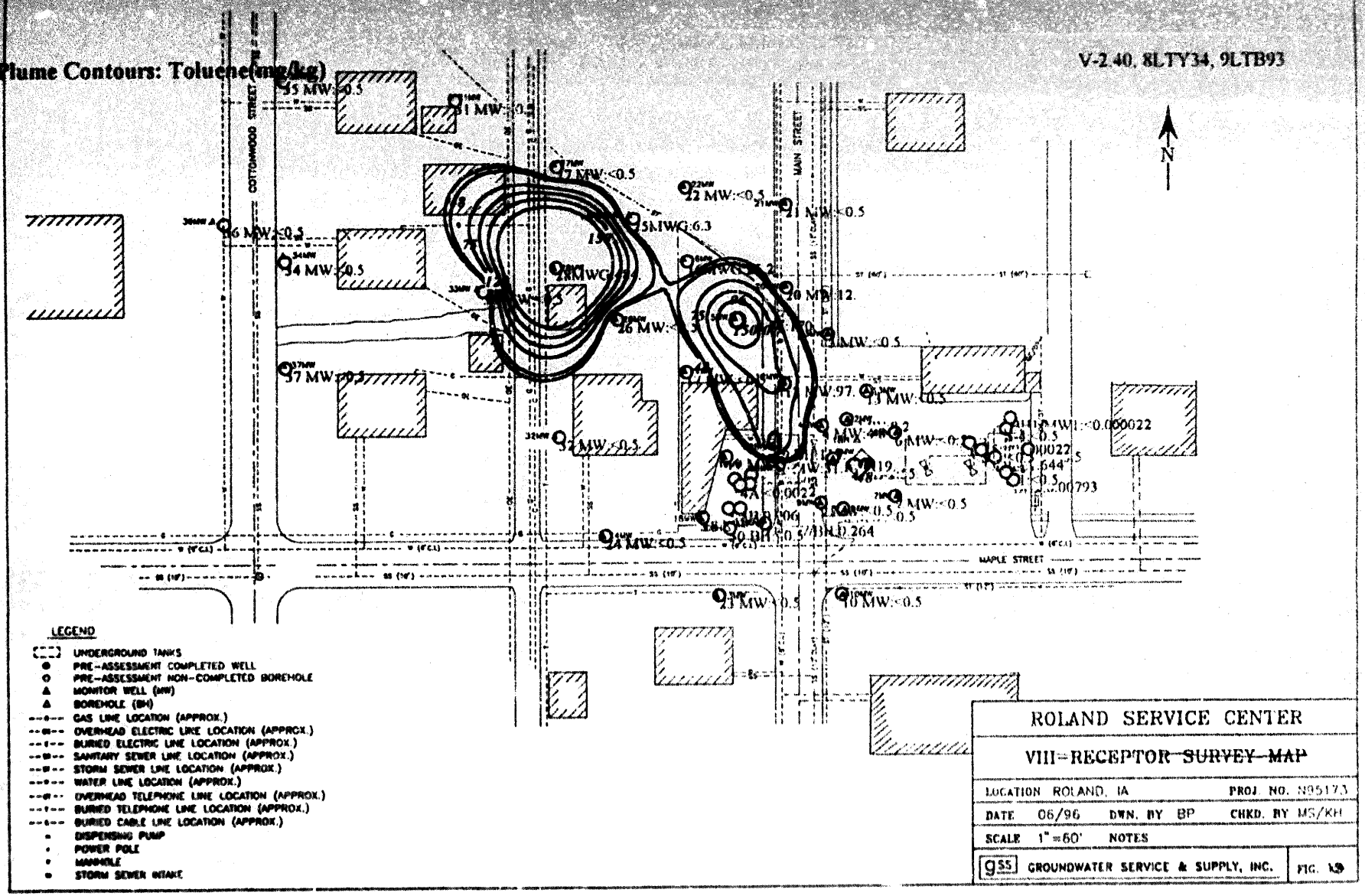


1 inch = 92.7 feet

Fig 20

Soil Plume Contours: Toluene(mg/kg)

V-2.40, 8LTY34, 9LTB93

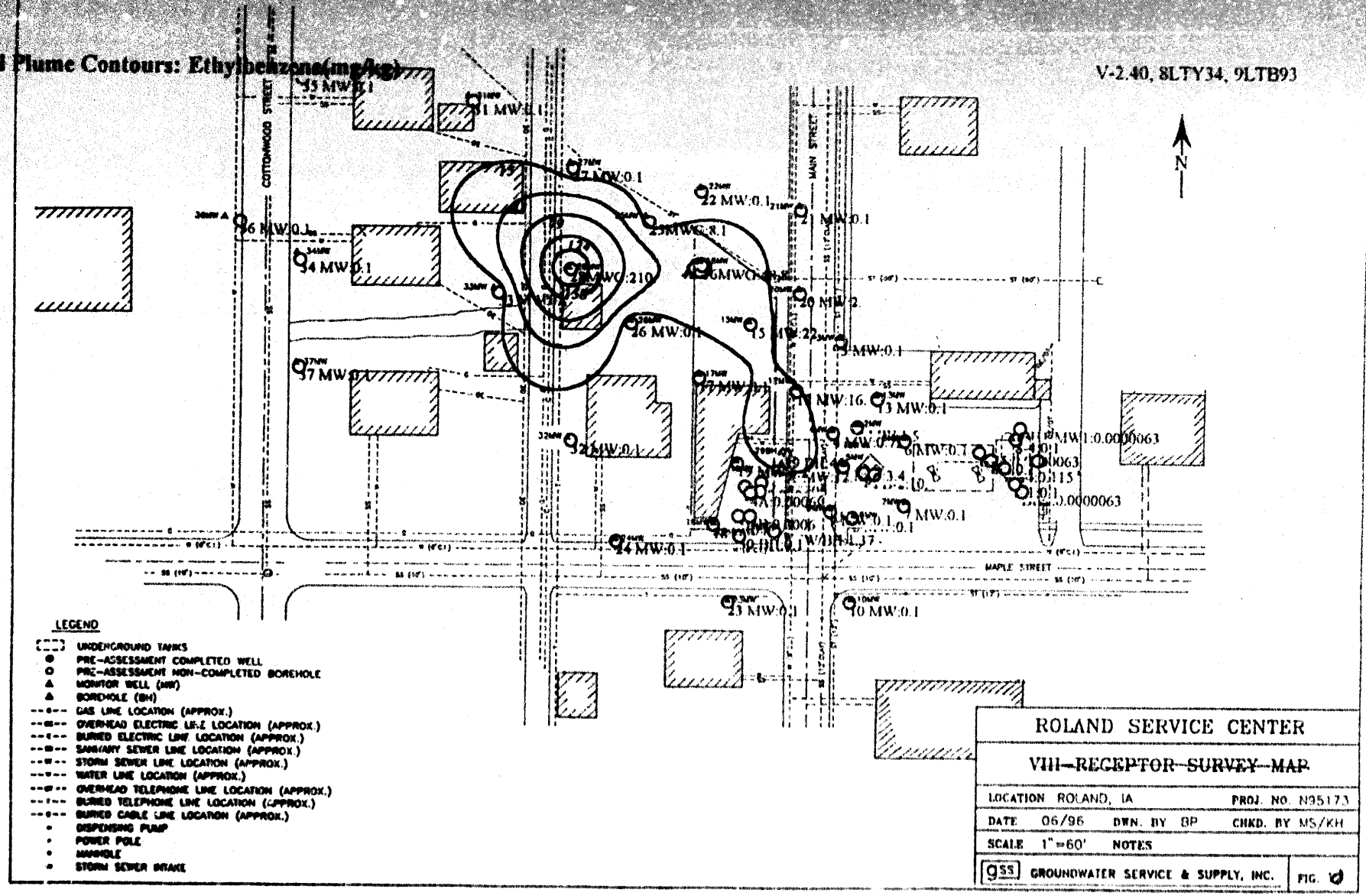


1 inch = 92.7 feet

1-5 2a

Soil Plume Contours: Ethylbenzene (mg/kg)

V-2.40, 8LTY34, 9LTB93



ROLAND SERVICE CENTER

VIII-RECEPTOR SURVEY MAP

LOCATION	ROLAND, IA	PROJ. NO.	N95173
DATE	06/96	DWN. BY BP	CHKD. BY MS/KH
SCALE	1"=60'	NOTES	

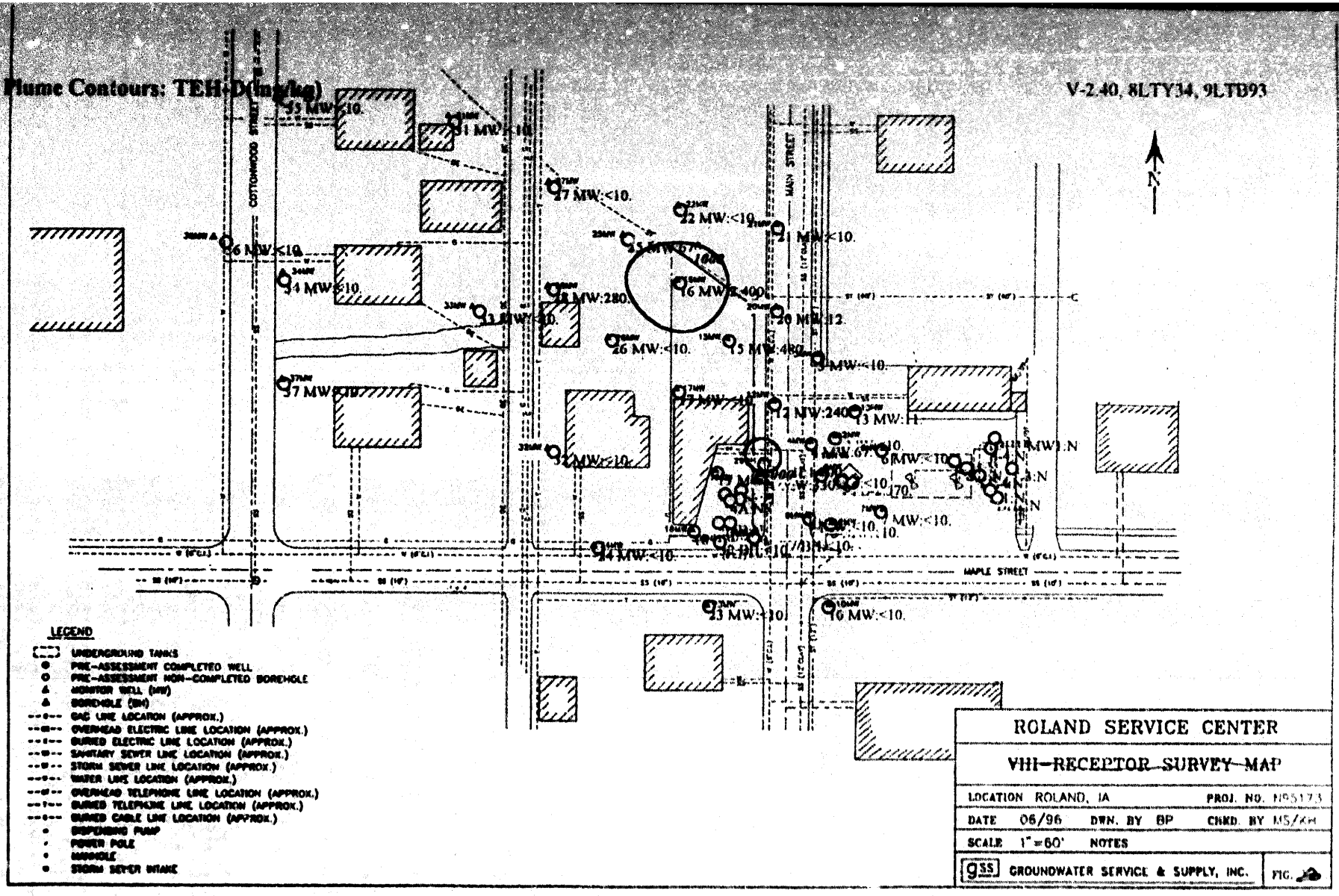
GSS GROUNDWATER SERVICE & SUPPLY, INC. FIG. 8

1 inch = 92.7 feet

Fig 206

Soil Plume Contours: TEH-D (mg/kg)

V-2.40, 8LTY34, 9LTB93



ROLAND SERVICE CENTER

VHI-RECEPTOR SURVEY MAP

LOCATION ROLAND, IA			PROJ. NO. N95173
DATE 06/96	DWN. BY BP	CHKD. BY MS/KH	
SCALE 1"=60'	NOTES		

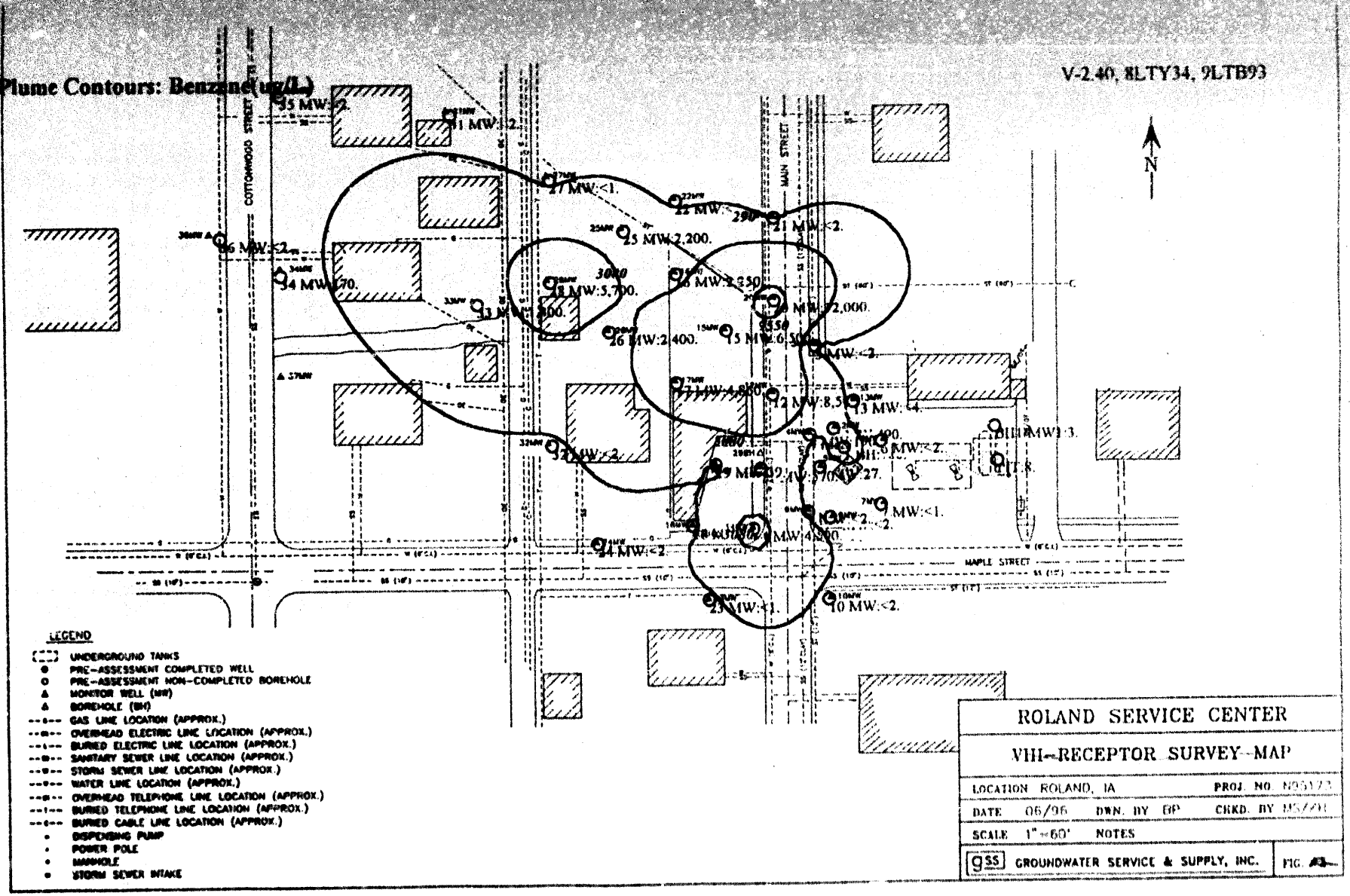
GSS GROUNDWATER SERVICE & SUPPLY, INC. FIG.

1 inch = 92.7 feet

Fig 20c

GW Plume Contours: Benzene(ug/L)

V-2.40, 8LTY34, 9LTB93



ROLAND SERVICE CENTER

VIII-RECEPTOR SURVEY-MAP

LOCATION ROLAND, IA PROJ. NO. 955173

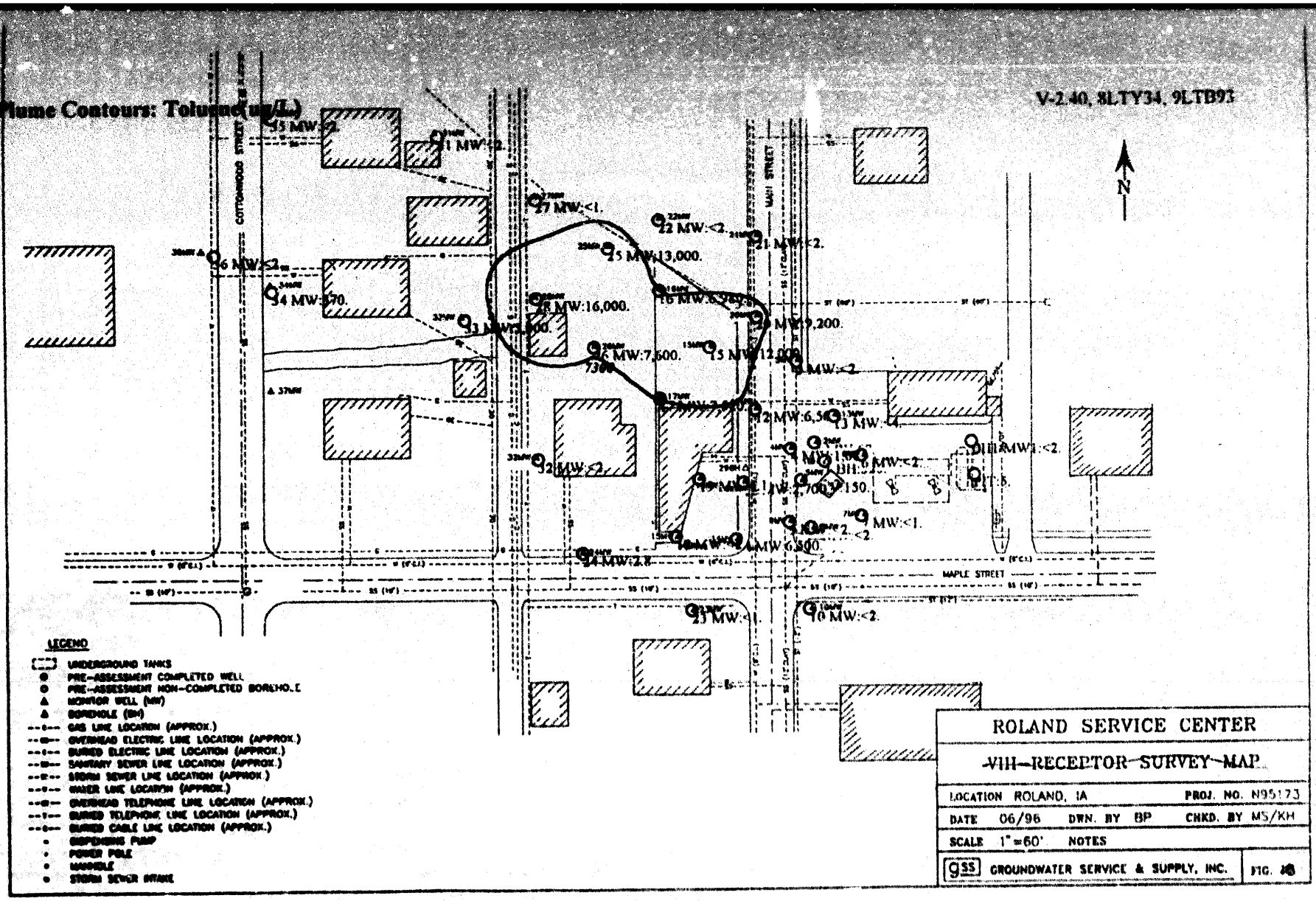
DATE 06/96 DWN. BY BP CHKD. BY MS/DH

SCALE 1"=60' NOTES

GSS GROUNDWATER SERVICE & SUPPLY, INC. FIG. #2

1 inch = 92.7 feet

Fig 21

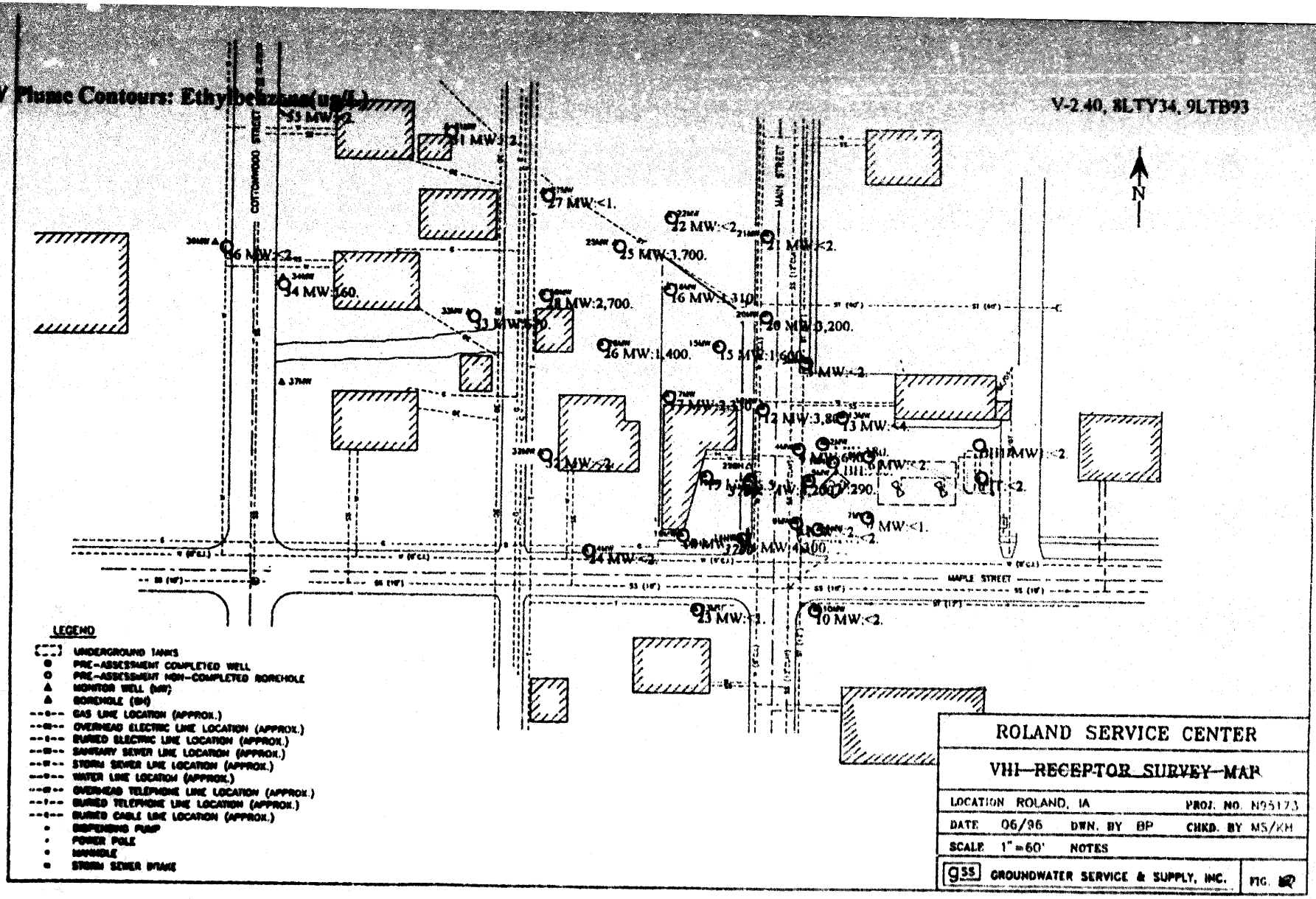


1 inch = 92.7 feet

Fig 2.9

GW Plume Contours: Ethylbenzene(ug/L)

V-2.40, 8LTY34, 9LTB93



ROLAND SERVICE CENTER

VHI-RECEPTOR SURVEY MAP

LOCATION	ROLAND, IA	PROJ. NO.	N95173
DATE	06/96	DWN. BY BP	CHKD. BY MS/KH
SCALE	1" = 60'	NOTES	

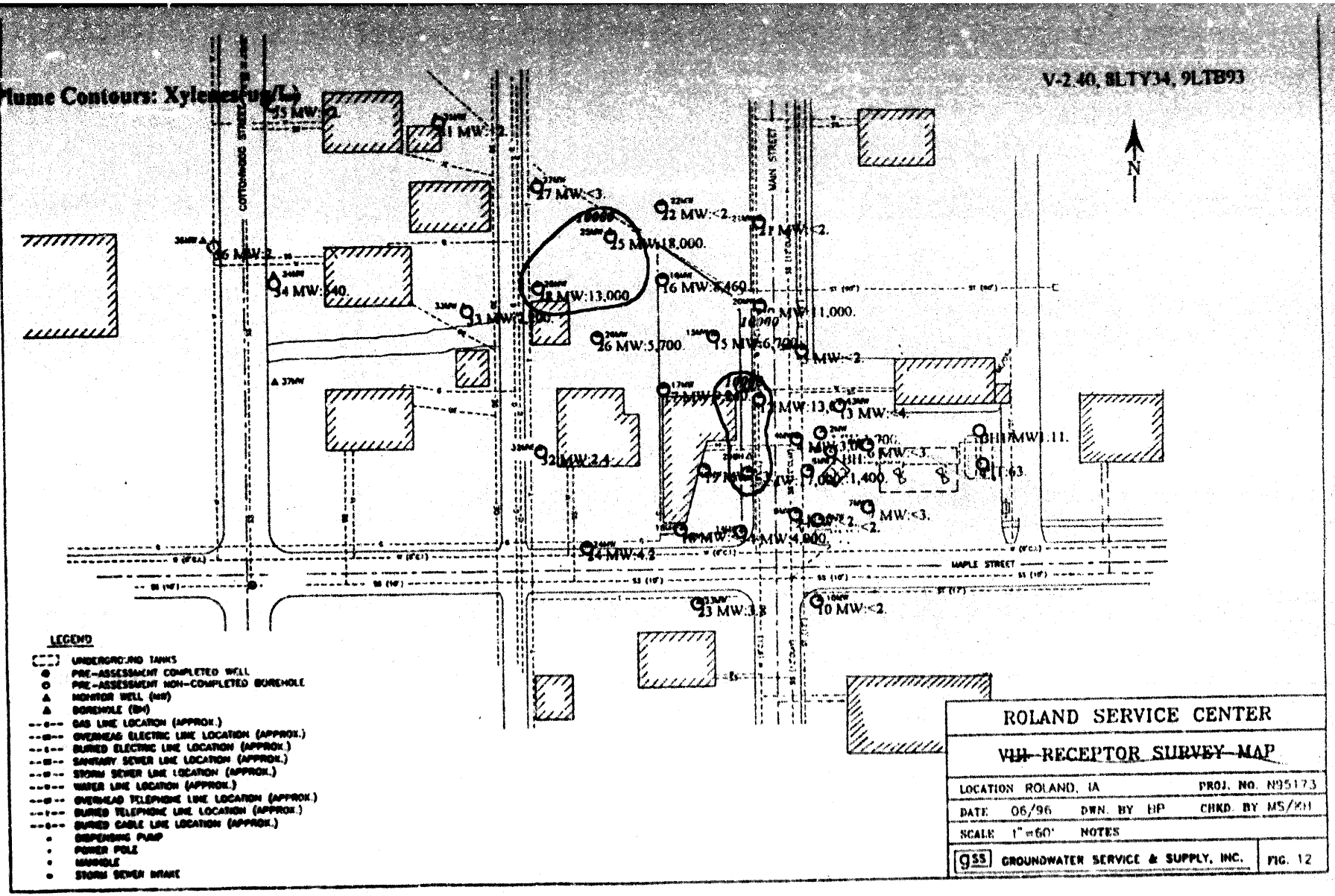
GSS GROUNDWATER SERVICE & SUPPLY, INC. FIG. 8?

1 inch = 92.7 feet

Fig 21b

GW Plume Contours: Xylenes (ug/L)

V-2.40, 8LTY34, 9LTB93



ROLAND SERVICE CENTER

VIII-RECEPTOR SURVEY MAP

LOCATION ROLAND, IA PROJ. NO. N95173

DATE 06/96 DWN. BY HP CHKD. BY MS/KH

SCALE 1"=60' NOTES

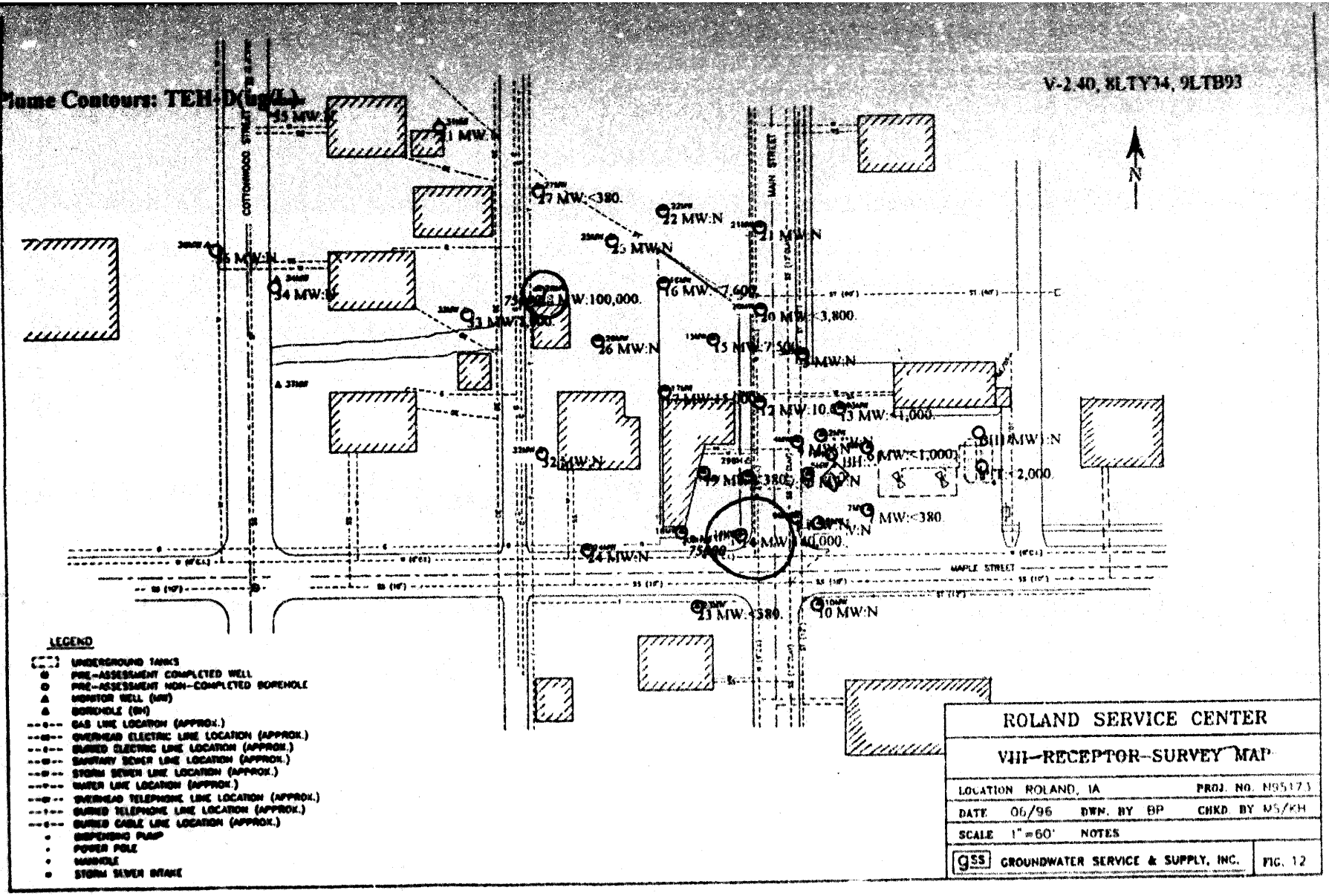
GSS GROUNDWATER SERVICE & SUPPLY, INC. FIG. 12

1 inch = 92.7 feet

Fig 2.c

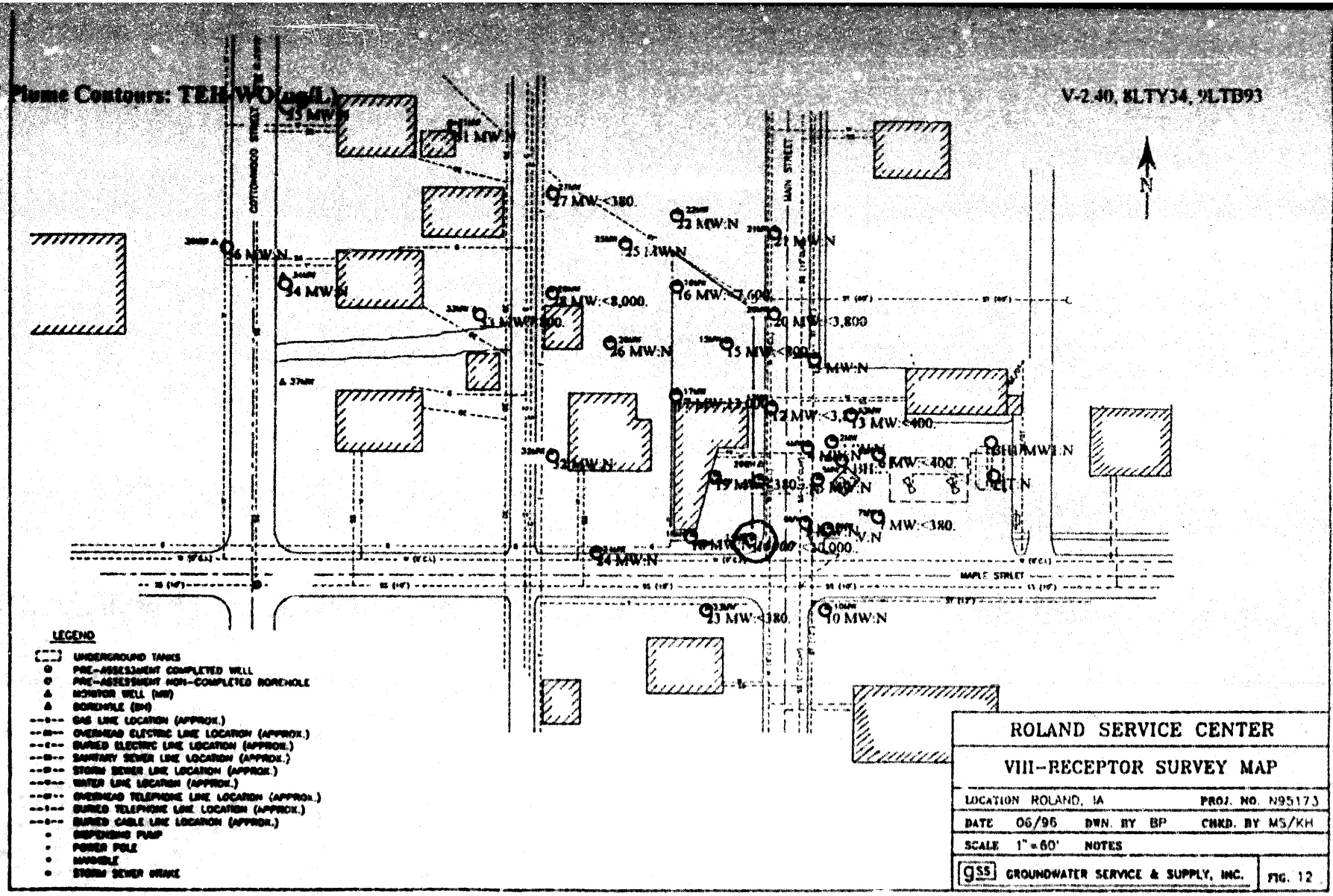
GW Plume Contours: TEH-D(ug/L)

V-2.40, 8LTY34, 9LTB93


COTTONWOOD STREET
MAIN STREET
MAPLE STREET
N
MW:100,000.
MW:7,600.
MW:3,800.
MW:7,500.
MW:10,000.
MW:1,000.
MW:<380.
MW:<380.
MW:<380

GW Plume Contours: TEH-WO (ug/L)

V-2.40, 8LTY34, 9LTB93



ROLAND SERVICE CENTER

VIII-RECEPTOR SURVEY MAP

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SCALE	1"=60'	NOTES	

GSS GROUNDWATER SERVICE & SUPPLY, INC. FIG. 12

1 inch = 92.7 feet

Fig 21e