1995-06-01

WRP#6991004

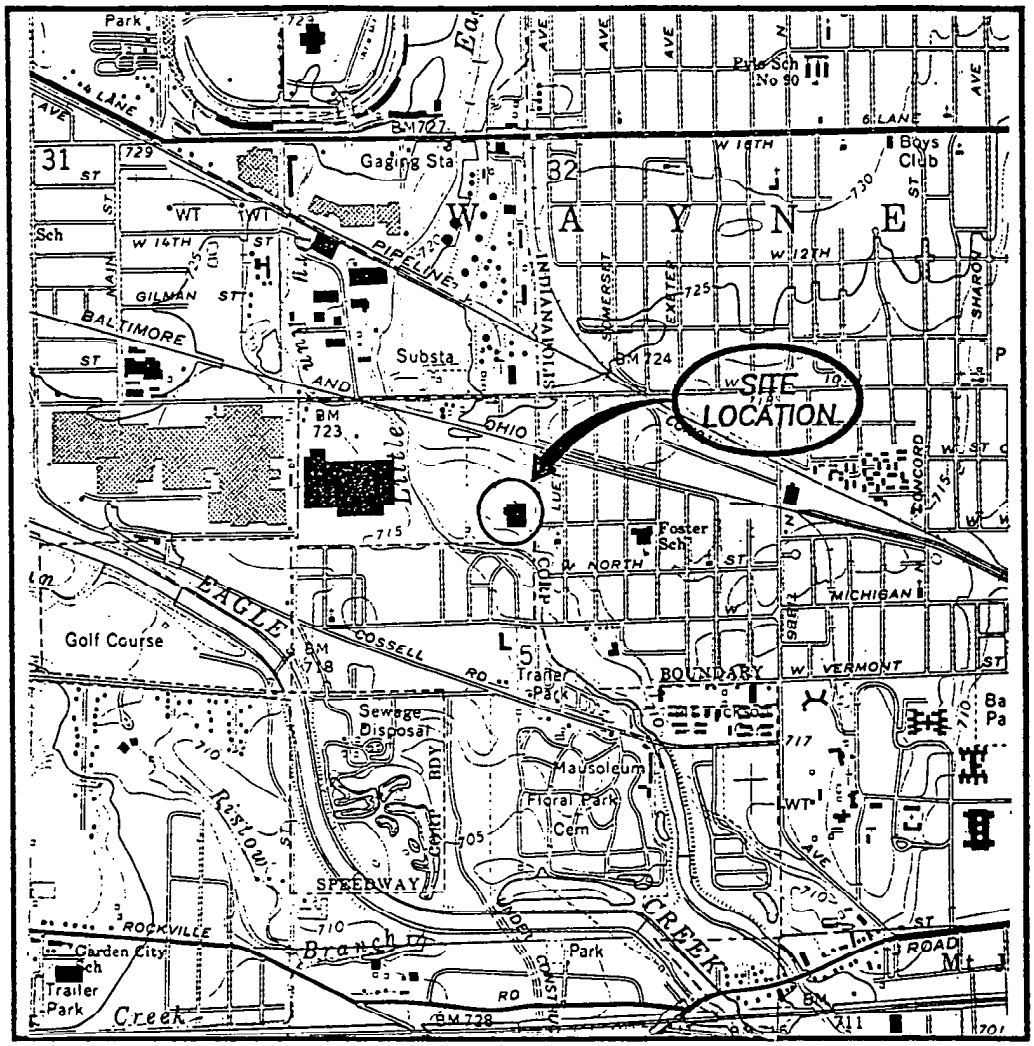
GENERAL MOTORS CORPORATION
ALLISON PLANT 10
MEETING DISCUSSION ITEMS

1) BACKGROUND
- Prior to 1974
- GM purchases property for use as warehouse for excess equipment
- GM sells property
- Removal action

2) REMEDIAL INVESTIGATION
- Physical setting
- Groundwater use and flow direction
- Soil analytical results
- Groundwater analytical results
- Additional investigation

3) FEASIBILITY STUDY
- Primary alternatives considered
  - Pump and Treat, and SVE
  - Air sparging and SVE
- Pilot Study

4) REMEDIAL DESIGN AND IMPLEMENTATION



SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE
INDIANAPOLIS WEST, INDIANA (1980)

SCALE 1:24,000

0 1/2 1 MILE

0 2,000 4,000

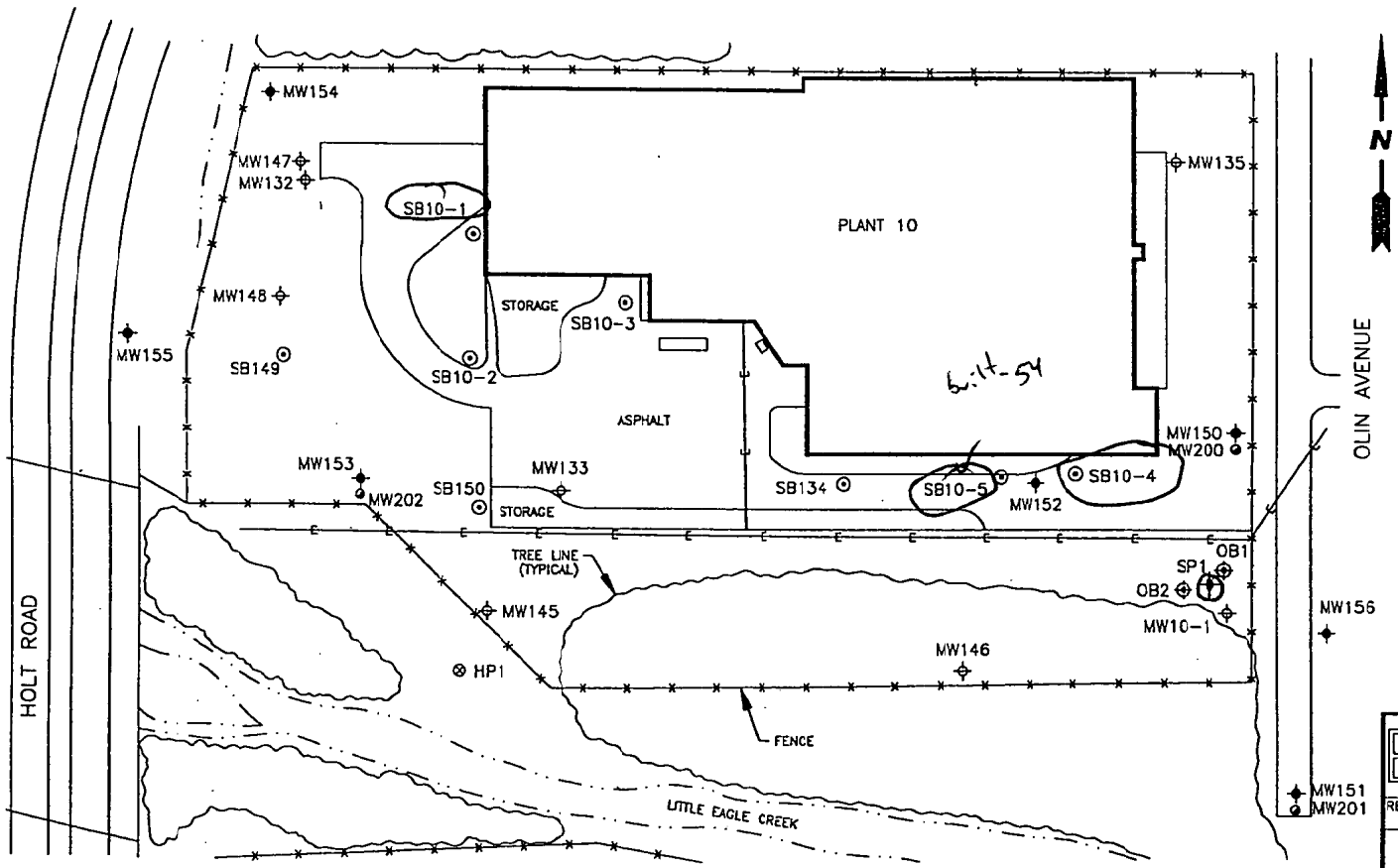
SCALE FEET

N

FLUOR DANIEL GTI

7960 CASTLEWAY DRIVE
INDIANAPOLIS, INDIANA 46250
(317) 595-6400

DESIGNED: KG	**SITE LOCATION MAP**	
DETAILED: KG	CLIENT: GENERAL MOTORS CORPORATION ALLISON ENGINE COMPANY PLANT #10	DRAWING DATE: 6/1/95
CHECKED:	LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA	FIGURE: 1



LEGEND

- NEW SHALLOW 2" MONITORING WELL
- NEW DEEP 2" MONITORING WELL
- NEW AIR SPARGE/ VENT TEST WELL
- NEW 2" OBSERVATION WELL
- NEW HYDROPUNCH POINT
- EXISTING SOIL BORING
- EXISTING MONITORING WELL
- OVERHEAD ELECTRICAL

0 80 160
SCALE FEET

SOURCE: DOW ENVIRONMENTAL

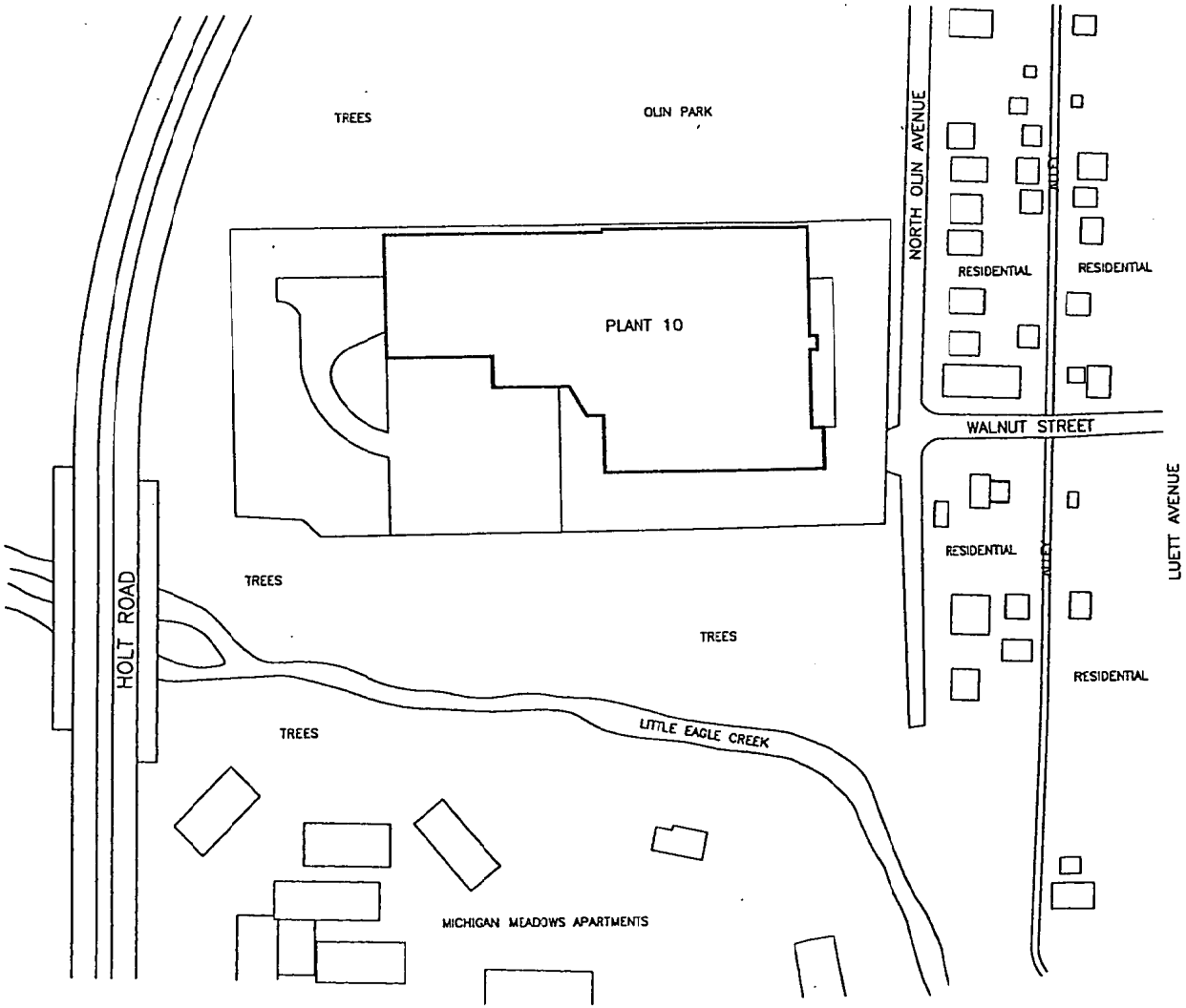
GROUNDWATER TECHNOLOGY
7960 CASTLEWAY DRIVE
INDIANAPOLIS, IN 46250
(317) 595-6400

REV. NO.:	DRAWING DATE: 6/19/95	ACAD FILE: 0345-SIT

SITE MAP

CLIENT: ALLISON ENGINE COMPANY, INC. PLANT 10 SITE			PM: AG
LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA			PE/RG:
DESIGNED: AG	DETAILED: PJC	PROJECT NO.: 040020345	FIGURE: 2

ALLISON PLANT PROPERTY



N

0 120 240
SCALE FEET

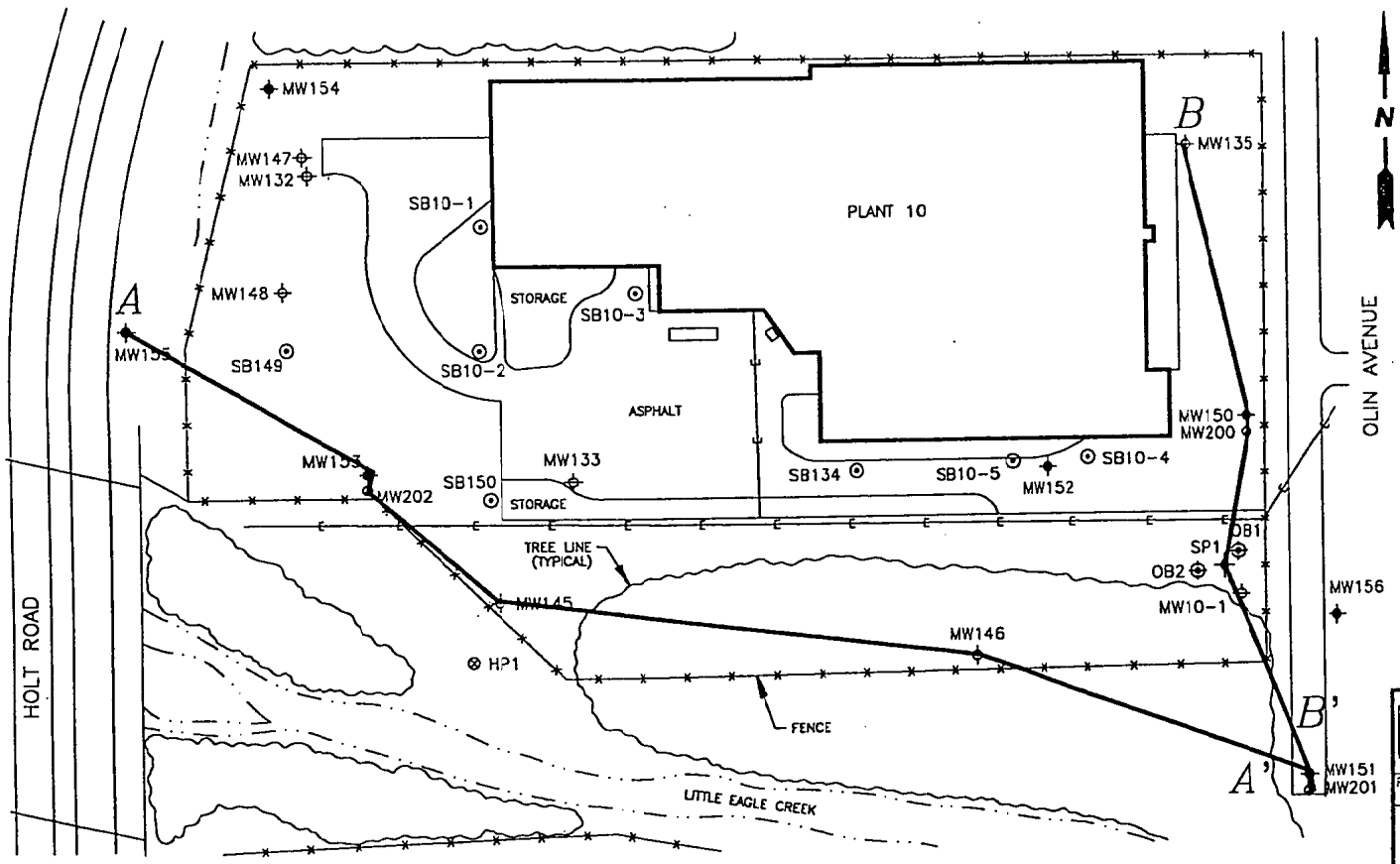
SOURCE: AERIAL PHOTO

GROUNDWATER TECHNOLOGY
7960 CASTLEWAY DRIVE
INDIANAPOLIS, IN 46250
(317) 595-6400

REV. NO.:	DRAWING DATE: 11/14/95	ACAD FILE: 0345-VIC

VICINITY MAP

CLIENT: ALLISON ENGINE COMPANY, INC. PLANT 10 SITE			PM: AG
LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA			PE/RG:
DESIGNED: KG	DETAILED: PJC	PROJECT NO.: 040020345	FIGURE: 3



LEGEND

- NEW SHALLOW 2" MONITORING WELL
- NEW DEEP 2" MONITORING WELL
- NEW AIR SPARGE/ VENT TEST WELL
- NEW 2" OBSERVATION WELL
- NEW HYDROPUNCH POINT
- EXISTING SOIL BORING
- EXISTING MONITORING WELL
- OVERHEAD ELECTRICAL

0 80 160
SCALE FEET

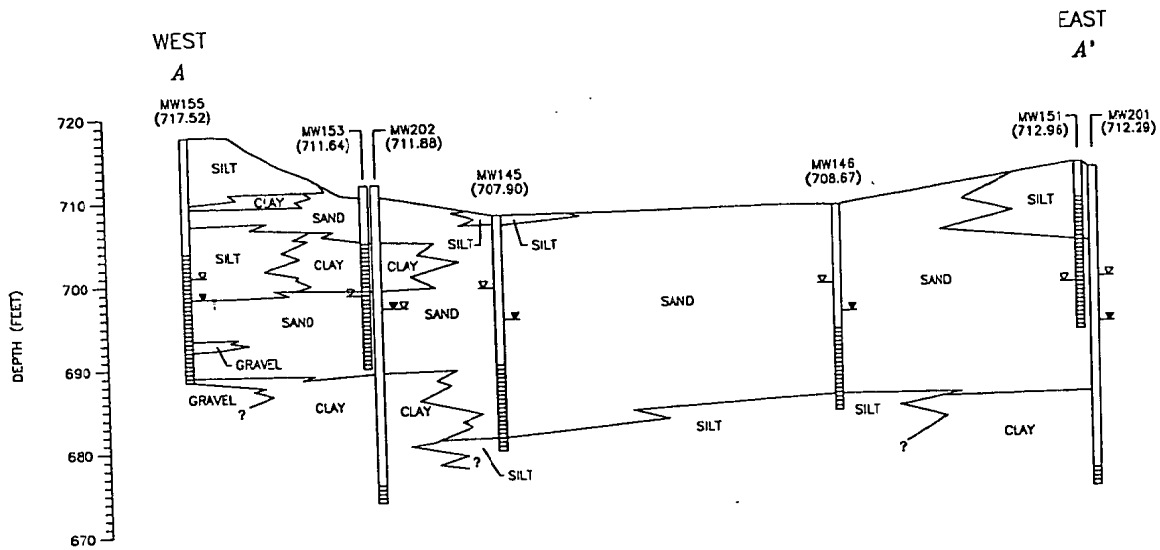
SOURCE: DCW ENVIRONMENTAL

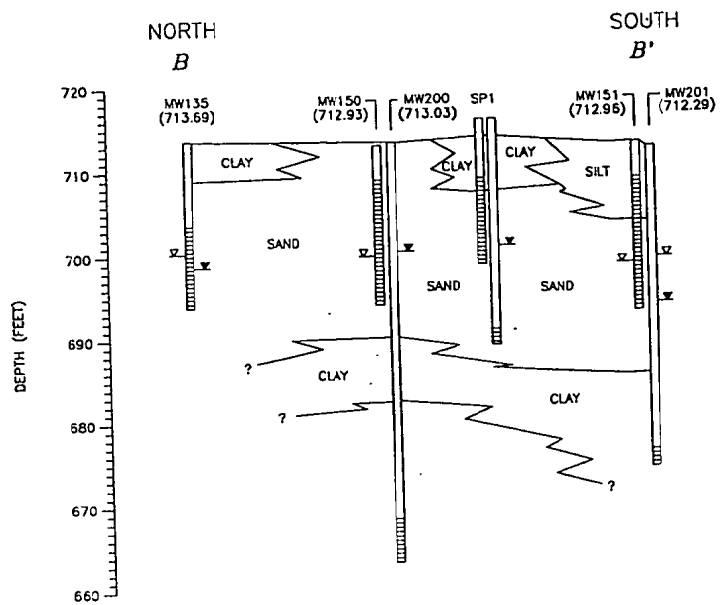
GROUNDWATER TECHNOLOGY
7960 CASTLEWAY DRIVE
INDIANAPOLIS, IN 46250
(317) 595-6400

REV. NO.:	DRAWING DATE: 6/19/95	ACAD FILE: 0345-SIT

CROSS SECTION LOCATION MAP

CLIENT: ALLISON ENGINE COMPANY, INC. PLANT 10 SITE			PM: AG
LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA			PE/RG:
DESIGNED: AG	DETAILED: PJC	PROJECT NO.: 040020345	FIGURE: 4





LEGEND

- WELL CASING
- WELL SCREEN
- STATIC WATER LEVEL
- INITIAL WATER LEVEL

VERTICAL SCALE AS SHOWN

0 120 240

HORIZONTAL SCALE FEET

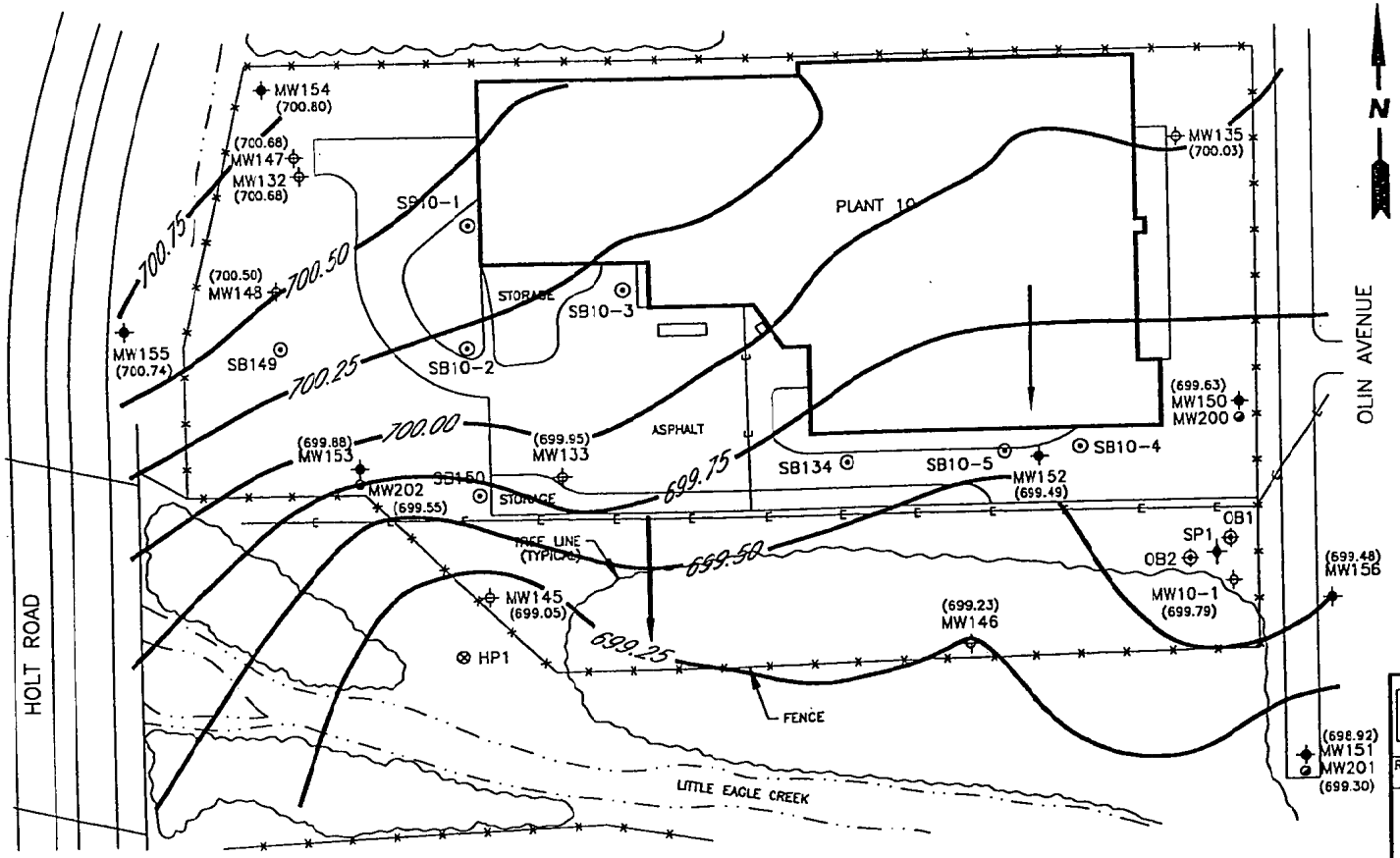
SOURCE: GEOLOGIST SKETCH

GROUNDWATER TECHNOLOGY
1244-B EXECUTIVE BLVD.
CHESAPEAKE, VA 23320
(804) 436-7881

REV. NO.:	DRAWING DATE: 11/14/95	ACAD FILE: 0345XSEC

CROSS SECTIONS A-A' AND B-B'

CLIENT: ALLISON ENGINE COMPANY, INC. PLANT 10 SITE			PM:
LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA			PE/RG:
DESIGNED: KG	DETAILED: PJC	PROJECT NO.: 040020345	FIGURE: 4A



LEGEND

- NEW SHALLOW 2" MONITORING WELL
- NEW DEEP 2" MONITORING WELL
- NEW AIR SPARGE/ VENT TEST WELL
- NEW 2" OBSERVATION WELL
- NEW HYDROPUNCH POINT
- EXISTING SOIL BORING
- EXISTING MONITORING WELL
- OVERHEAD ELECTRICAL
- (699.79) GROUNDWATER ELEVATION IN FEET
- GROUNDWATER CONTOUR LINE
- DIRECTION OF GROUNDWATER FLOW
- CONTOUR INVERVAL= 0.25 FEET

0 80 160
SCALE FEET

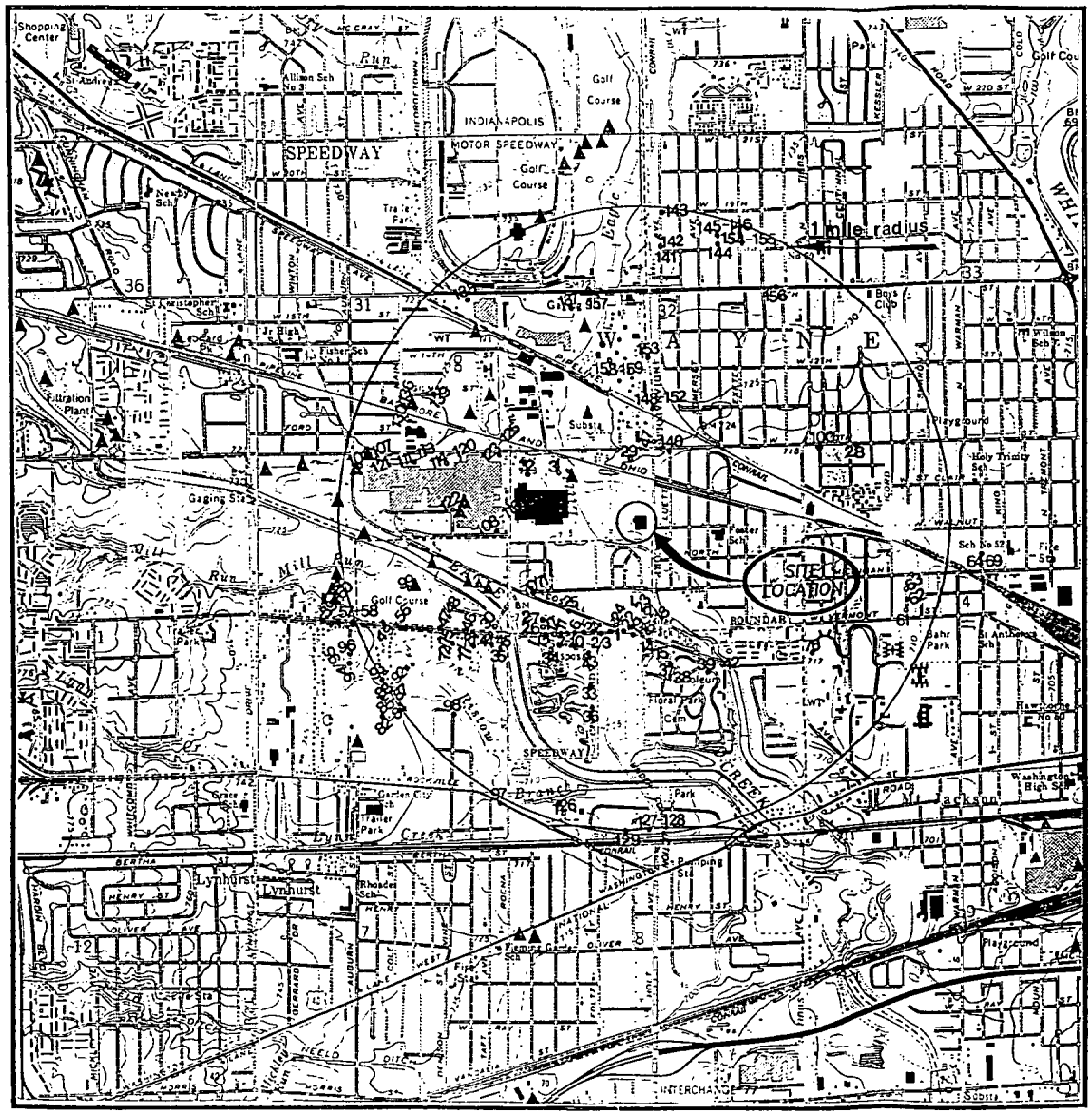
SOURCE: DOW ENVIRONMENTAL

GROUNDWATER TECHNOLOGY
7960 CASTLEWAY DRIVE
INDIANAPOLIS, IN 46250
(317) 595-6400

REV. NO.:	DRAWING DATE: 11/16/95	ACAD FILE: 0345-PSM

POTENTIOMETRIC SURFACE MAP
SEPTEMBER 11, 1995

CLIENT: ALLISON ENGINE COMPANY, INC. PLANT 10 SITE			PM: AG
LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA			PE/RG:
DESIGNED: KG	DETAILED: PJC	PROJECT NO.: 040020345	FIGURE: 5B



LEGEND

140 DOMESTIC WELL

▲ HIGH CAPACITY WELL

SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE
INDIANAPOLIS WEST, INDIANA (1980)
CLERMONT, INDIANA (1980)

SCALE 1:24,000

0 1/2 1 MILE

0 2,000 4,000

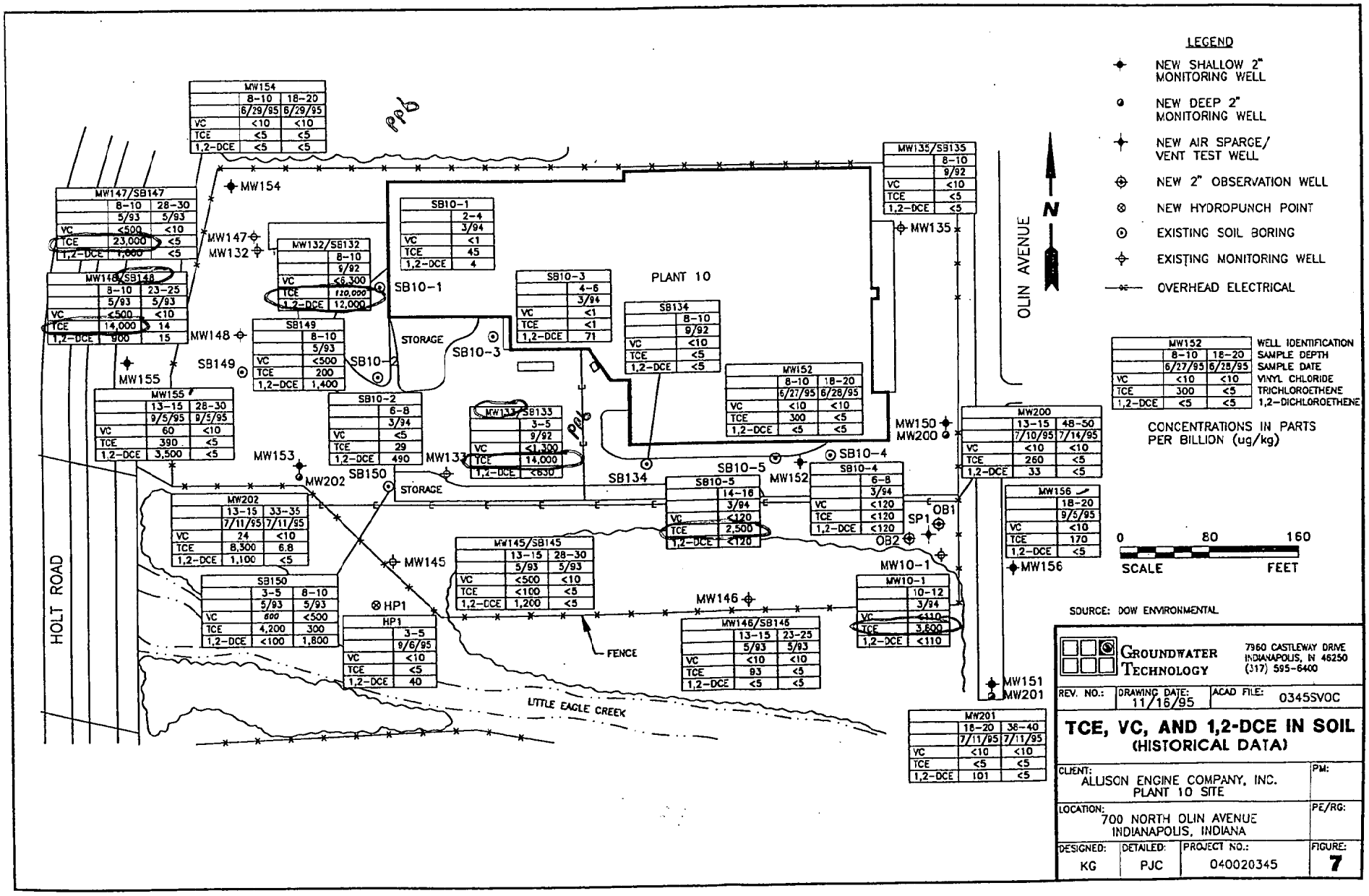
SCALE FEET

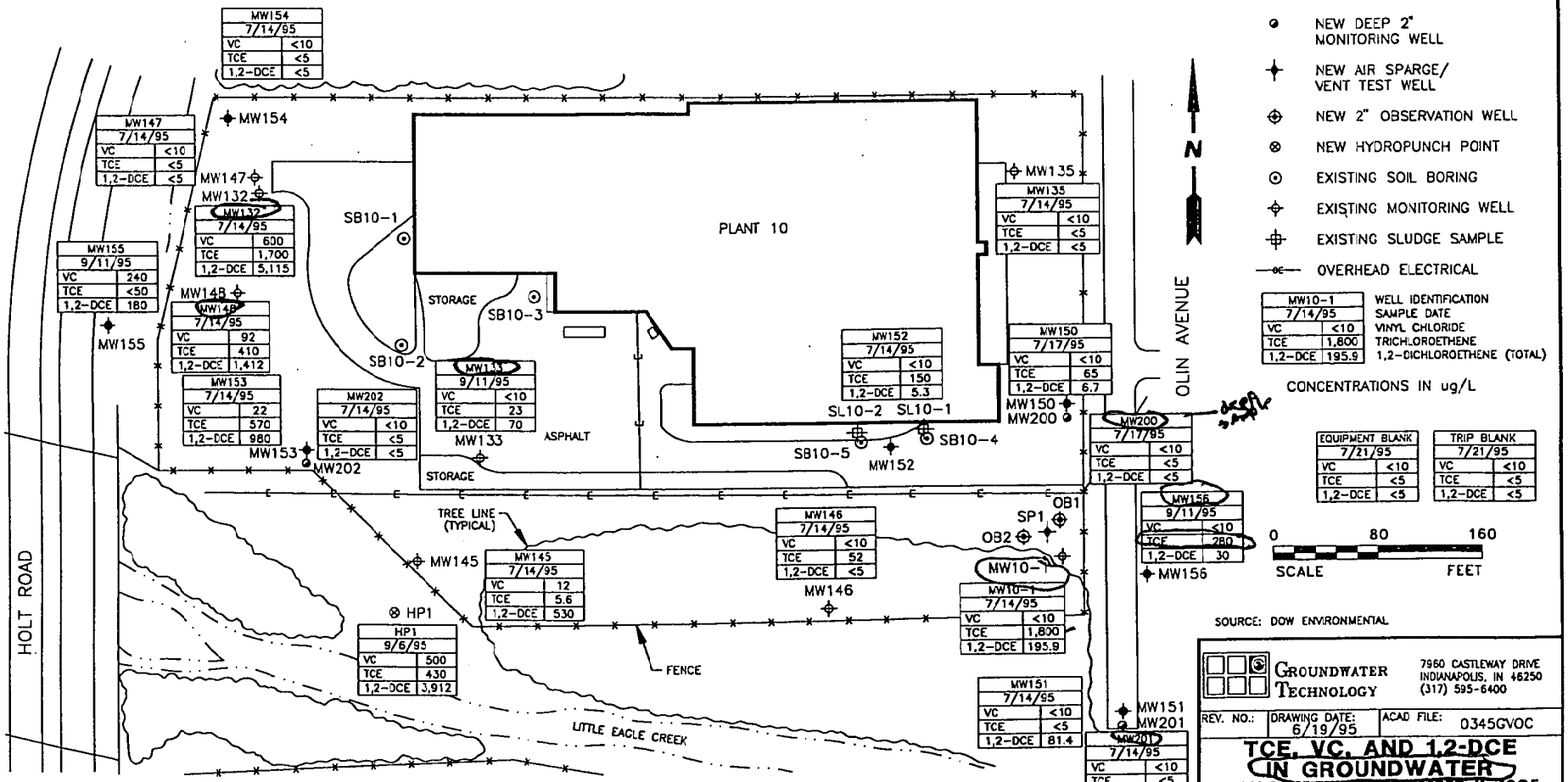
GROUNDWATER TECHNOLOGY
7950 CASTLEWAY DRIVE
INDIANAPOLIS, IN 46250
(317) 595-6400

REV. NO.:	DRAWING DATE: 11/7/95	ACAD FILE: 0345-MWL

DOMESTIC/MUNICIPAL WELL LOCATION MAP

CLIENT: GENERAL MOTORS CORPORATION ALLISON ENGINE COMPANY PLANT 10			PM: AG
LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA			PE/RG:
DESIGNED: KG	DETALED: KG	PROJECT NO.: 04002-0345	FIGURE: 6


LEGEND
NEW SHALLOW 2" MONITORING WELL
NEW DEEP 2" MONITORING WELL
NEW AIR SPARGE/ VENT TEST WELL
NEW 2" OBSERVATION WELL
NEW HYDROPUNCH POINT
EXISTING SOIL BORING
EXISTING MONITORING WELL
OVERHEAD ELECTRICAL
N
OLIN AVENUE
HOLT ROAD
LITTLE EAGLE CREEK
PLANT 10
STORAGE
FENCE
MW154
MW147
MW132
MW148
MW155
MW153
MW202
MW145
MW146
MW135
MW150
MW200
MW152
MW156
MW151
MW201
MW10-1
SB10-1
SB10-2
SB10-3
SB10-4
SB10-5
SB134
SB150
SP1
OB1
OB2
HP1
MW154 | 8-10 | 18-20 | 6/29/95 | 6/29/95 | VC <10 <10 | TCE <5 <5 | 1,2-DCE <5 <5
MW147/SB147 | 8-10 | 28-30 | 5/93 | 5/93 | VC <500 <10 | TCE 23,000 <5 | 1,2-DCE 1,000 <5
MW148/SB148 | 8-10 | 23-25 | 5/93 | 5/93 | VC <500 <10 | TCE 14,000 14 | 1,2-DCE 900 15
MW132/SB132 | 8-10 | 9/92 | VC <6,300 | TCE 120,000 | 1,2-DCE 12,000
SB149 | 8-10 | 5/93 | VC <500 | TCE 200 | 1,2-DCE 1,400
SB10-1 | 2-4 | 3/94 | VC <1 | TCE 45 | 1,2-DCE 4
SB10-3 | 4-6 | 3/94 | VC <1 | TCE <1 | 1,2-DCE 71
SB134 | 8-10 | 9/92 | VC <10 | TCE <5 | 1,2-DCE <5
MW152 | 8-10 | 18-20 | 6/27/95 | 6/28/95 | VC <10 <10 | TCE 300 <5 | 1,2-DCE <5 <5
MW135/SB135 | 8-10 | 9/92 | VC <10 | TCE <5 | 1,2-DCE <5
MW155 | 13-15 | 28-30 | 9/5/95 | 9/5/95 | VC 60 <10 | TCE 390 <5 | 1,2-DCE 3,500 <5
SB10-2 | 6-8 | 3/94 | VC <5 | TCE 29 | 1,2-DCE 490
MW133/SB133 | 3-5 | 9/92 | VC <1,300 | TCE 14,000 | 1,2-DCE <630
MW200 | 13-15 | 48-50 | 7/10/95 | 7/14/95 | VC <10 <10 | TCE 260 <5 | 1,2-DCE 33 <5
SB10-5 | 14-16 | 3/94 | VC <120 | TCE 2,500 | 1,2-DCE <120
SB10-4 | 6-8 | 3/94 | VC <120 | TCE <120 | 1,2-DCE <120
MW156 | 18-20 | 9/5/95 | VC <10 | TCE 170 | 1,2-DCE <5
MW202 | 13-15 | 33-35 | 7/11/95 | 7/11/95 | VC 24 <10 | TCE 8,300 6.8 | 1,2-DCE 1,100 <5
MW145/SB145 | 13-15 | 28-30 | 5/93 | 5/93 | VC <500 <10 | TCE <100 <5 | 1,2-DCE 1,200 <5
SB150 | 3-5 | 8-10 | 5/93 | 5/93 | VC 600 <500 | TCE 4,200 300 | 1,2-DCE <100 1,800
HP1 | 3-5 | 9/6/95 | VC <10 | TCE <5 | 1,2-DCE 40
MW146/SB146 | 13-15 | 23-25 | 5/93 | 5/93 | VC <10 <10 | TCE 93 <5 | 1,2-DCE <5 <5
MW10-1 | 10-12 | 3/94 | VC <110 | TCE 3,600 | 1,2-DCE <110
MW201 | 18-20 | 38-40 | 7/11/95 | 7/11/95 | VC <10 <10 | TCE <5 <5 | 1,2-DCE 101 <5
MW152 | 8-10 | 18-20 | 6/27/95 | 6/28/95 | VC <10 <10 | TCE 300 <5 | 1,2-DCE <5 <5
WELL IDENTIFICATION
SAMPLE DEPTH
SAMPLE DATE
VINYL CHLORIDE
TRICHLOROETHENE
1,2-DICHLOROETHENE
CONCENTRATIONS IN PARTS PER BILLION (ug/kg)
0 80 160
SCALE FEET
SOURCE: DOW ENVIRONMENTAL
GROUNDWATER TECHNOLOGY
7960 CASTLEWAY DRIVE INDIANAPOLIS, IN 46250 (317) 595-6400
REV. NO.:
DRAWING DATE: 11/16/95
ACAD FILE: 0345SVOC
TCE, VC, AND 1,2-DCE IN SOIL (HISTORICAL DATA)
CLIENT: ALLISON ENGINE COMPANY, INC. PLANT 10 SITE
PM:
LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA
PE/RG:
DESIGNED: KG
DETAILED: PJC
PROJECT NO.: 040020345
FIGURE: 7



SOURCE: DOW ENVIRONMENTAL

GROUNDWATER TECHNOLOGY
7960 CASTLEWAY DRIVE
INDIANAPOLIS, IN 46250
(317) 595-6400

REV. NO.:	DRAWING DATE:	ACAD FILE:
	6/19/95	0345GVOC

TCE, VC, AND 1,2-DCE IN GROUNDWATER
JULY 14-17 AND SEPTEMBER 11, 1995

CLIENT: ALLISON ENGINE COMPANY, INC. PLANT 10 SITE
PM: AG
LOCATION: 700 NORTH OLIN AVENUE INDIANAPOLIS, INDIANA
PE/RG:

DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
KG	PJC	040020345	11