POOR QUALITY ORIGINAL

REDACTED VERSION

FLUOR DANIEL ARCS TEAM

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January 10, 1994

FDI/ARCS # 2456

U.S. Environmental Protection Agency
Attn: Walt Helmick (6E-SH)
Work Assignment Manager
Region VI
1445 Ross Avenue
Suite 1000
Dallas, Texas 75202

CONTRACT NO. 68-W9-0013
SITE INSPECTION REPORT (PRESCORE)
SECOND SUBMITTAL
DIXIE (TEI) PETRO-CHEMICAL (TXD079836763)
LONGVIEW, GREGG COUNTY, TEXAS
SITE INSPECTIONS
WA # 25-6JZZ

Dear Mr. Helmick:

Transmitted with this letter is the referenced Prescore for Dixie (TEI) Petro-Chemical, Inc. Also enclosed is a diskette of the Prescore file.

The following situations were considered in preparation of this PreScore:

- A sediment sample (SD-03) was collected in an intermittent stream that flows from the site. It was not used to score an observed release to surface water. However, this sample demonstrated similar contamination to that found at the site.

- A background sediment sample (SD-14) was collected upstream of the site in Long Creek. However, similar contaminants to those found on site were detected. Therefore, the downstream sample collected in Long Creek (SD-16) was not used to score the site. The contaminants can not be solely attributable to the site.

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- An observed release to surface water was not evaluated.

- Sample SS-07 was collected at the former truck fueling area and contained no contamination. However, the remaining source locations (former UST location north of warehouse and the shallow ground water area) contained similar contaminant concentrations to those reported for sample SD-06. Therefore, sample SD-06 supports the previously mentioned areas as sources.

Should you have any questions, please contact either of the undersigned at (214) 450-4100.

Sincerely,

Keith Westberry
ARCS Project Hydrologist

Jonathan M. Stewart
ARCS Project Manager

Record Information

1. Site Name: Dixie (TEI) Petro-Chemical
   (as entered in CERCLIS)
2. Site CERCLIS Number: TXD079836763
3. Site Reviewer: Keith Westberry
4. Date: October 13, 1993
5. Site Location: Longview/Gregg County, Texas
   (City/County,State)
6. Congressional District: 01
7. Site Coordinates: Multiple

   Latitude: 32°29'20.0" Longitude: 94°42'30.0"

Site Description

1. Setting: Suburban
2. Current Owner: Private - Industrial
3. Current Site Status: Active
4. Years of Operation: Active Site , from and to dates: 1979 to 1986
5. How Initially Identified: CERCLA Notification
6. Entity Responsible for Waste Generation:
   - Other - Comm. Solvent Repackaging
   - Retail Activities
7. Site Activities/Waste Deposition:
   - Tanks - Below Ground
   - Recycling

Waste Description

8. Wastes Deposited or Detected Onsite:

   - Solvents
   - Metals

Response Actions

9. Response/Removal Actions:

   - Other Removal Action Has Occurred

RCRA Information

10. For All Active Facilities, RCRA Site Status:

    - Not Applicable

Demographic Information

11. Workers Present Onsite: Yes
12. Distance to Nearest Non-Worker Individual: > 10 Feet - 1/4 Mile
13. Residential Population Within 1 Mile: 777.0
14. Residential Population Within 4 Miles: 45444.0

Water Use Information

15. Local Drinking Water Supply Source:

    - No Water Withdrawals Within Target Distance Limits

16. Total Population Served by Local Drinking Water Supply Source: Not Applicable
17. Drinking Water Supply System Type for Local Drinking Water Supply Sources:

- Not Applicable

18. Surface Water Adjacent to/Draining Site:

- Contaminated Stream
- Contaminated Wetland

HRS DOCUMENTATION RECORD
Dixie (TEI) Petro-Chemical - 11/12/93

1. Site Name: Dixie (TEI) Petro-Chemical
   (as entered in CERCLIS)
2. Site CERCLIS Number: TXD079836763
3. Site Reviewer: Keith Westberry
4. Date: October 13, 1993
5. Site Location: Longview/Gregg County, Texas
   (City/County,State)
6. Congressional District: 01
7. Site Coordinates: Multiple

   Latitude: 32°29'20.0" Longitude: 94°42'30.0"

	Score
Ground Water Migration Pathway Score (Sgw)	0.29
Surface Water Migration Pathway Score (Ssw)	0.15
Soil Exposure Pathway Score (Ss)	0.60
Air Migration Pathway Score (Sa)	1.08

Site Score	0.64

NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

GROUND WATER MIGRATION PATHWAY SCORESHEET
Dixie (TEI) Petro-Chemical - 11/12/93

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer: Queen City Sand		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	0
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	400
3. Likelihood of Release	550	400
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+02
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	6
Targets		
7. Nearest Well	50	5.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	1.20E-01
8d. Population (lines 8a+8b+8c)	**	1.20E-01
9. Resources	5	5.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	1.01E+01
12. Targets (including overlaying aquifers)	**	1.01E+01
13. Aquifer Score	100	0.29
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	0.29

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Dixie (TEI) Petro-Chemical - 11/12/93

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	10
2b. Runoff	25	1
2c. Distance to Surface Water	25	6
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	70
3. Potential to Release by Flood		
3a. Containment (Flood)	10	10
3b. Flood Frequency	50	7
3c. Potential to Release by Flood (lines 3a x 3b)	500	70
4. Potential to Release (lines 2d+3c)	500	140
5. Likelihood of Release	550	140
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	10
8. Waste Characteristics	100	18
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	5.00E+00
12. Targets (lines 9+10d+11)	**	5.00E+00
13. DRINKING WATER THREAT SCORE	100	0.15

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Dixie (TEI) Petro-Chemical - 11/12/93

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	140
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	5.00E+05
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	1000	32
Targets		
18. Food Chain Individual	50	0.00E+00
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	3.00E-04
19d. Population (lines 19a+19b+19c)	**	3.00E-04
20. Targets (lines 18+19d)	**	3.00E-04
21. HUMAN FOOD CHAIN THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Dixie (TEI) Petro-Chemical - 11/12/93

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	140
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	5.00E+06
24. Hazardous Waste Quantity	*	10
25. Waste Characteristics	1000	56
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	0.00E+00
26c. Potential Contamination	**	0.00E+00
26d. Sensitive Environments (lines 26a+26b+26c)	**	0.00E+00
27. Targets (line 26d)	**	0.00E+00
28. ENVIRONMENTAL THREAT SCORE	60	0.00
29. WATERSHED SCORE	100	0.15
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)	100	0.15

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SOIL EXPOSURE PATHWAY SCORESHEET
Dixie (TEI) Petro-Chemical - 11/12/93

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	10
4. Waste Characteristics	100	18
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	5.00E+00
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	0.00E+00
10. Targets (lines 5+6c+7+8+9)	**	5.00E+00
11. RESIDENT POPULATION THREAT SCORE	**	4.95E+04

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

SOIL EXPOSURE PATHWAY SCORESHEET
Dixie (TEI) Petro-Chemical - 11/12/93

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	5.00E+00
13. Area of Contamination	100	5.00E+00
14. Likelihood of Exposure	500	5.00E+00
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	100	18
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	7.70E-01
20. Targets (lines 18+19)	**	1.77E+00
21. NEARBY POPULATION THREAT SCORE	**	1.59E+02
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	0.60

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

AIR PATHWAY SCORESHEET
Dixie (TEI) Petro-Chemical - 11/12/93

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	108
2b. Particulate Potential to Release	500	280
2c. Potential to Release	500	280
3. Likelihood of Release	550	280
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+02
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	6
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	1.80E+01
8d. Population (lines 8a+8b+8c)	**	1.80E+01
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	1.50E+01
10c. Sens. Environments(lines 10a+10b)	***	1.50E+01
11. Targets (lines 7+8d+9+10c)	**	5.30E+01
AIR MIGRATION PATHWAY SCORE (Sa)	100	1.08E+00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: Former UST Area #1

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID		Former UST Area #1	
b. Source Type		Contaminated Soil	
c. Secondary Source Type		N.A.	
d. Source Vol.(yd3/gal)	Source Area (ft2)	0.00	4950.00
e. Source Volume/Area Value		1.46E-01	
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)		0.00E+00	
g. Data Complete?		NO	
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)		0.00E+00	
i. Data Complete?		NO	
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)		1.46E-01	

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Acetone	> 2	NO	3.0E+01	ppm
Arsenic	> 2	NO	3.5E+00	ppm
Chromium	> 2	NO	1.2E+01	ppm
Ethyl benzene	> 2	NO	6.8E+01	ppm
Methyl Napthalene, 2-	> 2	NO	6.1E+00	ppm
Naphthalene	> 2	NO	3.8E+00	ppm
Nickel	> 2	NO	3.0E+01	ppm
Tetrachloroethane, 1,1,1,2-	> 2	NO	2.4E+01	ppm
Toluene	> 2	NO	2.0E+02	ppm
Xylene, o-	> 2	NO	4.1E+02	ppm
Zinc	> 2	NO	1.3E+02	ppm

Documentation for Source Type:

The source is an area that was formerly used as an underground storage tank (UST) area for many solvents and other organic compounds (Ref. 4, pg. 4-09, Figure 3). Soil samples (SD-09, SD-10, SD-11, and SD-12) were collected in the area where the UST's were

formerly located to determine if the remaining soils were contaminated (Ref. 4, Table 3).

Reference: 4

Documentation for Source Hazardous Substances:

Samples SS-09, SS-10, SS-11, and SS-12 were collected at the Former UST Area #1 (Ref. 4, pp. 30 & 49). These samples were collected on May 25, 1993 (Ref. 5, pp. 20-22).

Sample SS-09 (CLP Sample #'s = MFAQ12/FZ914)
(Ref. 4, pg. 30)

Contaminants	Concentration	Qualifier
Arsenic	3.5 ppm	J
Chromium	12.5 ppm	J

(Ref. 4, pg. 37)

.....

Sample SS-10 (CLP Sample #'s = MFAQ14/FZ916).

Contaminants	Concentration	Qualifier
Acetone	30 ppm	B
Total Xylene	410 ppm	J

(Ref. 4, pg. 42)

.....

Sample SS-11 (CLP Sample #'s = MFAQ15/FZ917).

Contaminants	Concentration	Qualifier
Ethylbenzene	68 ppm	J
2-Methylnaphthalene	6.1 ppm	
Naphthalene	3.8 ppm	
Nickel	29.6 ppm	
Tetrachloroethane	24 ppm	
Toluene	200 ppm	J
Zinc	130 ppm	

(Ref. 4, pp. 37 & 42)

The previously mentioned samples were compared to sample SS-13 for background concentrations (Ref. 4, pg. 30). Sample SS-13 was collected on May 24, 1993 (Ref. 5, pg. 17). Concentrations for similar contaminants are as follows:

Background Soil Sample SS-13 (CLP Sample # MFAQ00/FZ902).
(Ref. 4, pg. 30)

Contaminant	Concentration	Qualifier
Acetone	0.012 ppm	J
Arsenic	1.8 ppm	J
Chromium	11.3 ppm	J
Ethylbenzene	Undetected (No detection Limit Given)	
2-Methylnaphthalene	0.44 ppm	U
Naphthalene	0.44 ppm	U
Nickel	3.9 ppm	B
Tetrachloroethane	0.012 ppm	J
Toluene	0.002 ppm	U
Total Xylene	0.012 ppm	U
Zinc	48 ppm	

(Ref. 4, pp. 36 & 42)

The following discusses the qualifiers used in this data set:

U = Undetected, B = Detected in the Blank, J = Estimated Value

Arsenic was qualified J due to matrix spike recoveries being out of control limits (Ref. 4, pg. 62).

Chromium was qualified J due to ICP serial dilutions being out of control limits (Ref. 4, pg. 62).

Acetone was qualified B due to contaminant presence in the blank (Ref. 4, pg. 68).

Toluene, Ethylbenzene, and Total Xylene were qualified J due to the two column quantitation differing by > 25% (Ref. 4, pg. 68).

Reference: 4,5

Documentation for Source Area:

The source area was first delineated on a scaled site plan. The scale was then used to determine the approximate size of the source area (Ref. 7, pp. 1-2). The calculations of the source are as follows:

Former UST Area #1 1.35" x 3.30"

WASTE QUANTITY

Dixie (TEI) Petro-Chemical - 11/12/93

Map Scale = 1.5" = 50'

Converted Area Measurements 45' x 110'

Area = 4,950 sq. feet

Reference: 7

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: Shallow GW Area

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID		Shallow GW Area	
b. Source Type		Contaminated Soil	
c. Secondary Source Type		N.A.	
d. Source Vol.(yd3/gal)	Source Area (ft2)	0.00	177.70
e. Source Volume/Area Value		5.23E-03	
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)		0.00E+00	
g. Data Complete?		NO	
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)		0.00E+00	
i. Data Complete?		NO	
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)		5.23E-03	

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Arsenic	< 2	NO	5.5E+00	ppm
Chromium	< 2	NO	6.8E+01	ppm
Lead	< 2	NO	1.5E+01	ppm
Nickel	< 2	NO	9.4E+00	ppm
Vanadium	< 2	NO	6.0E+01	ppm
Zinc	< 2	NO	6.1E+01	ppm

Documentation for Source Type:

The source is an area identified during the Site Reconnaissance Inspection (Ref. 5, pg. 09). The usage of this source area is unknown but is characterized by a rock/soil mixture and water was ponded over it with an oily sheen appearance (Ref. 5, pg. 09). Sediment sample SD-08 was collected in the source area to determine possible contaminants (Ref. 5, pg. 20). An exact size of the source was not determined during the Site Reconnaissance or the Site Sampling Inspections. Therefore, the size of the source area was determined to be approximately 178 square feet (Ref. 7, pg. 2).

Reference: 5,7

Documentation for Source Hazardous Substances:

Sample SD-08 was collected on May 25, 1993 (Ref. 5, pg. 20). Sample concentrations are as follows:

Sample SD-08 (CLP Sample Number = MFAQ11/FZ913)

Contaminants	Concentration	Qualifier
Arsenic	5.5 ppm	J
Chromium	67.9 ppm	J
Lead	15.4 ppm	
Nickel	9.4 ppm	B
Vanadium	60.5 ppm	
Zinc	60.8 ppm	

(Ref. 4, pg. 38)

Sample SD-14 was collected on May 24, 1993, for the purposes of obtaining background sediment concentrations (Ref. 4, pg. 30). Similar contaminant background concentrations are as follows:

SD-14 (CLP Sample #'s MFAQ03/FZ905).
(Ref. 4, pg. 30)

Contaminants	Concentration	Qualifier
Arsenic	4.2 ppm	J
Chromium	15 ppm	J
Lead	48.5 ppm	
Nickel	3 ppm	U
Vanadium	21.1 ppm	
Zinc	25.8 ppm	

(Ref. 4, pg. 38)

The following discusses the qualifiers for the data set:

B = Detected in the Blank, J = Estimated Value, U = Undetected

Arsenic was qualified with a J due to matrix spike recoveries being out of control limits (Ref. 4, pg. 62).

Chromium was qualified with a J due to the ICP serial dilutions

being out of control limits (Ref. 4, pg. 62).

Reference: 4,5

Documentation for Source Area:

The size of the source was first estimated on a scaled site plan. The scale of the site plan was then used to determine the approximate size of the source area (Ref. 7, pp. 1-2). The calculations of the source areas were done as follows:

Shallow Ground Water Area 0.4" x 0.4"

Map Scale = 1.5" = 50'

Converted Area Measurements = 13.3' x 13.3'

Area = 177.7 sq. feet

Reference: 7

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No.	Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1	Former UST Area #1	GW-SW-A	1.46E-01	0.00E+00	1.46E-01
2	Shallow GW Area	GW-SW-SE-A	5.23E-03	0.00E+00	5.23E-03

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values		HWQVs*	WCVs**
Ground Water	Toxicity/Mobility	1.00E+02	10	6
SW: Overland Flow, DW	Tox./Persistence	1.00E+04	10	18
SW: Overland Flow, HFC	Tox./Persis./Bioacc.	5.00E+05	10	32
SW: Overland Flow, Env	Etox./Persis./Bioacc.	5.00E+06	10	56
SW: GW to SW, DW	Tox./Persistence	1.00E+02	10	6
SW: GW to SW, HFC	Tox./Persis./Bioacc.	5.00E+02	10	6
SW: GW to SW, Env	Etox./Persis./Bioacc.	4.00E+05	10	32
Soil Exposure:Resident	Toxicity	1.00E+04	10	18
Soil Exposure: Nearby	Toxicity	1.00E+04	10	18
Air	Toxicity/Mobility	1.00E+02	10	6

* Hazardous Waste Quantity Factor Values
** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

GROUND WATER PATHWAY AQUIFER SUMMARY
Dixie (TEI) Petro-Chemical - 11/12/93

No.	Aquifer ID	Type	Overlaying No.	Inter-Connected with	Likelihood of Release	Targets
1	Queen City Sand	Non K	0	0	400	1.01E+01

Containment

No.	Source ID	HWQ Value	Containment Value
1	Former UST Area #1	1.46E-01	10
2	Shallow GW Area	5.23E-03	10

==========
Containment Factor 10

Documentation for Ground Water Containment, Source Former UST Area #1:

Analysis of an off-site sediment sample (SD03) shows similar contaminants to those present at this source to be migrating from the source area (Ref. 4, pp. 35-36 & 49(a)).

Table 3-2 of the HRS Final Rule states that if there is evidence of hazardous substance migration from the source area, the source should receive a containment value of 10 (Ref. 1, Table 3-2, pg. 51596).

Reference: 1,4

Documentation for Ground Water Containment, Source Shallow GW Area:

Analysis of off-site sediment sample (SD-03) shows similar contaminants to those at this source to be migrating from the source area (Sample SD-08) (Ref. 4 , pp. 38, 42 & 49a).

Table 3-2 of the HRS Final Rule states that if there is evidence of a hazardous substance migrating from the source area, the source should receive a containment value of 10 (Ref. 1, Table 3-2, pg.

51596).

Reference: 1,4

Net Precipitation

Net Precipitation (inches)	0

Aquifer: Queen City Sand

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

Documentation for Queen City Sand Aquifer:

The Queen City Sand is the aquifer of concern in the area. It is defined as an unconfined, surface aquifer. The base of this aquifer dips toward the northeasterly-trending East Texas Embayment at a rate approximately equal to that of the Carrizo-Wilcox. There is a low hydraulic gradient of 8 feet per mile which causes slow movement of a few hundred feet per year (Ref. 3, pg. 10).

The Queen City Sand outcrops over 90 percent of Gregg and Upshur Counties. The formation consists of massive to cross-bedded sediments, locally stratified. These sediments are composed of 80 percent medium to fine sand and about 20 percent silt and clay. The maximum thickness of the Queen City Sand is approximately 500 feet (Ref. 3, pg. 13).

Reference: 3

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination

- N/A and/or data not specified

==========

Observed Release Factor 0

POTENTIAL TO RELEASE

Containment

Containment Factor	10	

Net Precipitation

Net Precipitation Factor	0	

Depth to Aquifer

A. Depth of Hazardous Substances	0.00	feet
B. Depth to Aquifer from Surface	0.00	feet
C. Depth to Aquifer (B - A)	0.00	feet
Depth to Aquifer Factor	5	

Travel Time

Are All Layers Karst?	NO	
Thickness of Layer(s) with Lowest Conductivity	0.00	feet
Hydraulic Conductivity (cm/sec)	0.0E-00	
Travel Time Factor	35	

==========

Potential to Release Factor 400

Source: 1 Former UST Area #1

Source Hazardous Waste Quantity Value: 0.15

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Acetone	10	1.00E+00	1.00E+01
Arsenic	10000	1.00E-02	1.00E+02
Chromium	10000	1.00E-02	1.00E+02
Ethyl benzene	10	1.00E-02	1.00E-01
Methyl Napthalene, 2-	100	2.00E-01	2.00E+01
Naphthalene	100	2.00E-03	2.00E-01
Nickel	10000	2.00E-05	2.00E-01
Tetrachloroethane, 1,1,1,2-	100	1.00E-02	1.00E+00
Toluene	10	1.00E-02	1.00E-01
Xylene, o-	1	1.00E-02	1.00E-02
Zinc	10	2.00E-03	2.00E-02

Source: 2 Shallow GW Area

Source Hazardous Waste Quantity Value: 0.01

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Arsenic	10000	1.00E-02	1.00E+02
Chromium	10000	1.00E-02	1.00E+02
Lead	10000	2.00E-05	2.00E-01
Nickel	10000	2.00E-05	2.00E-01
Vanadium	100	2.00E-07	2.00E-05
Zinc	10	2.00E-03	2.00E-02

Hazardous Substances Found in an Observed Release

Well No.	Observed Release Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value

- N/A and/or data not specified

Toxicity/Mobility Value from Source Hazardous Substances:	1.00E+02
Toxicity/Mobility Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility Factor:	1.00E+02
Sum of Source Hazardous Waste Quantity Values:	1.51E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	6

Population by Well

No.	Well ID	Sample Type	Distance (miles)	Level of Contamination	Population

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

Potential Contamination by Distance Category

Distance Category (miles)	Population	Value
> 0 to 1/4	0.0	0.00E+00
> 1/4 to 1/2	0.0	0.00E+00
> 1/2 to 1	0.0	0.00E+00
> 1 to 2	5.0	7.00E-02
> 2 to 3	3.0	5.00E-02
> 3 to 4	0.0	0.00E+00

Potential Contamination Factor: 0.120

Documentation for Target Population > 0 to 1/4 mile Distance Category:

There are no drinking water wells within a 0 to 1/4 mile radius (Ref. 5, pp. 1-22; Ref. 8, pp. 12,23; Ref. 9, pp. 20,32).

Reference: 5,8,9

Documentation for Target Population > 1/4 to 1/2 mile Distance Category:

There are no drinking water wells within a 1/4 to 1/2 mile radius (Ref. 5, 1-22; Ref. 8, pp. 12,23; Ref. 9, pp. 20,32).

Reference: 5,8,9

Documentation for Target Population > 1/2 to 1 mile Distance Category:

There are no drinking water wells within a 1/2 to 1 mile radius (Ref. 5, pp. 1-22; Ref. 8, pp. 12,23; Ref. 9, pp. 20,32).

Reference: 5,8,9

Documentation for Target Population > 1 to 2 miles Distance Category:

Although, available information does not indicate the presence of drinking water wells (Ref. 8, pp. 12,23; Ref. 9, pp. 20,32), two wells were found and sampled with the 1 to 2 mile distance category (Ref. 5, pg. 15) during the sampling inspection. The exact population of these homes is unknown however an estimated population was calculated as follows:

Each residence population was based on 2.67 persons per home (Ref. 11, pg. 3).

Calculations: 2 homes x 2.67 per./home = 5.34 persons
This value was then rounded to the nearest whole number. Therefore, the number of persons in both residences combined is 5.

Reference: 5,8,9,11

Documentation for Target Population > 2 to 3 miles Distance Category:

There are three water wells within the 2 to 3 mile distance category. However, two of the three water wells are not used for drinking water. These two wells are listed as follows:

United Gas Pipeline Co. (35-35-401) Unknown Use
United Gas Pipeline Co. (35-35-402) Industrial Use
(Ref. 8, pp. 5,12,23)

Well #35-35-501 is designated for domestic use (Ref. 9, pp. 5,20,32).
The owner of the well is unknown (Ref. 9, pg. 5). Therefore, the

population served by the well was estimated as follows:

A value of 2.67 persons per home was used to determine the population served by the well (Ref. 11, pg. 3). Therefore, the value of 2.67 persons per home was rounded to the nearest whole number (3).

Reference: 8,9,11

Documentation for Target Population > 3 to 4 miles Distance Category:

The water wells located within the 3 to 4 mile radius are as follows: (Ref. 8, pp. 12,23; Ref. 9, pp. 20,32)

The well owners are unknown		(Ref. 9, pp. 4-5).
Well #35-35-601	Stock Use	(Ref. 9, pp. 5,20,32)
Well #35-35-603	Unknown Use	(Ref. 9, pp. 5,20,32)
Well #35-35-604	Stock Use	(Ref. 9, pp. 5,20,32)
Well #35-31-901	Industrial Use	(Ref. 9, pp. 4, 20,32)

Since none of the wells above are designated as drinking water use, there is no population drinking water in the 3 to 4 mile distance category.

Reference: 8,9

Nearest Well

Level of Contamination: Potential
Distance in miles: 1.02

Nearest Well Factor: 5.00E+00

Documentation for Nearest Well:

The nearest well that supplies drinking water is the (b) (6) Well (Ref. 5, pg. 15; Ref. 8, pp. 12,23; Ref. 9, pp. 20, 32). The (b) (6) Well is located approximately 1.02 miles southeast of the site (Ref. 10, pg. 1). The well is 100 feet deep and is estimated to be screened in the Queen City Sand (Ref. 5, pg. 15; Ref. 3, pg. 8).

Reference: 3,5,8,9,10

Resources

Resource Use: YES

Resource Factor: 5.00E+00

Documentation for Resources:

Within the 3 to 4 mile distance category there are wells that are listed for stock use (Ref. 9, pp. 4,20,32). For the purpose of this report "stock use" will be considered agricultural use.

Reference: 9

Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

Documentation for Wellhead Protection Area:

There are no designated wellhead protection areas within four miles of the site (Ref. 12, pg.1).

Reference: 12

SURFACE WATER PATHWAY SEGMENT SUMMARY
Dixie (TEI) Petro-Chemical - 11/12/93

No.	Segment ID	Segment Type	Water Type	Start Point (mi)	End Point (mi)	Average Flow (cfs)
1	Intermittent Stream	River	Fresh	0.00	0.50	2
2	Long Creek	River	Fresh	0.50	2.50	9
3	Eastman Lake	Lake	Fresh	2.50	4.25	9
4	Sabine River	River	Fresh	4.25	15.00	3687

Documentation for segment: Intermittent Stream:

By definition the intermittent stream is not surface water. However, the surface water definition can not be explained without including this segment. The intermittent stream links the site to the surface water (Ref. 16, pg. 1). Therefore, it is crucial to the pathway.

The surface drainage from the site flows immediately into the intermittent stream (Ref. 4, pg. 13; Ref. 16, pg. 1). The intermittent stream flows approximately 1/2 mile before reaching the PPE at Long Creek (Ref. 4, pg. 13; Ref. 16, pg. 1). The distance calculations were as follows:

Length of the Intermittent Stream segment measured on a Topo Map = 1.3 inches.
Conversion: 2.635 in. = 1 mile
Calculation: 1.3 in./ 2.625 (in./mile) = 0.50 mile
(Ref. 16, pg. 1).

There is no available information indicating the flow rate for this stream. Therefore, based on visual evidence; a value of 2 cfs was chosen for the flow rate (Ref. 1, Table 4-13, pg. 51613).

Reference: 4,16

Documentation for segment: Long Creek :

The PPE to Long Creek is 0.50 miles from the site (Ref. 4, pg. 13; Ref. 16, pg. 1). Long Creek then reaches the PPE to Eastman Lake 2.5 miles downstream of the site. The segment length of Long Creek was measured as follows:

Total Long Creek segment distance measured on Topo Map: 5.30 in.

Conversion: 2.625 in. = 1 mile
Calculation: 5.30 in./ 2.625 (in./mile) = 2.0 miles
(Ref. 16, pg. 1)

There is no available information on the flow in the creek. Therefore, based on visual observation, a value of 9 cfs was chosen for the flow rate for Long Creek (Ref. 1, Table 4-13, pg. 51613).

Reference: 1,4,16

Documentation for segment: Eastman Lake:

The PPE to Eastman Lake is approximately 2.5 miles from the site (Ref. 4, pg. 13; Ref. 16, pg. 1). Eastman Lake then reaches the PPE to the Sabine River 4.25 miles downstream of the site. The distance from the PPE of Eastman Lake to the PPE of the Sabine River was measured as follows:

Total Eastman Lake segment distance measured on a Topo Map = 4.60 in.
Conversion: 2.625 in. = 1 mile
Calculation: 4.60 in./ 2,625 (in./mile) = 1.75 miles
(Ref. 16, pg. 1)

There is no available information on the flow rate in the lake. Therefore, based on visual observation, a value of 9 cfs was chosen for the flow rate for Eastman Lake (Ref. 1, Table 4-13, pg. 51613).

Reference: 1,4,16

Documentation for segment: Sabine River:

The PPE to the Sabine River is approximately 4.25 miles downstream from the site (Ref. 4, pg. 13; Ref. 16, pg. 1). The distance from the PPE to the site was calculated as follows:

Distance measured on Topo Map: 11.2 inches

Conversion: 2.625 in. = 1 mile
Calculation: 11.2 in./ 2.625 (in./mile) = 4.25 miles
(Ref. 16, pg. 1)

The remainder of the fifteen mile target distance limit is reached within the confines of the Sabine River (Ref. 16, pg. 1).

The flow rate for the Sabine River is 3,687 cubic feet per second. This value was computed from two 1992 flow rates in the Sabine (both upstream). These two values were averaged to obtain an approximate average flow rate at the site (Ref. 17, pp. 3-4).

Reference: 4,16,17

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
Dixie (TEI) Petro-Chemical - 11/12/93

OBSERVED RELEASE

No.	Sample ID	Sample Type	Distance (miles)	Level of Contamination DW	HFC	Env

- N/A and/or data not specified

==========

Observed Release Factor 0

POTENTIAL TO RELEASE

Potential to Release by Overland Flow

Containment

No.	Source ID	HWQ Value	Containment Value
1	Former UST Area #1	1.46E-01	10
2	Shallow GW Area	5.23E-03	10

==========

Containment Factor: 10

Documentation for Overland Flow Containment, Source Former UST Area #1:

The site does not have a maintained, engineered cover nor a functioning, maintained run-on or run-off control system (Ref. 1, Table 4-2, pg. 51609, Ref. 5, pg. 9).

Reference: 1,5

Documentation for Overland Flow Containment, Source Shallow GW Area:

The site does not have a maintained, engineered cover nor a functioning, maintained run-on or run-off control system (Ref. 1, Table 4-2, pg. 51609, Ref. 5, pg. 7).

Reference: 1,5

Distance to Surface Water

Distance to Surface Water:	2640.0 feet
Distance to Surface Water Factor:	6

Documentation for Distance to Surface Water:

The distance from the site to Long Creek (via the intermittent stream) is approximately 1/2 mile (Ref. 16, pg. 1). The calculations used to determine this distance are as follows:

Distance Measured on Topo Map: 1.3 inches
Conversion: 2.625 inches per mile

Calculation: 1.3 in. / 2.625 (in./mile) = .5 miles

Reference: 16

Runoff

A. Drainage Area:	3.0 acres

Documentation for Drainage Area:

The site, which includes both of the sources, is approximately 3 acres in size (Ref. 14, pg. 7).

Reference: 14

B. 2-year, 24-hour Rainfall:	4.4 inches

Documentation for Rainfall:

The 2 year, 24-hour rainfall in Longview, Texas is 4.4 inches(Ref. 13, pg. 2).

Reference: 13

C. Soil Group: A
Coarse-textured soils with high infiltration rates

Documentation for Soil Group:

The Bowie-Cuthbert soil group is located at the site (Ref. 15, pp. 7-8).

The Bowie-Cuthbert group consists of a fine, sandy loam material (Ref. 15, pg. 8). By this definition the HRS Final Rule states that the soil should be classified as group A (Ref. 1, Table 4-4, pg. 51611).

Reference: 1,15

Runoff Factor: 1

==========

Potential to Release by Overland Flow Factor: 70

Potential to Release by Flood

No.	Source ID	HWQ Value	Flood Containment Value	Flood Frequency Value	Potential to Release by Flood
1	Former UST Area #1	1.46E-01	10	7	70
2	Shallow GW Area	5.23E-03	10	7	70

==========

Potential to Release by Flood Factor: 70

Documentation for Flood Containment, Source Former UST Area #1:

The entire site is located the 500 year floodplain (Ref. 6, pp. 2 & 3). Therefore the site is contained against a 100 year flood event (Ref. 1, Sec. (4.1.2.1.2.2.1), pg. 51611).

Reference: 1,6

Documentation for Flood Frequency, Source Former UST Area #1:

The entire site is located within the 500 year floodplain (Ref. 6, pp. 2 & 3).

Reference: 6

Documentation for Flood Containment, Source Shallow GW Area:

The entire site is located in the 500 year floodplain (Ref. 6, pp. 2 & 3). Therefore the source is contained for a 100 year flood (Ref. 1, Sec. (4.1.2.1.2.2.1), pp. 1 & 2).

Reference: 1,6

Documentation for Flood Frequency, Source Shallow GW Area:

The entire site is located in the 500 year floodplain (Ref. 6, pp. 2 & 3).

Reference: 6

SW PATHWAY: OVERLAND/FLOOD DRINKING WATER THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Source: 1 Former UST Area #1

Source Hazardous Waste Quantity Value: 0.15

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Acetone	10	4.00E-01	4.00E+00
Arsenic	10000	1.00E+00	1.00E+04
Chromium	10000	1.00E+00	1.00E+04
Ethyl benzene	10	4.00E-01	4.00E+00
Methyl Napthalene, 2-	0	4.00E-01	0.00E+00
Naphthalene	100	4.00E-01	4.00E+01
Nickel	10000	1.00E+00	1.00E+04
Tetrachloroethane, 1,1,1,2-	100	4.00E-01	4.00E+01
Toluene	10	4.00E-01	4.00E+00
Xylene, o-	1	4.00E-01	4.00E-01
Zinc	10	1.00E+00	1.00E+01

SW PATHWAY: OVERLAND/FLOOD DRINKING WATER THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Source: 2 Shallow GW Area

Source Hazardous Waste Quantity Value: 0.01

Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value
Arsenic	10000	1.00E+00	1.00E+04
Chromium	10000	1.00E+00	1.00E+04
Lead	10000	1.00E+00	1.00E+04
Nickel	10000	1.00E+00	1.00E+04
Vanadium	100	1.00E+00	1.00E+02
Zinc	10	1.00E+00	1.00E+01

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Toxicity/ Persistence Value

- N/A and/or data not specified

SW PATHWAY: OVERLAND/FLOOD DRINKING WATER THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Toxicity/Persistence Value from Source Hazardous Substances:	1.00E+04
Toxicity/Persistence Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	1.51E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population

- N/A and/or data not specified

==========

Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

Level II Concentrations

Intake	Distance Along the In-water Segment from the Probable Point of Entry (miles)	Population

- N/A and/or data not specified

==========

Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

Potential Contamination

Intake ID	Average Annual Flow (cfs)	Population Served
- N/A and/or data not specified		

Documentation for Intake :

There are no documented drinking water intakes within the target limit distance (Ref. 17, pg. 11).

Reference: 17

Type of Surface Water Body	Total Population	Dilution-Weighted Population
- N/A and/or data not specified		

==========

Dilution-Weighted Population Served
by Potentially Contaminated Intakes: 0.0

Potential Contamination Factor: 0.0

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: YES

Resource Value: 5.00E+00

Documentation for Resources:

The Sabine River is used for agriculture, industry, recreation, and domestic needs (Ref. 15, pg. 4).

Reference: 15

SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Source: 1 Former UST Area #1

Source Hazardous Waste Quantity Value: 0.15

Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Acetone	10	4.00E-01	5.00E-01	2.00E+00
Arsenic	10000	1.00E+00	5.00E+00	5.00E+04
Chromium	10000	1.00E+00	5.00E+00	5.00E+04
Ethyl benzene	10	4.00E-01	5.00E+01	2.00E+02
Methyl Napthalene, 2-	0	4.00E-01	5.00E+03	0.00E+00
Naphthalene	100	4.00E-01	5.00E+02	2.00E+04
Nickel	10000	1.00E+00	5.00E-01	5.00E+03
Tetrachloroethane, 1,1,1,2-	100	4.00E-01	5.00E+01	2.00E+03
Toluene	10	4.00E-01	5.00E+01	2.00E+02
Xylene, o-	1	4.00E-01	5.00E+01	2.00E+01
Zinc	10	1.00E+00	5.00E+02	5.00E+03

SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Source: 2 Shallow GW Area

Source Hazardous Waste Quantity Value: 0.01

Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value
Arsenic	10000	1.00E+00	5.00E+00	5.00E+04
Chromium	10000	1.00E+00	5.00E+00	5.00E+04
Lead	10000	1.00E+00	5.00E+01	5.00E+05
Nickel	10000	1.00E+00	5.00E-01	5.00E+03
Vanadium	100	1.00E+00	5.00E-01	5.00E+01
Zinc	10	1.00E+00	5.00E+02	5.00E+03

SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Toxicity Value	Persistence Value	Bio-accum. Value	Toxicity/ Persistence/ Bioaccum. Value

- N/A and/or data not specified

SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Toxicity/Persistence/Bioaccumulation Value from Source Hazardous Substances:	5.00E+05
Toxicity/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Persistence/Bioaccumulation Factor:	5.00E+05
Sum of Source Hazardous Waste Quantity Values:	1.51E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	32

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

==========

Sum of Human Food Chain Population Values: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Fishery	Annual Production (pounds)	Human Food Chain Population Value
- N/A and/or data not specified		

==========

Sum of Human Food Chain Population Values: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Fishery	Annnual Production (pounds)	Type of Surface Water Body	Average Annual Flow (cfs)	Pop. Value (Pi)	Dilution Weight (Di)	Pi*Di
4 Sabine River	1000.0	River	3687	3.0	1.00E-03	3.00E-03

Sum of (Pi*Di): 3.00E-03

Potential Human Food Chain Contamination Factor: 3.00E-04

Documentation for Intermittent Stream Fishery:

By visual observation, there does not appear to be any fishing in the intermittent stream. Because the stream is defined as an intermittent it will dry up during some parts of the year (Ref. 16, pg. 1).

Reference: 16

Documentation for Long Creek Fishery:

By visual observation, there does not appear to be any fishing in this stretch of Long Creek. However, there is no documented evidence of this (Ref. 5).

Reference: 5

Documentation for Eastman Lake Fishery:

Eastman Lake is on the property of the Eastman Kodak Corp. and is not accessible to the public for fishing. Therefore the annual fish production for the lake will be considered as zero for this report (Ref. 16, pg. 1).

Reference: 16

Documentation for Sabine River Fishery:

An exact value for the annual fish production in the Sabine River is unknown (Ref. 18, pg. 1). However, the Sabine River is fished quite extensively downstream of Longview (Ref. 19, pg. 1). Therefore, the annual fish production in pounds will be estimated at 1,000 pounds per year (Ref. 1, Table 4-18, pg. 51621).

Reference: 1,18,19

Food Chain Individual

Location of Nearest Fishery: Sabine River
Distance from the Probable Point of Entry: 4.25 miles
Type of Surface Water Body: River
Dilution Weight: 0.0010000
Level of Contamination: Potential

Food Chain Individual Factor: 0.00

Documentation for Sabine River:

The PPE to the Sabine River is approximately 4.25 miles downstream from the site (Ref. 4, pg. 13; Ref. 16, pg. 1). The distance from the PPE to the site was calculated as follows:

Distance measured on Topo Map: 11.2 inches
Conversion: 2.625 in. = 1 mile
Calculation: 11.2 in./ 2.625 (in./mile) = 4.25 miles
(Ref. 16, pg. 1)

The remainder of the fifteen mile target distance limit is reached within the confines of the Sabine River (Ref. 16, pg. 1).

The flow rate for the Sabine River is 3,687 cubic feet per second. This value was computed from two 1992 flow rates in the Sabine (both upstream). These two values were averaged to obtain an approximate average flow rate at the site (Ref. 17, pp. 3-4).

Reference: 4,16,17

SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Source: 1 Former UST Area #1

Source Hazardous Waste Quantity Value: 0.15

Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Acetone	100	4.00E-01	5.00E-01	2.00E+01
Arsenic	10	1.00E+00	5.00E+01	5.00E+02
Chromium	10000	1.00E+00	5.00E+00	5.00E+04
Ethyl benzene	100	4.00E-01	5.00E+01	2.00E+03
Methyl Napthalene, 2-	1000	4.00E-01	5.00E+03	2.00E+06
Naphthalene	1000	4.00E-01	5.00E+02	2.00E+05
Nickel	10	1.00E+00	5.00E+02	5.00E+03
Tetrachloroethane, 1,1,1,2-	10	4.00E-01	5.00E+01	2.00E+02
Toluene	100	4.00E-01	5.00E+01	2.00E+03
Xylene, o-	100	4.00E-01	5.00E+01	2.00E+03
Zinc	10	1.00E+00	5.00E+02	5.00E+03

SW PATHWAY: OVERLAND FLOW/FLOOD ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Source: 2 Shallow GW Area

Source Hazardous Waste Quantity Value: 0.01

Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value
Arsenic	10	1.00E+00	5.00E+01	5.00E+02
Chromium	10000	1.00E+00	5.00E+00	5.00E+04
Lead	1000	1.00E+00	5.00E+03	5.00E+06
Nickel	10	1.00E+00	5.00E+02	5.00E+03
Vanadium	0	1.00E+00	5.00E-01	0.00E+00
Zinc	10	1.00E+00	5.00E+02	5.00E+03

Hazardous Substances Found in an Observed Release

Sample No.	Observed Release Hazardous Substance	Eco-toxicity Value	Persistence Value	Bio-accum. Value	Ecotoxicity/ Persistence/ Bioaccum. Value

- N/A and/or data not specified

Ecotoxicity/Persistence/Bioaccummulation Value from Source Hazardous Substances:	5.00E+06
Ecotoxicity/Persistence/Bioaccummulation Value from Observed Release Hazardous Substances:	0.00E+00
Ecotoxicity/Persistence/Bioaccummulation Factor:	5.00E+06
Sum of Source Hazardous Waste Quantity Values:	1.51E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	56

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT ENVIRONMENTAL THREAT TARGETS
Dixie (TEI) Petro-Chemical - 11/12/93

Level I Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

==========
Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

Sensitive Environment	Distance from Probable Point of Entry to Sensitive Env. (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Sum of Sensitive Environments Values: 0

Wetlands

Wetland	Distance from Probable Point of Entry to Wetland (miles)	Wetlands Frontage (miles)
- N/A and/or data not specified		

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

==========

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

Sensitive Environments

Type of Surface Water Body	Sensitive Environment	Sensitive Environment Value

Wetlands

Type of Surface Water Body	Sensitive Environment	Wetlands Frontage	Wetlands Value

- N/A and/or data not specified

Documentation for Sensitive Environment Wetlands:

Wetlands frontage was calculated as follows:

A planimeter with a similar scale to the wetlands map was used to evaluate wetlands frontage on Long Creek, Eastman Lake, and the Sabine River (Ref. 20, pp. 1-2).

Throughout the 15 mile downstream segment categories of wetlands were grouped and added. The following table presents the wetlands totals:

Wetlands Category	Frontage Distance
PFO1A	4.8 miles
PFO(SS)1A	2.0 miles
R2OWH	1.8 miles
L1OWHh	2.6 miles

Key to Wetlands:
P=Palustrine SS= Scrub Shrub R= Riverine 2 = Lower Perinnial

FO = Forrested OW = Open Water EM = Emergent

1 = Broad Leaved Deciduous S = Narrow Leaved Persistent

A = Temporary C = Seasonal H = Permanent

Reference: 20

Documentation for Sensitive Environment Neches Rose Mallow:

The Neches River Rose Mallow is a Category 2 (Federal Endangered and State Threatened) species located within the target limit distance of the site (Ref. 21, pg. 1).

Reference: 21

Documentation for Sensitive Environment A. Snapping Turtle:

The Alligator Snapping Turtle is a Category 2 (Federal and State Threatened) species located within the target limit distance of the site (Ref. 21, pg. 1)

Reference: 21

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT ENVIRONMENTAL THREAT TARGETS
Dixie (TEI) Petro-Chemical - 11/12/93

Type of Surface Water Body	Sum of Sens. Environment Values(Sj)	Sum of Wetland Frontage Values(Wj)	Dilution Weight (Dj)	Dj(Wj+Sj)

- N/A and/or data not specified

Sum of Dj(Wj+Sj): 0.00E+00
Sum of Dj(Wj+Sj)/10: 0.00E+00

==========
Potential Contamination Sensitive Environment Factor: 0.00E+00

Likelihood of Exposure

No.	Source ID	Level of Contamination
2	Shallow GW Area	Level I

Likelihood of Exposure Factor: 550

Documentation for Area of Contamination, Source Former UST Area #1:

The area of observed contamination for the former UST Area #1 is considered to be the same as the source area. This area was determined by first delineating the source on a site map. The source was then measured as follows:

Dimensions on Map: 1.35" x 3.30"
Converted dimensions: 45' x 110'
Area of contamination = 4,950 sq. feet
(Ref. 7, pp. 1-2)

Reference: 7

Documentation for Area of Contamination, Source Shallow GW Area:

The area of observed contamination for the shallow ground water area is considered to be the same as the source area. This area was determined by first delineating the source on a site map. The site was then measured and the area calculated as follows:

Dimensions of source on Map: 0.40" x 0.40"
Converted Dimensions: 13.3' x 13.3'
Actual area of contamination: 177.7 sq. feet
(Ref. 7, pp. 1-2)

Reference: 7

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT LIKELIHOOD OF EXPOSURE
Dixie (TEI) Petro-Chemical - 11/12/93

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
2	Arsenic	< 2	5.5E+00	3.3E-01	1.7E+02	ppm
2	Chromium	< 2	6.8E+01	0.0E+00	2.9E+03	ppm
2	Lead	< 2	1.5E+01	0.0E+00	0.0E+00	ppm
2	Nickel	< 2	9.4E+00	0.0E+00	1.2E+04	ppm
2	Vanadium	< 2	6.0E+01	0.0E+00	4.1E+03	ppm
2	Zinc	< 2	6.1E+01	0.0E+00	1.7E+05	ppm

Documentation for Source Former UST Area #1, Contaminants:

Samples SS-09, SS-10, SS-11, and SS-12 were collected at the Former UST Area #1 (Ref. 4, pp. 30 & 49). These samples were collected on May 25, 1993 (Ref. 5, pp. 20-22).

Sample SS-09 (CLP Sample #'s = MFAQ12/FZ914)
(Ref. 4, pg. 30)

Contaminants	Concentration	Qualifier
Arsenic	3.5 ppm	J
Chromium	12.5 ppm	J

(Ref. 4, pg. 37)

.....

Sample SS-10 (CLP Sample #'s = MFAQ14/FZ916).

Contaminants	Concentration	Qualifier
Acetone	30 ppm	B
Total Xylene	410 ppm	J

(Ref. 4, pg. 42)

.....

Sample SS-11 (CLP Sample #'s = MFAQ15/FZ917).

Contaminants	Concentration	Qualifier
Ethylbenzene	68 ppm	J
2-Methylnaphthalene	6.1 ppm	
Naphthalene	3.8 ppm	
Nickel	29.6 ppm	
Tetrachloroethane	24 ppm	
Toluene	200 ppm	J
Zinc	130 ppm	

(Ref. 4, pp. 37 & 42)

The previously mentioned samples were compared to sample SS-13 for background concentrations (Ref. 4, pg. 30). Sample SS-13 was collected on May 24, 1993 (Ref. 5, pg. 17). Concentrations for similar contaminants are as follows:

Background Soil Sample SS-13 (CLP Sample # MFAQ00/FZ902).
(Ref. 4, pg. 30)

Contaminant	Concentration	Qualifier
Acetone	0.012 ppm	J
Arsenic	1.8 ppm	J
Chromium	11.3 ppm	J
Ethylbenzene	Undetected (No detection Limit Given)	
2-Methylnaphthalene	0.44 ppm	U
Naphthalene	0.44 ppm	U
Nickel	3.9 ppm	B
Tetrachloroethane	0.012 ppm	J
Toluene	0.002 ppm	U
Total Xylene	0.012 ppm	U
Zinc	48 ppm	

(Ref. 4, pp. 36 & 42)

The following discusses the qualifiers used in this data set:

U = Undetected, B = Detected in the Blank, J = Estimated Value

Arsenic was qualified J due to matrix spike recoveries being out of control limits (Ref. 4, pg. 62).

Chromium was qualified J due to ICP serial dilutions being out of control limits (Ref. 4, pg. 62).

Acetone was qualified B due to contaminant presence in the blank (Ref. 4, pg. 68).

Toluene, Ethylbenzene, and Total Xylene were qualified J due to the two column quantitation differing by > 25% (Ref. 4, pg. 68).

Reference: 4,5

Documentation for Source Shallow GW Area, Contaminants:

Sample SD-08 was collected on May 25, 1993 (Ref. 5, pg. 20). Sample concentrations are as follows:

Sample SD-08 (CLP Sample Number = MFAQ11/FZ913)

Contaminants	Concentration	Qualifier
Arsenic	5.5 ppm	J
Chromium	67.9 ppm	J
Lead	15.4 ppm	
Nickel	9.4 ppm	B
Vanadium	60.5 ppm	
Zinc	60.8 ppm	

(Ref. 4, pg. 38)

Sample SD-14 was collected on May 24, 1993, for the purposes of obtaining background sediment concentrations (Ref. 4, pg. 30). Similar contaminant background concentrations are as follows:

SD-14 (CLP Sample #'s MFAQ03/FZ905).
(Ref. 4, pg. 30)

Contaminants	Concentration	Qualifier
Arsenic	4.2 ppm	J
Chromium	15 ppm	J
Lead	48.5 ppm	
Nickel	3 ppm	U
Vanadium	21.1 ppm	
Zinc	25.8 ppm	

(Ref. 4, pg. 38)

The following discusses the qualifiers for the data set:

B = Detected in the Blank, J = Estimated Value, U = Undetected

Arsenic was qualified with a J due to matrix spike recoveries being out of control limits (Ref. 4, pg. 62).

Chromium was qualified with a J due to the ICP serial dilutions being out of control limits (Ref. 4, pg. 62).

Reference: 4,5

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Source: 2 Shallow GW Area

Source Hazardous Waste Quantity Value: 0.01

Hazardous Substance	Toxicity Value
Arsenic	10000
Chromium	10000
Lead	10000
Nickel	10000
Vanadium	100
Zinc	10

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	5.23E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

Targets

Level I Population: 0.0 Value: 0.00

Documentation for Level I Population:

There are three residences located within 200 feet of the site. However, these residences are not located within 200 feet of the sources (Ref. 4, pp. 15,48).

Reference: 4

Level II Population: 0.0 Value: 0.00

Documentation for Level II Population:

There are no documented resident individuals on the property with Level II contamination or within 200 feet of that contamination (Ref. 4, pp. 36,49a).

Reference: 4

Workers: 4.0 Value: 5.00

Documentation for Workers:

This property is currently leased to the McConway & Torley (MC&T). MC&T is a rail car parts manufacturer and uses the on-site warehouse for storing these parts (Ref. 4, pg. 6). There are currently four employees working at MC&T (Ref. 5, pg. 3).

Reference: 4,5

Resident Individual:	Potentia	Value:	0.00
Resources:	NO	Value:	0.00

Documentation for Resources:

There are no resources identified on the sources (Ref. 5, pp. 1-22).

Reference: 5

Terrestial Sensitive Environment	Value
- N/A and/or data not specified	

==========

Terrestrial Sensitive Environments Factor: 0.00

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT LIKELIHOOD OF EXPOSURE
Dixie (TEI) Petro-Chemical - 11/12/93

Likelihood of Exposure

No.	Source ID	Level of Contamination	Attractiveness/ Accessibility	Area of Contam. (sq. feet)
2	Shallow GW Area	Level I	5	178

Highest Attractiveness/Accessibility Value: 5
Sum of Eligible Areas Of Contamination (sq. feet): 178
Area of Contamination Value: 5

Likelihood of Exposure Factor Category: 5

Documentation for Attractiveness/Accessibility, Source Former UST Area #1:

Contamination found at the source is greater than 2 feet from the surface (Ref. 5, pp. 20-21).

Reference: 5

Documentation for Attractiveness/Accessibility, Source Shallow GW Area:

The site is surrounded by a maintained fence (Ref. 1, Table 5-6, pg. 51648, Ref. 5, pg. 7).

Reference: 1,5

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
2	Arsenic	< 2	5.5E+00	3.3E-01	1.7E+02	ppm
2	Chromium	< 2	6.8E+01	0.0E+00	2.9E+03	ppm
2	Lead	< 2	1.5E+01	0.0E+00	0.0E+00	ppm
2	Nickel	< 2	9.4E+00	0.0E+00	1.2E+04	ppm
2	Vanadium	< 2	6.0E+01	0.0E+00	4.1E+03	ppm
2	Zinc	< 2	6.1E+01	0.0E+00	1.7E+05	ppm

Documentation for Source Former UST Area #1, Contaminants:

Samples SS-09, SS-10, SS-11, and SS-12 were collected at the Former UST Area #1 (Ref. 4, pp. 30 & 49). These samples were collected on May 25, 1993 (Ref. 5, pp. 20-22).

Sample SS-09 (CLP Sample #'s = MFAQ12/FZ914)
(Ref. 4, pg. 30)

Contaminants	Concentration	Qualifier
Arsenic	3.5 ppm	J
Chromium	12.5 ppm	J

(Ref. 4, pg. 37)

.....

Sample SS-10 (CLP Sample #'s = MFAQ14/FZ916).

Contaminants	Concentration	Qualifier
Acetone	30 ppm	B
Total Xylene	410 ppm	J

(Ref. 4, pg. 42)

.....

Sample SS-11 (CLP Sample #'s = MFAQ15/FZ917).

Contaminants	Concentration	Qualifier
Ethylbenzene	68 ppm	J
2-Methylnaphthalene	6.1 ppm	
Naphthalene	3.8 ppm	
Nickel	29.6 ppm	
Tetrachloroethane	24 ppm	
Toluene	200 ppm	J
Zinc	130 ppm	

(Ref. 4, pp. 37 & 42)

The previously mentioned samples were compared to sample SS-13 for background concentrations (Ref. 4, pg. 30). Sample SS-13 was collected on May 24, 1993 (Ref. 5, pg. 17). Concentrations for similar contaminants are as follows:

Background Soil Sample SS-13 (CLP Sample # MFAQ00/FZ902).
(Ref. 4, pg. 30)

Contaminant	Concentration	Qualifier
Acetone	0.012 ppm	J
Arsenic	1.8 ppm	J
Chromium	11.3 ppm	J
Ethylbenzene	Undetected (No detection Limit Given)	
2-Methylnaphthalene	0.44 ppm	U
Naphthalene	0.44 ppm	U
Nickel	3.9 ppm	B
Tetrachloroethane	0.012 ppm	J

Toluene	0.002 ppm	U
Total Xylene	0.012 ppm	U
Zinc	48 ppm	

(Ref. 4, pp. 36 & 42)

The following discusses the qualifiers used in this data set:

U = Undetected, B = Detected in the Blank, J = Estimated Value

Arsenic was qualified J due to matrix spike recoveries being out of control limits (Ref. 4, pg. 62).

Chromium was qualified J due to ICP serial dilutions being out of control limits (Ref. 4, pg. 62).

Acetone was qualified B due to contaminant presence in the blank (Ref. 4, pg. 68).

Toluene, Ethylbenzene, and Total Xylene were qualified J due to the two column quantitation differing by > 25% (Ref. 4, pg. 68).

Reference: 4,5

Documentation for Source Shallow GW Area, Contaminants:

Sample SD-08 was collected on May 25, 1993 (Ref. 5, pg. 20). Sample concentrations are as follows:

Sample SD-08 (CLP Sample Number = MFAQ11/FZ913)

Contaminants	Concentration	Qualifier
Arsenic	5.5 ppm	J
Chromium	67.9 ppm	J
Lead	15.4 ppm	
Nickel	9.4 ppm	B
Vanadium	60.5 ppm	
Zinc	60.8 ppm	

(Ref. 4, pg. 38)

Sample SD-14 was collected on May 24, 1993, for the purposes of obtaining background sediment concentrations (Ref. 4, pg. 30). Similar contaminant background concentrations are as follows:

SD-14 (CLP Sample #'s MFAQ03/FZ905).
(Ref. 4, pg. 30)

Contaminants	Concentration	Qualifier
Arsenic	4.2 ppm	J
Chromium	15 ppm	J
Lead	48.5 ppm	
Nickel	3 ppm	U
Vanadium	21.1 ppm	
Zinc	25.8 ppm	

(Ref. 4, pg. 38)

The following discusses the qualifiers for the data set:

B = Detected in the Blank, J = Estimated Value, U = Undetected

Arsenic was qualified with a J due to matrix spike recoveries being out of control limits (Ref. 4, pg. 62).

Chromium was qualified with a J due to the ICP serial dilutions being out of control limits (Ref. 4, pg. 62).

Reference: 4,5

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Source: 2 Shallow GW Area

Source Hazardous Waste Quantity Value: 0.01

Hazardous Substance	Toxicity Value
Arsenic	10000
Chromium	10000
Lead	10000
Nickel	10000
Vanadium	100
Zinc	10

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT WASTE CHARACTERISTICS
Dixie (TEI) Petro-Chemical - 11/12/93

Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	5.23E-03
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT TARGETS
Dixie (TEI) Petro-Chemical - 11/12/93

Nearby Individual

Population within 1/4 mile: 152.0

Nearby Individual Value: 1.0

Population Within 1 Mile

Travel Distance Category	Number of People	Value
> 0 to 1/4 mile	152.0	0.4
> 1/4 to 1/2 mile	67.0	0.1
> 1/2 to 1 mile	558.0	0.3
	Population Within 1 Mile Factor:	0.8

Documentation for Population > 0 to 1/4 mile Distance Category:

The population within the 0 to 1/4 mile distance category:

The population within the 0 to 1/4 mile radius from the site is as follows: (Ref. 16, pg. 1)

A count of the homes within the distance category was first completed. (57 homes) (Ref. 17, pg. 1)

This value was then multiplied by an estimated 2.67 persons/home value for Gregg County. (Ref. 11, pg. 3)

Calculation: 57 homes x 2.67 persons/home = 152.2 persons

This value was then rounded to the nearest whole number, which makes the total population within the distance category 152 persons.

Reference: 11,16,17

Documentation for Population > 1/4 to 1/2 mile Distance Category:

The population within the 1/4 to 1/2 mile radius from the site is as follows: (Ref. 16, pg. 1)

A count of the homes within the distance category was first completed (25 homes). (Ref. 17, pg. 1)

This value was then multiplied by an estimated 2.67 persons per home value for Gregg County (Ref. 11, pg. 3).

Calculation: 25 homes x 2.67 persons/home = 66.8 persons

This value was then rounded to the nearest whole number, which makes the total estimated population within the distance category 67 persons.

Reference: 11,16,17

Documentation for Population > 1/2 to 1 mile Distance Category:

The population within the 1/2 to 1 mile radius from the site is as follows: (Ref. 16, pg. 1)

A count of the homes within the distance category was first completed (209 homes). (Ref. 17, pg. 1)

This value was then multiplied by an estimated 2.67 persons per home value for Gregg County (Ref. 11, pg. 3).

Calculation: 209 homes x 2,67 persons/home = 558.03 persons

This value was then rounded to the nearest whole number, which makes a total population within the distance category of 558 persons.

Reference: 11,16,17

OBSERVED RELEASE

No.	Sample ID	Distance (miles)	Level of Contamination

- N/A and/or data not specified

==========

Observed Release Factor: 0

Gas Migration Potential

GAS POTENTIAL TO RELEASE

Source ID	Source Type	Gas Contain. Value (A)	Gas Source Type Value (B)	Gas Migrtn. Potent. Value (C)	Sum (B+C)	Gas Potential to Rel. Value A(B+C)
Former UST Area #1	Contaminated Soil	3	19	17	36	108

Gas Potential to Release Factor: 108

Documentation for Gas Containment, Source Former UST Area #1:

The source has an uncontaminated soil cover greater than three feet and is lightly vegetated with much exposed soil (Ref. 5, pg. 7, Ref. 1, Table 6-3, pg. 51652).

Reference: 1,5

Documentation for Source Type, Source Former UST Area #1:

The source is an area that was formerly used as an underground storage tank (UST) area for many solvents and other organic compounds (Ref. 4, pg. 4-09, Figure 3). Soil samples (SD-09, SD-10, SD-11, and SD-12) were collected in the area where the UST's were formerly located to determine if the remaining soils were contaminated (Ref. 4, Table 3).

Reference: 4

Documentation for Gas Containment, Source Shallow GW Area:

The source has contaminated soil at depths less than one foot (Ref. 1, Table 6-3, pg. 51652, Ref. 4, pp. 33 & 38).

Reference: 1,4

Documentation for Source Type, Source Shallow GW Area:

The source is an area identified during the Site Reconnaissance Inspection (Ref. 5, pg. 09). The usage of this source area is unknown but is characterized by a rock/soil mixture and water was ponded over it with an oily sheen appearance (Ref. 5, pg. 09). Sediment sample SD-08 was collected in the source area to determine possible contaminants (Ref. 5, pg. 20). An exact size of the source was not determined during the Site Reconnaissance or the Site Sampling Inspections. Therefore, the size of the source area was determined to be approximately 178 square feet (Ref. 7, pg. 2).

Reference: 5,7

Source: Former UST Area #1

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value
Acetone	17
Ethyl benzene	17
Naphthalene	11
Tetrachloroethane, 1,1,1,2-	17
Toluene	17
Xylene, o-	17

Average of Gas Migration Potential Value for 3 Hazardous Substances: 17.000

Gas Migration Potential Value From Table 6-7: 17

Source: Shallow GW Area

Gaseous Hazardous Substance	Hazardous Substance Gas Migration Potential Value

Average of Gas Migration Potential Value for 3 Hazardous Substances: 0.000

Gas Migration Potential Value From Table 6-7: 0

Particulate Migration Potential

PARTICULATE POTENTIAL TO RELEASE

Source ID	Source Type	Partic. Contain. Value (A)	Partic. Source Type Value (B)	Partic. Migrtn. Potent. Value (C)	Sum (B+C)	Partic. Potential to Rel. Value A(B+C)
Former UST Area #1	Contaminated Soil	3	22	6	28	84
Shallow GW Area	Contaminated Soil	10	22	6	28	280

Particulate Potential to Release Factor: 280

Documentation for Particulate Containment, Source Former UST Area #1:

The source has an uncontaminated soil cover greater than 3 feet and is lightly vegetated with much exposed soil (Ref. 1, Table 6-9,pg. 51653, Ref. 5, pg. 7).

Reference: 1,5

Documentation for Source Type, Source Former UST Area #1:

The source is an area that was formerly used as an underground storage tank (UST) area for many solvents and other organic compounds (Ref. 4, pg. 4-09, Figure 3). Soil samples (SD-09, SD-10, SD-11, and SD-12) were collected in the area where the UST's were formerly located to determine if the remaining soils were contaminated (Ref. 4, Table 3).

Reference: 4

Documentation for Particulate Containment, Source Shallow GW Area:

The source has contaminated soil at a depth less than one foot (Ref. 1, Table 6-9, pg. 51653, Ref. 4, pp. 33 & 38).

Reference: 1,4

Documentation for Source Type, Source Shallow GW Area:

The source is an area identified during the Site Reconnaissance Inspection (Ref. 5, pg. 09). The usage of this source area is unknown but is characterized by a rock/soil mixture and water was ponded over it with an oily sheen appearance (Ref. 5, pg. 09). Sediment sample SD-08 was collected in the source area to determine possible contaminants (Ref. 5, pg. 20). An exact size of the source was not determined during the Site Reconnaissance or the Site Sampling Inspections. Therefore, the size of the source area was determined to be approximately 178 square feet (Ref. 7, pg. 2).

Reference: 5,7

Documentation for Particulate Migration Potential:

The particulate migration potential factor value was assigned using the HRS Final Rule (Ref. 1, Figure 6-2, pg. 51654).

Reference: 1

Source: Former UST Area #1

Particulate Hazardous Substance
Arsenic
Chromium
Methyl Napthalene, 2-
Naphthalene
Nickel
Zinc

Source: Shallow GW Area

Particulate Hazardous Substance
Arsenic
Chromium
Lead
Nickel
Vanadium
Zinc

Source: 1 Former UST Area #1

Source Hazardous Waste Quantity Value: 0.15

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Acetone	10	1.00E+00	NA	1.00E+01
Arsenic	10000	NA	2.00E-04	2.00E+00
Chromium	10000	NA	2.00E-04	2.00E+00
Ethyl benzene	10	1.00E+00	NA	1.00E+01
Methyl Napthalene, 2-	100	NA	2.00E-04	2.00E-02
Naphthalene	100	2.00E-01	2.00E-04	2.00E+01
Nickel	10000	NA	2.00E-04	2.00E+00
Tetrachloroethane, 1,1,1,2-	100	1.00E+00	NA	1.00E+02
Toluene	10	1.00E+00	NA	1.00E+01
Xylene, o-	1	1.00E+00	NA	1.00E+00
Zinc	10	NA	2.00E-04	2.00E-03

Source: 2 Shallow GW Area

Source Hazardous Waste Quantity Value: 0.01

Hazardous Substance	Toxicity Value	Gas Mobility Value	Particulate Mobility Value	Toxicity/ Mobility Value
Arsenic	10000	NA	2.00E-04	2.00E+00
Chromium	10000	NA	2.00E-04	2.00E+00
Lead	10000	NA	2.00E-04	2.00E+00
Nickel	10000	NA	2.00E-04	2.00E+00
Vanadium	100	NA	2.00E-04	2.00E-02
Zinc	10	NA	2.00E-04	2.00E-03

Hazardous Substances Found in an Observed Release

Sample ID	Observed Release Hazardous Substance	Particulate Toxicity/ Mobility Value	Gas Toxicity/ Mobility Value

- N/A and/or data not specified

Documentation for Particulate Mobility:

The particulate mobility factor value was chosen using the HRS Final Rule (Ref. 1, Figure 6-3, pg. 51657).

Reference: 1

Toxicity/Mobility Value from Source Hazardous Substances:	1.00E+02
Toxicity/Mobility Value from Observed Release Hazardous Substances:	0.00E+00
Toxicity/Mobility Factor:	1.00E+02
Sum of Source Hazardous Waste Quantity Values:	1.51E-01
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	6

Actual Contamination

No.	Sample ID	Distance (miles)	Level of Contamination

- N/A and/or data not specified

Potential Contamination

Distance Categories Subject to Potential Contamination	Population	Value
Onsite	4.0	0.4000
> 0 to 1/4 mile	152.0	4.1000
> 1/4 to 1/2 mile	67.0	0.3000
> 1/2 to 1 mile	558.0	0.8000
> 1 to 2 miles	19978.0	8.3000
> 2 to 3 miles	15141.0	3.8000
> 3 to 4 miles	9548.0	0.7000
	Potential Contaminantion Factor:	18.0000

Documentation for Population Onsite Distance Category:

There are 4 workers documented on the site (Ref. 5, pg. 3).

Reference: 5

Documentation for Population > 0 to 1/4 mile Distance Category:

There are 57 homes located within a 0 to 1/4 mile radius (Ref. 16, pg. 1).

This house count was then multiplied by 2.67 persons/home and rounded to the nearest whole number (Ref. 11, pg. 3).

Therefore, a total of 152 persons is estimated for the 0 to 1/4 mile radius from the site (Ref. 17, pg. 1).
(57 x 2.67 per./home = 152.19 , rounded = 152 persons)

Reference: 11,16,17

Documentation for Population > 1/4 to 1/2 mile Distance Category:

There are approximately 25 homes located within a 1/4 to 1/2 mile radius (Ref. 16, pg. 1).

This house count was then multiplied by 2.67 persons per home and rounded to the nearest whole number (Ref. 11, pg. 3).

Therefore, a total of 67 persons is estimated for the 1/4 to 1/2 mile radius (Ref. 17, pg. 1).
(25 homes x 2.67 per./home = 66.75 persons, rounded = 67 persons)

Reference: 11,16,17

Documentation for Population > 1/2 to 1 mile Distance Category:

There are approximately 209 homes located within the 1/2 to 1 mile radius (Ref. 16, pg. 1).

This house count was then multiplied by 2,67 persons per home and rounded to the nearest whole number (Ref. 11, pg. 3)

Therefore, a total of 558 persons is estimated for the 1/2 to 1 mile radius from the site (Ref. 17, pg. 1).
(209 persons x 2.67 per./home = 558.03 persons, rounded = 558 per.)

Reference: 11,16,17

Documentation for Population > 1 to 2 miles Distance Category:

A total population of 19,978 is located within the 1 to 2 mile radius (Ref. 22, pg. 2).

Reference: 22

Documentation for Population > 2 to 3 miles Distance Category:

A total population of 15,141 is located within the 2 to 3 mile radius (Ref. 22, pg. 2).

Reference: 22

Documentation for Population > 3 to 4 miles Distance Category:

A total population of 9,548 is located within the 3 to 4 mile radius (Ref. 22, pg. 2).

Reference: 22

Nearest Individual Factor

Level of Contamination: Potential
Distance in miles: 0 to 1/8

Nearest Individual Value: 20

Documentation for Nearest Individual:

The nearst residence is located at the trailer park adjacent to the site. The residence is located approximately 200 feet from the site (Ref. 5, pg. 11).

Reference: 5

Resources

Resource Use: NO

Resource Value: 0

Documentation for Resources:

There are no resources documented on-site at the sources (Ref. 4, pg. 15).

Reference: 4

Actual Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value
- N/A and/or data not specified		

Actual Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value
- N/A and/or data not specified		

==========
Sensitive Environments Actual Contamination Factor: 0.000
(Sum of Sensitive Environments + Wetlands Values)

Potential Contamination, Sensitive Environments

Sensitive Environment	Distance (miles)	Sensitive Environment Value	Distance Weight	Weighted Value/10
Neches Rose Mallow	0.000	75	1.0000	7.500
A. Snapping Turtle	0.000	75	1.0000	7.500

Sum of Sensitive Environments Weighted Values/10: 15.000

Potential Contamination, Wetlands

Distance Category	Wetland Acreage	Wetland Acreage Value	Distance Weight	Weighted Value/10
> 3 to 4 miles	265.0	250.0	0.0014	0.035
> 2 to 3 miles	120.0	125.0	0.0023	0.029
> 1 to 2 miles	70.0	75.0	0.0051	0.038
> 1/2 to 1 mile	15.0	25.0	0.0160	0.040
> 1/4 to 1/2 mile	1.2	25.0	0.0540	0.135

Total Wetland Acreage: 471.2

Sum of Wetland Weighted Acreage Values/10: 0.277

==========

Sensitive Environment Potential Contamination Factor: 15.000

Documentation for Sensitive Environment Neches Rose Mallow:

The Neches River Rose Mallow is a Category 2 (Federal Endangered and State Threatened) species located within the target limit distance of the site (Ref. 21, pg. 1).

Reference: 21

Documentation for Sensitive Environment A. Snapping Turtle:

The Alligator Snapping Turtle is a Category 2 (Federal and State Threatened) species located within the target limit distance of the site (Ref. 21, pg. 1)

Reference: 21

Documentation for Sensitive Environment Wetlands:

Wetlands were measured in square inches using a planimeter. The value was then converted from square inches to acres with the following conversion values:

144 sq. inches = 1 sq. foot & 43,560 sq. feet = 1 acre

A total of 265 acres of wetlands were counted in the 3 to 4 mile radius (Ref. 20, pg. 1; Ref. 23, pg. 1).

Reference: 20,23

Documentation for Sensitive Environment Wetlands:

Wetlands were measured in square inches using a planimeter. The value was then converted from square inches to acres with the following conversion values:

144 sq. inches = 1 sq. foot; 43,560 sq. feet = 1 acre

A total of 120 acres of wetlands were counted in the 2 to 3 mile radius (Ref. 20, pg. 1; Ref. 23, pg. 1).

Reference: 20,23

Documentation for Sensitive Environment Wetlands:

Wetlands were measured in square inches using a planimeter. The value was then converted from square inches to acres with the following conversion values:

144 sq. inches = 1 sq. foot; 43,560 sq. feet = 1 acre

A total of 70 acre of wetlands were counted in the 1 to 2 mile radius (Ref. 20, pg. 1; Ref. 23, pg. 1).

Reference: 20,23

Documentation for Sensitive Environment Wetlands:

Wetlands were measured in square inches using a planimeter. The value was then converted from square inches to acres with the following conversion values:

144 sq. inches = 1 sq. foot; 43,560 sq. feet = 1 acre

A total of 15 acres of wetlands were counted in the 1/2 to 1 mile radius (Ref. 20, pg. 1; Ref. 23, pg. 1).

Reference: 20, 23

Documentation for Sensitive Environment Wetlands:

Wetlands were measured in square inches using a planimeter. The value was then converted from square inches to acres with the following conversion values:

144 sq. inches = 1 sq. foot; 43,560 sq. feet = 1 acre

A total of 1.2 acres of wetlands were counted in the 1/4 to 1/2 mile radius (Ref. 20, pg. 1; Ref. 23, pg. 1).

Reference: 20,23

Documentation for Sensitive Environment Wetlands:

Wetlands were measured in square inches using a planimeter. The value was then converted from square inches to acres with the following conversion values:

144 sq. inches = 1 sq. foot; 43,560 sq. feet = 1 acre

A total of 0.2 acres of wetlands were counted in the 0 to 1/4 mile radius (Ref. 20, pg. 1; Ref. 23, pg. 1).

Reference: 20,23

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Ernest J. Baker, Jr.

TEXAS
WATER
DEVELOPMENT
BOARD

Report 101

GROUND-WATER RESOURCES OF GREGG AND UPSHUR COUNTIES, TEXAS

OCTOBER 1969

3-01

TEXAS WATER DEVELOPMENT BOARD

REPORT 101

GROUND-WATER RESOURCES OF GREGG AND UPSHUR COUNTIES, TEXAS

By

Matthew E. Broom
United States Geological Survey

Prepared by the U.S. Geological Survey
in cooperation with the
Texas Water Development Board

October 1969

3-02

GROUND-WATER RESOURCES OF GREGG AND UPSHUR COUNTIES, TEXAS

ABSTRACT

Gregg and Upshur Counties, in northeast Texas, are underlain by two aquifers that are capable of sustaining additional development. The aquifers consist of the Wilcox Group and Carrizo Sand (Carrizo-Wilcox aquifer) and the Queen City Sand.

The Carrizo-Wilcox aquifer, the most productive of the two aquifers, underlies all of the 2-county area at increasingly greater depths toward the trough (East Texas Embayment) that trends northeasterly through the east-central part of Upshur County. Of the total pumpage of 3.02 mgd (million gallons per day) in 1966, 2.84 mgd was from the Carrizo-Wilcox aquifer. At the 1966 hydraulic gradient (8 feet per mile), about 12,000 acre-feet per year (10.9 mgd) was being transmitted through this aquifer. The amount that is perennially available is not known, but it is probably at least two times that pumped in 1966. In addition, 45 million acre-feet of fresh to slightly saline water is in transient storage in the Carrizo-Wilcox aquifer; however, much of this lies at a depth of more than 400 feet. The water in the Carrizo-Wilcox generally is soft, but the high chloride content in parts of Upshur and most of Gregg County may limit development of the ground-water supplies in the aquifer, particularly for municipal and domestic uses.

The Queen City Sand, which crops out over nearly 90 percent of the area, is relatively undeveloped. In 1966, only 200 acre-feet (0.18 mgd) was pumped from the aquifer. At the 1966 hydraulic gradient of 8 feet per mile, 2.4 mgd, or 2,700 acre-feet per year, was being transmitted through the aquifer. An estimated 25 million acre-feet of fresh water is in transient storage, of which 8 million acre-feet theoretically would be available from storage. Development of even half of this quantity would require a large number of small-capacity wells because of the low transmissibility of the aquifer, about 5,000 gpd (gallons per day) per foot as compared to 20,000 gpd per foot for the Carrizo-Wilcox. The water in the Queen City Sand is uniformly low in mineralization except for iron; because of iron content, the Queen City Sand may be less desirable as a source of water for municipal, industrial, and domestic uses than the Carrizo-Wilcox aquifer. However, the iron can be substantially removed with proper treatment.

GROUND-WATER RESOURCES OF GREGG AND UPSHUR COUNTIES, TEXAS

INTRODUCTION

Location and Extent of the Area

Gregg and Upshur Counties in northeast Texas are bordered by Camp County on the north, Harrison, Marion, and Morris Counties on the east, Rusk County on the south, Smith County on the southwest, and Wood County on the west (Figure 1). The city of Longview (Gregg County), the principal center of commerce and industry in the area, is 130 miles east of Dallas and 60 miles west of Shreveport, Louisiana.

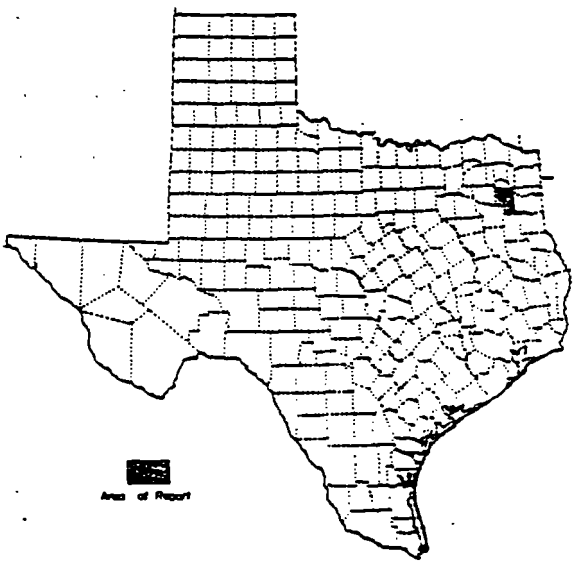

Figure 1.—Location of Gregg and Upshur Counties

The two counties comprise an area of 870 square miles, of which 284 are in Gregg County and 586 are in Upshur County.

Purpose and Scope

This is a report of a detailed investigation of the ground-water resources of Gregg and Upshur Counties begun in 1966 by the U.S. Geological Survey in cooperation with the Texas Water Development Board. The purpose of this report is to provide a guide for the optimum development of available ground-water resources in the report area.

Data are presented to show the vertical and lateral extent of the water-bearing formations or aquifers, the hydrologic properties of the aquifers, and the chemical quality of water in the aquifers. The report gives the quantities and uses of the ground water being withdrawn and the effects of these withdrawals on water levels. Problems associated with ground-water development are discussed, and estimates are given on ground water that is available for future development.

Methods of Investigation

The field data were collected mostly during the period from July 1966 to January 1967. Basic information, including depths of wells, water levels, methods of well construction and water lift, yield characteristics, and use of water, was collected for 157 wells. Information previously collected by the Texas Water Development Board and the U.S. Geological Survey was brought up-to-date. Well records are shown in Table 7 and well locations are shown on Figure 13.

Static water levels were measured with steel tape in 84 wells (Table 7). Altitudes not previously established at well sites were interpolated from Geological Survey 7½- and 15-minute topographic quadrangle maps (contour intervals 10 and 20 feet).

Ground-water samples were collected for chemical analysis from 66 wells and the results are shown in Table 9. Table 9 also includes analyses that were made previous to the present investigation.

Quantities of ground water pumped for public and industrial use (Table 4) were obtained largely from records. Quantities for domestic, livestock, and irrigation use were estimated from the number of users and normal rates of use.

The geologic map (Figure 2) is from the Geologic Atlas of Texas, Tyler Sheet (University of Texas, Bureau of Economic Geology, 1964).

Subsurface control for the geologic sections (Figures 14, 15, and 16), for the maps showing the altitudes of and depths to the top or base of the aquifers (Figures 4 and 5), and for maps showing the approximate sand thickness of the aquifers (Figures 11 and 12) were determined from electrical logs of oil, gas, and water tests. Additional subsurface information was provided by drillers' logs of wells, a representative number of which are given in Table 8.

Aquifer tests (Table 3) were analyzed by the Theis non-equilibrium method as modified by Cooper and Jacob (1946) and the Theis recovery method (Wenzel, 1942).

Previous Investigations

Deussen (1914), in his report on the geology and underground waters of the southeastern part of the Texas Coastal Plain, included a brief account of ground-water sources and development in Gregg and Upshur Counties. The geology of the report area was described in a report by Sellards and others (1932) on the regional geology of Texas.

Shafer and Lyle (1937) made an inventory of wells in Gregg County; a supplement to this inventory was made by Broadhurst (1943). Broadhurst (1942) made an inventory of wells in Upshur County. Broadhurst and Breeding (1945) reported on ground-water development and stream runoff in Gregg County. Sundstrom and others (1948), in a report on the public water supplies of East Texas, included information on the water supplies at Big Sandy and Gilmer in Upshur County, and Gladewater, Kilgore, and Longview in Gregg County.

Baker and others (1963) gave information on the aquifers in their ground-water reconnaissance report. Holloway (1964) reported on an alleged ground-water contamination case near Kilgore in Gregg County. Hughes and Leifeste (1965) gave information on the quality of surface water in their reconnaissance study of the chemical quality of surface water in the Sabine River basin.

Detailed ground-water investigations in counties adjacent to the report area have been made in Smith County (Dillard, 1963); Camp, Franklin, Morris, and Titus Counties (Broom and others, 1965); Harrison County (Broadhurst and Breeding, 1943b, and Broom and Myers, 1966); Marion County (Broadhurst and Breeding, 1943a); and Wood County (Broom, 1968). Smith and others (1966) made detailed base-flow studies of Little Cypress Creek along its reaches extending through Upshur, Gregg, and Harrison Counties.

Physiography and Climate

Gregg and Upshur Counties are in the West Gulf Coastal Plain physiographic province (Fenneman, 1938). The land surface, which slopes generally southeastward, supports a substantial growth of pine and hardwood. The area is drained in the northern half mostly by Little Cypress Creek and its tributaries, and in the southern half mostly by the Sabine River and its tributaries. Except for the relatively level flood plains of the principal streams, the terrain is gently rolling to hilly. Altitudes range from about 680 feet on the Little Cypress-Sabine drainage divide to about 240 feet along the downstream reaches of the Sabine River.

The U.S. Geological Survey maintains four stream-gaging stations in the area. The locations of the gaging stations are shown on Figure 13. Gaging-station data (U.S. Geological Survey, 1967) are summarized in the following table:

STREAM-GAGING STATION	DRAINAGE AREA (SQ MI)	AVERAGE DISCHARGE		
		YEARS OF RECORD	CUBIC FEET PER SECOND	ACRE-FEET PER YEAR
Sabine River near Gladewater* 8-0200	2,791	34	1,882	1,363,000
Big Sandy Creek near Big Sandy 8-0195	231	27	183	132,500
Little Cypress Creek near Ore City 7-3460.5	383	4	†	†
Rabbit Creek at Kilgore 8-0207	75.8	3	†	†

* Since October 1960, flow of the Sabine River at the Gladewater station has been affected by storage in and diversion from Lake Tawakoni near Wills Point, capacity, 936,200 acre-feet. In 1966, the city of Dallas diverted 29,950 acre-feet from Lake Tawakoni for municipal use.

† Average discharges are not given at stations having fewer than 5 years of complete record. During the time of available record, discharge at the Little Cypress Creek station ranged from 23,500 cfs (cubic feet per second) on April 24, 1966, to no flow at times; discharge at the Rabbit Creek station ranged from 15,200 cfs on April 24, 1966, to no flow at times in 1964.

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The records of the U.S. Weather Bureau at Longview from 1889 to present provide the most complete climatological data for the area. The normal annual precipitation at Longview is 46.16 inches; and the normal monthly precipitation, in inches, is as follows:

January	4.27	May	5.87	September	2.82
February	3.76	June	3.38	October	3.07
March	3.84	July	3.52	November	4.12
April	4.79	August	2.56	December	4.58

The normal January temperature is 9°C (47.7°F), and the normal July temperature is 29°C (84.2°F). The average date of the first killing frost is November 16 and the last is March 14. The average growing season is 250 days.

The annual gross lake surface evaporation in the report area during the period 1940-65 ranged from 38.0 inches in 1950, 1957, 1958, and 1959 to 57.0 inches in 1954 and averaged 44.5 inches (Kane, 1967, table E-13).

Population and Economy

The U.S. Bureau of the Census (1960) shows a population of 69,436 for Gregg County and 19,793 for Upshur County. The estimated population in 1965 of principal cities in Gregg County was: Longview (county seat), 45,100; Kilgore, 11,200; and Gladewater, 6,142. The estimated population in 1965 of principal cities in Upshur County was: Gilmer (county seat), 4,560; Big Sandy, 848; and Ore City, 819.

The economy of the area is based on industry and agriculture. However, most of the industry is located in Gregg County and most agriculture is located in Upshur County. This uneven distribution is due largely to the East Texas oil field, which extends through a substantial part of Gregg County, including the cities of Kilgore and Gladewater, but is present only in the southernmost part of Upshur County.

Industry in Gregg County is the production and processing of petroleum and related products. The production of oil in Gregg County in 1965 was 24,932,500 barrels, and the cumulative production to 1965 since oil was discovered in 1931 was 2,042,105,500 barrels (Railroad Commission of Texas, 1966). Less important industries in Gregg County include the manufacture of machinery, chemicals, and plastics. A very recent industry to locate in the county was a brewery at Longview. Agriculture in Gregg County is mostly limited to beef cattle and nursery products.

Industry in Upshur County, though localized, is chiefly the production of oil in the southern part and some production of gas in the east-central part of the county. The production of oil in Upshur County in 1965 was 3,104,000 barrels, and the cumulative production in 1965 since oil was discovered in 1931 was 229,639,000 barrels. Less important industries in Upshur County include the production of steel conduits, lumber, pulp wood, pottery, and sand.

Agriculture is widespread in Upshur County and has evolved in recent years from predominately row-crop farming to inproved pastures and livestock. Beef cattle and poultry production provide most of the farm income. Other elements of the agricultural economy are dairy products, peach orchards, and truck crops.

Well-Numbering System

The well-numbering system used in this report is based on the divisions of latitude and longitude and was developed by the Texas Water Development Board for use throughout the State. Under this system, each 1-degree quadrangle is given a number consisting of two digits from 01 to 89. These are the first two digits in the well number. Each 1-degree quadrangle is divided into 7½-minute quadrangles which are given 2-digit numbers from 01 to 64. These are the third and fourth digits of the well number. Each 7½-minute quadrangle is subdivided into 2½-minute quadrangles which are given a single digit number from 1 to 9. This is the fifth digit of the well number. Finally, each well within a 2½-minute quadrangle is given a 2-digit number in the order in which it was inventoried, starting with 01. These are the last two digits of the well number.

Only the last three digits of the well number are shown at the location of a well on Figure 13; the second two digits are shown in the northwest corner of each 7½-minute quadrangle; and the first two digits are shown by the large block numerals 34 and 35.

In addition to the 7-digit well number, a 2-letter prefix is used to indentify the county. The letter prefix for Gregg County is KU, and for Upshur County it is YK. Thus, well YK-35-17-201 (a well for the city of Gilmer) is in Upshur County (YK), in the 1-degree quadrangle 35, in the 7½-minute quadrangle 17, in the 2½-minute quadrangle 2, and was the first (01) well inventoried in that 2½-minute quadrangle (Figure 13).

The well numbers used by the authors of previous reports and the corresponding numbers used in this report are given in Table 1.

Acknowledgments

The investigation was achieved largely through the cooperation of well owners and county, city, and industrial officials who allowed access to their property and permitted examination of pertinent records. Most of the data shown on the maps and cross sections in this report was obtained from the electrical logs of oil and gas tests.

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Table 1.—Well Numbers Used by Shafer and Lyle (1937), Broadhurst (1943), and Broadhurst and Breeding (1945) in Gregg County and Corresponding Numbers Used in This Report; Well Numbers Used by Broadhurst (1942) in Upshur County and Corresponding Numbers Used in This Report

OLD NUMBER	NEW NUMBER	OLD NUMBER	NEW NUMBER	OLD NUMBER	NEW NUMBER
		Gregg County (KU)			
411	35-33-201	607	35-35-401	679	35-34-201
468	35-34-702	641	35-25-801	698	35-33-903
469	35-33-901	654	35-26-703	699	35-34-403
470	35-33-902	656	35-26-704	700	35-34-401
471	35-41-303	658	35-26-705	703	35-34-703
476	35-33-904	663	35-26-709	705	35-35-701
525	35-34-503	664	35-26-502		
		Upshur County (YK)			
12	35-17-201	49	35-25-501	66	34-23-601
14	35-17-202	54	35-18-701	68	34-32-402
15	35-17-203	62	35-17-701	75	35-25-401
33	35-18-201	63	34-24-901		

GEOLOGY AS RELATED TO GROUND WATER

Stratigraphy and Structure

Geologic units of Eocene age are the principal sources of ground water in Gregg and Upshur Counties. Alluvium of Pleistocene and Holocene age yield only small quantities of ground water. The geologic units and their water-bearing characteristics are summarized in Table 2. The outcrop areas of the geologic units are shown on Figure 2.

The Queen City Sand forms the most extensive outcrop in the area. With local exceptions, the units below the Queen City Sand crop out in northeasterly trending belts that extend both north and south of Gregg and Upshur Counties. Eocene units above the Queen City are very limited in extent and occur mostly as outliers across central parts of the area. The wider belts of alluvium are along the principal streams.

The geologic sections (Figures 14, 15, and 16) show the stratigraphic relationships of the units in the subsurface. The contacts between the units often are difficult to determine on drillers' and electrical logs; consequently, the contacts shown on the geologic sections and the thickness of the units shown on Table 2 are only approximate. The top of the Midway Group defines the approximate base of fresh to slightly saline water in the two-county area. The altitude and depth to the top of the Midway are shown in Figure 3. The Wilcox Group, the lowermost fresh water-bearing unit, comprises nearly half the available water-bearing sediments. The sediments above the Wilcox Group, except the alluvium, are assigned to the Claiborne Group which is divided in ascending order into the Carrizo Sand, Reklaw Formation, Queen City Sand, Weches Greensand, and Sparta Sand.

The major structural feature in the area is a trough-like depression whose long axis nearly coincides with a line extending from the northwest corner of Gregg County to the northeast corner of Upshur County. Southeast of the line the units generally dip northwest, and northwest of the line the units generally dip southeast, both towards the long axis (Figures 3 and 14) at about 15 feet per mile. The report area is part of an extensive area of downwarping which in its entirety is called the East Texas Embayment.

The trough or embayment is shown by the contours on the top of the Midway Group in Figure 3. The general pattern is locally altered in the western part of Upshur County by a south-plunging structural ridge which passes through the community of Kelsey. This structural ridge brings the Carrizo Sand and Reklaw Formation to the surface west and northwest of Gilmer (Figure 2). West of the structural ridge, the Midway

3-07

Table 2.—Geologic Units and Their Water-Bearing Characteristics, Gregg and Upshur Counties

SYSTEM	SERIES	GROUP	UNIT	APPROXIMATE MAXIMUM THICKNESS (FT)	CHARACTER OF ROCKS	WATER-BEARING PROPERTIES
Quaternary	Holocene and Pleistocene		Alluvium	60	Sand, silt, clay, and some gravel.	Not known to yield water to wells in Gregg and Upshur Counties; probably would yield small quantities.
Tertiary	Eocene	Claiborne	Sparta Sand	250	Sand, silt, and clay.	Known to yield only small quantities of fresh water to wells in Gregg and Upshur Counties.
			Weches Greensand	75	Glauconite, glauconitic clay, and sand; secondary deposits of limonite common in outcrop areas.	Not known to yield water to wells in Gregg and Upshur Counties.
			Queen City Sand	500	Sand, silt, clay, and some lignite.	Yields small to moderate quantities of fresh water to wells in Gregg and Upshur Counties.
			Reklaw Formation	110	Glauconitic clay and some sand and lignite; limonite is common in outcrop areas.	Not known to yield water to wells in Gregg and Upshur Counties.
			Carrizo Sand	150	Sand, silt, and clay.	Yields moderate to large quantites of fresh to slightly saline water to wells in Gregg and Upshur Counties.
		Wilcox		600	Sand, silt, clay, lignite, and limonite sand beds generally thin-bedded and discontinuous.	Yields moderate to large quantities of fresh to slightly saline water to wells in Gregg and Upshur Counties.
	Paleocene	Midway		880	Calcareous clay and minor amounts of limestone, silt, and glauconitic sand.	Yields no water to wells in Gregg and Upshur Counties.

3-08

Group and the younger units dip to the southwest at about 130 feet per mile.

No faults are known to have been mapped in the area. Deep-seated faults have been mapped in the Hawkins oil field in Wood County, but displacement along these faults decreases upward so that little or no displacement of the rocks occurs above the Midway Group.

Physical Characteristics and Water-Bearing Properties of the Geologic Units

Midway Group

The Midway Group crops out in counties northwest of Gregg and Upshur Counties. The unit, mostly marine in origin, is composed chiefly of calcareous clay which locally may contain thin stringers of limestone and glauconitic sand. The unit tends to become silty and slightly sandy in the upper part of the section.

The top of the Midway (Figure 3) ranges in altitude from about 300 feet below sea level (700 feet below land surface) in the northwestern and southeastern corners of the area to about 1,100 feet below sea level (1,500 feet below land surface) in the southwestern corner of Upshur County. The Midway Group is about 880 feet thick in the report area.

The Midway is not known to yield water to wells in the area. Nevertheless, it is hydrologically signifcant in that it forms the basal confining rock for the overlying Wilcox Group.

Wilcox Group

The Wilcox Group conformably overlies the Midway and crops out northwest and southeast of the report area. The unit has a maximum thickness of about 600 feet and is composed of interbedded sand, silt, clay, and some lignite with secondary deposits of limonite. Medium to very fine sand generally constitutes one-third to one-half of the unit. Individual beds of sand generally are thin bedded and discontinuous, although some may attain a thickness of nearly 100 feet (well YK-35-19-401, Figure 16). The geologic sections (Figures 14, 15, and 16) clearly show that few beds of sand in the Wilcox can be correlated from well to well. Also, because of the transitional change between the relatively sandy Wilcox and relatively clayey Midway, the stratigraphy of the Wilcox in some places is somewhat questionable as determined only from electrical logs. In fact, locally, the lowest practicable water sands in the Wilcox may exist as much as 200 feet above the actual base of the Wilcox. In order to maintain stratigraphic continuity as much as possible in this investigation, the base of the Wilcox was placed on occasion to include some silty sands which might, for practical purposes, be included in the Midway Group.

Because of the lenticularity of the sand beds, the yields of wells tapping the Wilcox can be expected to range over fairly wide limits. Most of the wells currently in use only partially penetrate the Wilcox. However, the Wilcox may be capable of yielding as much as 500 gpm (gallons per minute) or more if all sands in the unit are screened.

Claiborne Group

Carrizo Sand

The Carrizo Sand unconformably overlies the Wilcox Group and crops out in small areas in the northwestern and southeastern parts of the report area (Figure 2). The Carrizo reaches a maximum thickness of about 150 feet, and typically the unit is composed of massive to cross-bedded, coarse to fine sand. In places, however, the Carrizo is interbedded with silt and clay so that it is not easily distinguishable from the underlying Wilcox Group (well YK-34-32-601, Figure 15).

Most of the wells in use are multiscreened to tap both the Carrizo Sand and the Wilcox Group. The yields of these wells range from about 300 to 600 gpm, and in most wells, the Carrizo is believed to contribute most of the water. Locally, the Carrizo probably is capable of yielding as much as 500 gpm to wells.

Reklaw Formation

The Reklaw Formation conformably overlies the Carrizo Sand and crops out in small areas in the northwestern and southeastern parts of the report area (Figure 2). In the latter area, however, subsurface data indicate that a part of the sediments mapped as Reklaw (Figure 2) actually may be of Queen City age. The formation has a maximum thickness of about 110 feet, and typically it is composed of glauconitic clay and minor amounts of sand and lignite. Locally the Reklaw may show an apparent increase in sand content, particularly in the north and northeastern parts of the area (well YK-35-11-701, Figure 16). However, the apparent increase in sand content may result from a thinning of the Reklaw, the additional sand being part of the overlying Queen City Sand.

The outcrop of the Reklaw is easily recognized because of its red clayey soil, which is in sharp contrast to the gray sandy soil of the underlying Carrizo Sand. Also, the outcrop is characterized by the occurrence of limonitic seams and concretions (ironstone) at or near the land surface.

3-09

The Reklaw Formation is not definitely known to yield water to any wells in the area, but it probably would yield small quantities to wells where the unit is locally sandy. It is significant hydraulically as a confining bed above the underlying Carrizo Sand.

Queen City Sand

The Queen City Sand conformably overlies the Reklaw Formation and crops out over 90 percent of Gregg and Upshur Counties (Figure 2). In contrast to the red clayey soil and the more gentle relief on the Reklaw, the outcrop of the Queen City is composed of gray sandy soil, and the relief ranges from moderate to hilly. Pine timber and perennial streams are more prevalent on the outcrop of the Queen City than on outcrops of the older units. The Queen City consists of massive to cross-bedded sediments, locally stratified. The sediments generally consist of about 80 percent medium to fine sand and about 20 percent silt and clay, with minor amounts of lignite. The Queen City has a maximum thickness of about 500 feet in the southwestern corner of Upshur County. In general, wells in the Queen City are capable of furnishing small to moderate quantities of fresh water.

Weches Greensand and Sparta Sand

The Weches Greensand and Sparta Sand have a very limited extent in Gregg and Upshur Counties. They crop out as scattered outliers having relatively sharp relief across the central part of the area (Figure 2).

The Weches Greensand attains a thickness of 75 feet and consists of interbedded glauconitic clay and sand. At the shallow depths and in outcrops the unit locally contains enough secondary deposits of limonite to make it a durable caprock. Consequently, a very hilly terrain is characteristic of the Weches outcrop. The formation is not known to yield water to wells in the report area.

The overlying Sparta Sand attains a thickness of 250 feet in the southwestern corner of Upshur County and generally consists of about 70 percent medium to fine sand and about 30 percent sandy clay and silt. The Sparta outcrops generally are excellent infiltration areas. Although the unit is known to yield only small quantities of fresh water to wells, water from springs at the base of the Sparta outcrop makes a significant contribution to the base flow of Big Sandy Creek.

Alluvium

Alluvial sediments occur in and near the floodplains of the principal streams (Figure 2). The sediments have a maximum thickness of about 60 feet, and generally consist of clay, silt, fine sand, and minor amounts of gravel. The alluvium is not known to yield water to wells, but it probably is capable of yielding at least small quantities of water.

HYDROLOGIC UNITS

The Wilcox Group, Carrizo Sand, and Queen City Sand constitute the significant water-bearing units in Gregg and Upshur Counties. The first two formations have similar hydrologic properties and are in hydraulic continuity. Consequently, they function as a single aquifer, which, for purposes of this report, is referred to as the Carrizo-Wilcox aquifer.

The Carrizo-Wilcox aquifer crops out between Longview and Kilgore in Gregg County and northwest of Gilmer in Upshur County. In the subsurface, the aquifer dips toward the northeasterly-trending trough (the East Texas Embayment) at about 15 feet per mile (Figure 4). In the southwestern part of Upshur County, the Carrizo-Wilcox dips steeply (about 130 feet per mile) southwest toward the Tyler Basin in Smith County.

The altitude of the top of the Carrizo-Wilcox aquifer (Figure 4) ranges from about 300 feet above sea level (near the outcrop areas) in the northwestern corner of Upshur County and in the southeastern corner of Gregg County, to nearly 500 feet below sea level (900 feet below land surface) in the southwestern corner of Upshur County. The Carrizo-Wilcox in Gregg and Upshur Counties has an average thickness of about 600 feet.

The Queen City Sand, the second most important aquifer, crops out over 90 percent of the area or about 840 square miles. The formation is absent along Little Cypress and Kelsey Creeks, a few miles west of Gilmer, and along the Sabine River south of Longview (Figure 2). The base of the aquifer dips generally toward the trough (the East Texas Embayment) at a rate approximately equal to the dip of the top of the Carrizo-Wilcox aquifer (Figure 5). The thickness of the aquifer, which in most places is about equivalent to the depth to the base of the aquifer shown on Figure 5, ranges from a few feet to about 500 feet.

GROUND-WATER HYDROLOGY

Occurrence and Movement of Ground Water

Ground water in the Carrizo-Wilcox aquifer and the Queen City Sand occurs under artesian and water-table conditions in Gregg and Upshur Counties. Under water-table conditions, the water is unconfined and when tapped by wells, the water does not rise in the wells above the zone of saturation in the aquifer. Under

artesian conditions, the water is confined and when tapped by wells, the water rises in the wells under hydrostatic pressure to a level above the top of the aquifer. If the pressure head is large enough to cause the water in the well to rise to an altitude greater than that of the land surface, the well will flow. The level to which water will rise in artesian wells is called the piezometric surface.

The Carrizo-Wilcox aquifer yields water under artesian conditions in Gregg and Upshur Counties, except in the outcrop area of the Carrizo where the water is unconfined. Water in the Queen City is unconfined except in the southwestern and northeastern parts of Upshur County where the overlying Weches Greensand effectively confines the water.

Ground water moves slowly (tens to hundreds of feet per year) from areas of recharge to areas of discharge. The direction of movement of the water in the Carrizo-Wilcox aquifer is shown in Figure 6. The contours show that the ground water moves generally toward the center of the trough where, coincidentally, large or concentrated withdrawals have formed general cones of depression in the piezometric surface. The slope of the piezometric surface across the 250 foot contour line (Figure 6) averages about 8 feet per mile.

The movement of water in the Queen City Sand, as indicated by the water-table map (Figure 7), generally is toward the larger streams. Because of the low hydraulic gradient (8 feet per mile), the rate of movement is slow, perhaps only a few hundred feet per year.

Recharge and Discharge

Ground water in the Carrizo-Wilcox aquifer and the Queen City Sand is derived from the infiltration of precipitation on the outcrop areas, from runoff en route to a watercourse, and from the infiltration of water from streams and lakes. The recharge areas of the Carrizo-Wilcox lie mostly in adjacent counties to the northwest and southeast. Those of the Queen City are in Gregg and Upshur Counties and in adjacent counties to the north and west.

A number of factors govern the rate of natural recharge, the most important of which are: (1) the type of soil in the outcrop areas; (2) the duration and intensity of rainfall; (3) the slope of the land surface; (4) the presence of vegetational cover; and (5) the depth of the water table.

Recharge to the Carrizo-Wilcox aquifer could not be determined from the available data. However, an estimate of the mimimum amount of recharge to the Queen City Sand can be made on the basis of the quantity of water that is being transmitted downdip under a hydraulic gradient (8 feet per mile) that has not been significantly affected by pumping. Thus, recharge is equal to at least 2.4 mgd (million gallons per day) or 2,700 acre-feet of water per year. An additional but undetermined quantity enters the aquifer and moves to the streams where it is discharged as seep and spring flow. The streamflow records of Little Cypress Creek near Ore City, which drains an area of 383 square miles, are insufficient to determine the low flow of the stream, which is sustained by ground water discharged largely from the Queen City Sand.

The water in the two aquifers is discharged both naturally and artificially. The natural discharge is the flow of springs and seeps, evaporation from the water table, and transpiration by trees and plants whose roots reach the water table. The quantity of water discharged by each method is difficult to determine, but it is at least several times the amount discharged by wells. Little water is discharged naturally from the Carrizo-Wilcox aquifer. An unknown, but probably large quantity of water is discharged from the Queen City through springs and seeps and by evapotranspiration. The artificial discharge by wells was 3.02 mgd (about 3,400 acre-feet) from both aquifers in 1966, of which 2.84 mgd was from wells in the Carrizo-Wilcox aquifer.

Hydraulic Properties of the Aquifers

The hydraulic properties of an aquifer that determine its capacity to transmit and store water are expressed as the coefficient of transmissibility and the coefficient of storage. (See definition of terms.)

Pumping tests were made in seven wells tapping the Carrizo-Wilcox aquifer. The results of these tests are shown in Table 3. The coefficients of transmissibility determined from these tests ranged from 3,100 to 11,000 gpd (gallons per day) per foot; discharge rates ranged from 100 to over 800 gpm; and specific capacities ranged from 2.8 to 15.5 gpm per foot of drawdown (Table 3). The range in transmissibility is due to variations in the permeability and thickness of the aquifer sands. None of the wells fully penetrated the aquifer; consequently, the results of the tests generally gave values that are less than those that would have been obtained from wells penetrating the entire aquifer. The coefficients of permeability, which were estimated from the total amount of sand believed to be contributing to the well (in most of the wells it was the equivalent of the amount of screen or perforation in the well), ranged from 41 to 128 gpd per square foot for an average of nearly 80 gpd per square foot. This value is considerably higher than the 50 gpd per square foot determined for the same unit in Wood County (Broom, 1968, p. 14). Thus, where as much as 400 feet of sand is available to the aquifer, the coefficient of transmissibility might be as much as 32,000 gpd per foot. The coefficient of storage obtained from one test was 0.00006. This value is within the range generally attributable to artesian conditions.

REFERENCE 4

"SITE INSPECTION REPORT, DIXIE (TEI) PETRO-CHEMICAL, INC., LONGVIEW, GREGG COUNTY, TEXAS, SEPTEMBER 23, 1993.

FLUOR DANIEL ARCS TEAM

Members: Fluor Daniel, Inc.
I.T. Corporation
PEI Associates, Inc.
Life Systems, Inc.

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12790 Merit Drive
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September 23, 1993

FDI/ARCS # 2231

U.S. Environmental Protection Agency
Attn: Walt Helmick (6E-SH)
Work Assignment Manager
1445 Ross Avenue
Suite 1000
Dallas, Texas 75202

CONTRACT NO. 68-W9-0013
SITE INSPECTION REPORT
DIXIE (TEI) PETRO-CHEMICAL, INC., TXD079836763
LONGVIEW, GREGG COUNTY, TEXAS
SITE INSPECTIONS
WA #25-6JZZ

Dear Mr. Helmick:

Transmitted herewith is the Site Inspection Report for the Dixie (TEI) Petro-Chemical, Inc. site located in Longview, Gregg County, Texas. The PreScore program will be transmitted under separate cover.

Should you have any questions concerning this report, please contact one of the undersigned at (214) 450-4100.

Sincerely,

Keith Westberry
ARCS Project Hydrologist

Jonathan Stewart
ARCS Project Manager

KW/JS:kkh

Enclosure

4-01

CONTRACT NO. 68-W9-0013
SITE INSPECTION REPORT
FOR
DIXIE (TEI) PETRO-CHEMICAL
CERCLIS # TXD079836763
LONGVIEW, GREGG COUNTY, TEXAS
WA # 25-6JZZ

EPA Project Manager	Date
Jonathan Stewart	9/23/93
Project Manager	Date
Keith Westberg	9/23/93
Team Leader	Date

SITE INSPECTION REPORT
FOR
DIXIE (TEI) PETRO-CHEMICAL
CERCLIS # TXD079836763
WA # 25-6JZZ

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SITE INSPECTION REPORT
FOR
DIXIE (TEI) PETRO-CHEMICAL
CERCLIS ID# TXD079836763
WA # 25-6JZZ

1.0 INTRODUCTION

Fluor Daniel, Inc. has been tasked by the U.S. Environmental Protection Agency (EPA) to perform a Site Inspection (SI) on the Dixie (TEI) Petro-Chemical (DTPC) (TXD079836763) site, located in Longview, Gregg County, Texas.

1.1 Site Inspection Objectives

The Site Inspection (SI) is the second investigation stage of the pre-remedial process. Only those sites requiring further action after the SI become Expanded Site Inspection (ESI) candidates.

The SI characterizes the site by data collected from regulatory file reviews, interviews, site reconnaissance inspections, and limited sampling (20 samples or less).

The SI evaluates the site through Hazardous Ranking System (HRS) documentation. It expands upon information obtained during the Preliminary Assessment (PA), including the PA and SI Reports, HRS PRESCORE, site reconnaissance inspections and analytical data.

1.2 Site Description/History

DTPC is located at 801 Gum Springs Road, Longview, Gregg County, Texas. This site is located approximately ¼ of a mile south of the intersection of Gum Springs Road and Eastman Road in Longview. The site is approximately 3 acres in size and is completely secured by a fence. The geographical coordinates of the site are 32°29'20" north latitude and 94°42'30" west

longitude (Ref. 1). The site reconnaissance inspection was conducted by Fluor Daniel, Inc. on April 19, 1993 and the site sampling inspection was conducted during the week of May 24, 1993.

DTPC presently conducts business under the name of DPC Industries, Inc. which is located south of Longview on Highway 149 in Lakeport, Texas. DTPC began it's operations at 801 Gum Springs Road in 1979 and closed in 1986 (Ref. 2 & 3). This property is currently leased to the McConway & Torley, Corp. (MC & T). MC & T is a rail car parts manufacturer. MC & T is managed on-site by their western regional manager, Mr. Earl A. Zapp. There are currently four employees working at MC & T.

DTPC was a commercial repackaging facility of bulk industrial solvents. These solvents were repackaged into 55-gallon, 5-gallon, and 1-gallon containers. These products were then resold to customers. Hazardous waste was generated by spills and line flushes related to repackaging and by decontamination of drum containers. Some spent solvents generated off-site by customers may have also been returned to DTPC for on-site management as hazardous waste (Ref. 5).

In 1982, DTPC was permitted as both a RCRA generator and a RCRA transporter. However, in that same year the company applied for a RCRA treatment, storage, and disposal (TSD) facility permit. In 1984, DTPC operated as a TSD. The facility reportedly had an emergency response by the Longview Fire Department in 1982 (Ref. 5). DTPC remained in operation as a TSD until closing in 1986 (Ref. 5). In 1985 an underground storage tank was removed from the facility. The tank was originally used as the holding tank for waste solvents and waste water produced in the decontamination of

drum containers (Ref. 6).

During their seven years of operation, DTPC used 36 underground storage tanks (USTs) (Ref. 1). There is no file information to document the removal of all of the tanks. The 1985 tank removal is the only one documented in both Texas Water Commission (TWC) and EPA files. However, during the site reconnaissance inspection, Mr. Wayne Penick, Senior Environmental Specialist, DPC Industries, Inc. noted that all of the USTs had been removed.

1.3 Site-Specific Objectives

The primary objectives of this SI are to characterize and locate any possible hazardous substances on the site and to gather the necessary information to complete the HRS PreScore program. Also, determine if any of the chemical tanks on-site leaked into the soil, and if any contaminants have been released off-site via the surface water or soil exposure pathways. The pathways considered to be of concern are the surface water migration and soil exposure pathways.

2.0 DATA REVIEW AND DATA COLLECTION

All previously collected sampling and non-sampling data are addressed in this section. This section will describe procedures and rationale for conducting both types of activities. The purpose of the sampling is to identify areas of contaminated soil that may be present on-site and target areas that may have been affected off-site. Table 1 lists the bulk chemicals that were handled on-site.

All data collection activities to date have been in accordance with the following documents:

- "Final Project Work Plan - Revision 1 for the Site

Inspection Project, EPA Region VI, Volume I" June 9, 1992, Fluor Daniel, Inc.

- "Original Project Field Sampling Quality Assurance Project Plan for the Site Investigations, Region VI, EPA" July 5, 1992, Fluor Daniel, Inc.

- "CLP Users Guide", EPA Region VI, not dated.

- "Original Health and Safety Plan, Site Inspections", June 8, 1992, Fluor Daniel, Inc.

2.1 Non-Sampling Data Collection Activities

The non-sampling data collection activities for the Dixie (TEI) Petro-Chemical SI have been essentially completed at this time.

2.2 Sampling Data Collection Activities

Prior to the sampling activities all of the sample locations and the rationale had been approved in the SI Revised Task Work Plan for DTPC. The following sections discuss the major pathways at the site and the rationale which was used during the site inspection process to address each pathway. Sampling procedures utilized in the field are also discussed in the following sections. Table 3 discusses sample locations and rationale.

2.2.1 Source Waste Characterizations

Three areas of possible contamination have been identified. These include the former UST area (north of warehouse), the shallow ground water area (west of warehouse), and the former truck fueling area (south of warehouse) (Figure 2).

The former UST area is where the majority of the bulk chemicals were stored. This area maintains fairly good vegetation. However, there are spots where the vegetation is stressed (Ref. 4).

There is a ponded area west of the warehouse in which the ponded water had an evident oily-like sheen (Ref. 4). Water appears to be seeping from the ground and ponding in this location. The native soils appear to have been replace with some type of river rock at this location (Attachment A, Photo #9). This area, throughout the remainder of this report, will be discussed as the shallow ground water area. The previous site activities at this location are undetermined at this time.

The former truck fueling area is just south of the warehouse. This area contained fuel tanks for the DTPC transport services. An UST was removed from this location (Ref. 7). This area contained a concrete pad with extensive cavitation around the edges (Ref. 4).

Four subsurface (4-6 ft deep) soil samples were collected to characterize the former UST area just north of the warehouse. One sediment sample was collected in the shallow ground water area west of the warehouse. One near surface soil sample was collected next to the concrete pad south of the warehouse to characterize another former UST area.

2.2.2 Ground Water Migration Pathway

General Regional Geology

DTPC is located in the East Texas Embayment Region. The principal source of ground water in Gregg County is from units of the Wilcox Group (Eocene). A small quantity of

ground water is provided by Pleistocene and Holocene alluvium. The most extensive surface outcrop in the area is that of the Queen City Sand (Claiborne Group) (Ref. 8).

Quarternary Alluvial sediments in this area occur near the flood plains of the principal streams. These sediments have a maximum thickness of about 60 feet. The constituents of the alluvium are clay, silt, fine sand, and minor amounts of gravel (Ref. 8).

The Queen City Sand outcrops over 90 percent of Gregg, and bordering Upshur County. The weathered soils of the Queen City Sand are composed of gray sand. Local topographic relief ranges from moderate to hilly. The locally stratified Queen City Sand sediments are massive to cross-bedded. These sediments tend to have three components:

A. 80% medium to fine sand
B. 20% silt and clay
C. minor amounts of lignite

The Queen City Sand formation has a maximum thickness of about 500 feet (Ref. 8).

The four mile radius from the site extends into parts of Harrison County. This area is outcropped partially by the Queen City Sand and partially by the Reklaw Formation (Ref. 10). The Reklaw Formation overlies the Carrizo Sand and consists of clay and fine sand with a maximum thickness of about 100 feet, but is not regionally continuous (Ref. 9).

Regional Hydrogeologic Setting

The Wilcox Group, Carrizo Sand, and Queen City Sand

constitute the significant water-bearing units in Gregg County. The Wilcox and Carrizo Formations are hydraulically interconnected. Consequently, they function as a single aquifer and will be referred to as the Carrizo-Wilcox aquifer (Ref. 8).

The Carrizo-Wilcox aquifer outcrops between Longview and Kilgore. The aquifer dips toward the northeasterly-trending trough (East Texas Embayment) at about 15 feet per mile. The Carrizo-Wilcox aquifer ranges from about 300 feet above sea level to nearly 500 feet below sea level (900 feet below land surface). The average thickness of this aquifer is approximately 600 feet (Ref. 8).

There are three methods of recharge to the Carrizo-Wilcox aquifer:

1. The infiltration of precipitation on the outcrop areas.
2. The infiltration of runoff in route to a watercourse.
3. The infiltration of water from streams and lakes.

These recharge areas for the Carrizo-Wilcox lie in Gregg and adjacent counties (Ref. 8).

The Queen City Sand is the second most important aquifer in the area. It is defined as an unconfined surface aquifer. The base of this aquifer dips toward the northeasterly-trending trough at a rate approximately equal to that of the Carrizo-Wilcox. The movement of water in the Queen City Sand is toward the larger streams. There is a low hydraulic gradient of 8 feet per mile which causes slow movement of a few hundred feet per

year (Ref. 8).

Although, the municipal water supply for the City of Longview and the community of Gum Springs is the Sabine River and Lake Cherokee, there are some domestic wells within the four mile radius of the site. Available information indicates that there are four water wells within four miles of the site (Ref 4,12, & 16). These wells are listed as either domestic or public wells and could be used for drinking water. The Fluor Daniel, Inc. sampling team successfully located and sampled two private drinking water wells; the (b) (6) and (b) (6) residences. The (b) (6) well is located approximately 1.02 miles Southeast of the site. The (b) (6) well is located is located approximately 1.49 miles northeast of the site (Ref. 12, 13). There were three drinking water samples (2 samples and 1 duplicate) collected from the two wells listed above. One subsurface sediment sample was collected on-site in the area where there was shallow ground water. This sample will help to characterize possible shallow ground water contamination. Analytical results for the samples are discussed in Section 3.0 of this report. Table 3 shows the sample locations and rationales and Table 1 is a sample information summary table. There are no Well Head Protection Areas within a four mile radius from the site (Ref. 14).

2.2.3 Surface Water Migration Pathway

The major surface hydrologic characteristic to the area is the Sabine River. An intermittent stream flows south from the site approximately 1/2 mile and outfalls into Long Creek. Long Creek continues approximately 2 miles before entering Eastman Lake. Eastman Lake outfalls into

the Sabine River. The 15-mile target limit distance is reached within the confines of the Sabine River.

Water within the intermittent stream had an oily-like sheen on it. It is unknown at this time if this could have been caused by natural organic processes.

Surface water from the Sabine River and Lake Cherokee are the public water supplies for the City of Longview and the community of Gum Springs. However, the Sabine intake is located upstream and would not be affected by this site. Lake Cherokee is located southeast of the site and is not affected by the Sabine River (Ref. 12). There are extensive palustrine, lacustrine, and riverine wetlands located along the 15 mile target limit distance of the site (Ref. 15 & 21). The Sabine River is also classified as a fishery. The annual precipitation for Gregg County is 48 inches (Ref. 22).

The threatened and endangered species of the area are as follows: (Ref. 11)

1. Neches River Rose Mallow
   Category #2 Federal (Endangered & Threatened)
2. Alligator Snapping Turtle
   Category #2 Federal & State Threatened
3. Wintering/Nesting Area for American Bald Eagles

During the sampling inspection, one near surface (0-6 in. deep) soil sample was collected near the concrete pad south of the warehouse. This sample will characterize the surface water drainage that is migrating from a former UST area to the intermittent stream. Four off-site near surface (0-6 in. deep) sediment samples were collected to characterize off-site surface water

contamination. Table 3 describes the locations of these samples (See Figure 3). Three surface water (0-6 in. deep) samples were collected in locations off-site to further characterize any possible surface water contamination. These included a duplicate and a background. Analytical results of the surface water samples are discussed in Section 3.0 of this report.

2.2.4 Soil Exposure Pathway

The site is currently active and is being used as a rail car parts manufacturing facility. The site is approximately 3 acres in size. Vegetation in some areas is very sparse. Some of these areas had obviously been cleared for the storage of rail car parts. At other areas, the vegetation appeared stressed but could not be attributed to present on-site activities. Access to the site is restricted on all sides by a fence. There have been no terrestrial sensitive environments documented on the site. However, within a four mile radius there are endangered and threatened species as noted in section 2.2.3 of this report (Ref. 11). The population within four miles of the site is as follows: (Ref. 13, 17, 19)

Target Distance Population Counts

0 - 1/4 mile radius = 152 persons
1/4 - 1/2 mile radius = 67 persons
1/2 - 1 mile radius = 558 persons
1 - 2 mile radius = 19,978 persons
2 - 3 mile radius = 15,141 persons
3 - 4 mile radius = 9,548 persons
Total = 45,444 persons

Two near surface (0-6 inches) soil/sediment samples, were collected within the site boundaries. Five subsurface

(4-6 feet) soil samples were collected within the boundaries of two former UST areas on the site. Analytical results for the soil/sediment samples are discussed in Section 3.0. Figure 3 shows the sample locations and Table 3 lists the sample rationales.

There are four workers for MC&T currently working on site (Ref. 4). There are three residences within 200 feet of the site (Figure 1). There is one school located within 1/2 mile of the site and five schools located from 1/2 to 2 miles from the site. There is also seven daycare centers within 2 miles of the site (Ref. 12, 23).

2.2.5 Air Migration Pathway

No releases of hazardous substances or reports of adverse health effects have been documented. No air samples were collected as part of this SI. However, the soil samples which were collected for source characterization will provide information concerning volatile and/or particulate air emissions. Analytical results for the soil samples are discussed in Section 3.0 of this report. There are three residences within 200 feet of the site (Figure 1). The number of residents within four miles of the site are listed in section 2.2.4 of this report.

3.0 SITE INSPECTION RESULTS

The samples which were collected during the field work phase of the SI were shipped to CLP laboratories and the drinking water samples collected were shipped to the U.S.EPA Laboratory in Houston, Texas. The CLP laboratories involved for this SI are as follows:

1. Organic.....Southwestern Laboratories of Oklahoma.
   Broken Arrow, Oklahoma.

2. Inorganic....American Analytical & Technical Serv.
Broken Arrow, Oklahoma.

The analytical results were then evaluated with respect to data completeness and contractual compliance by the Houston EPA Environmental Services Division Surveillance Branch. Subsequent to this, the data were validated by Fluor Daniel to assess quality assurance/quality control procedures utilized by the laboratories. Data validation was conducted in accordance with the most current USEPA Data Validation Guidelines and regional instructions. Table 2 presents a summary of sample numbers and locations. Tables 4 and 5 present the inorganic and organic analytical results, respectively, for all of the samples. Inorganic and organic data quality information is located in Attachments B and C respectively.

A total of thirteen soil/sediments, three surface waters, three drinking waters, and two blanks were analyzed for Target Analyte List (TAL) metals and cyanide, and Target Compound List (TCL) volatile organic, semi-volatile organic compounds (ABN), and pesticide/PCBs.

Inorganic Analytical Results

Data quality results achieved by the laboratory were generally acceptable. For soil samples, the initial calibration blank for selenium reported concentrations above the IDL and below the CRDL; continuing calibration blanks for barium, beryllium, chromium, and vanadium reported concentrations above the IDL and below the CRDL. For the water samples, continuing calibration blanks for lead, selenium, and vanadium reported concentrations above the IDL and below the CRDL. These affected sample results were qualified non-detect (u) if reported concentrations were above the IDL but less than five

times the highest associated blank concentrations. Chromium results for all soil samples were qualified as estimated (J) or (uj) due to ICP serial dilution out of control limits.

Soil Samples

A background soil sample (SS-13) was collected East of Gum Springs Road in a vacant grassy area (Figure 3). Inorganic analytical results indicate the presence of several metals which were detected at levels greater than three times the background concentrations (BBC). Chromium was found at a concentration greater than BBC in sample SS-06 of 43.6 parts per million (ppm). Nickel was also found at concentrations above BBC in samples SS-09 (19.8 ppm), SS-10 (27.9 ppm), SS-11 (29.6 ppm), SS-12 (12.3 ppm). Sample SS-04 was above background concentrations for zinc at 48.4 ppm. Arsenic concentrations were greater than the background concentrations for samples SS-06 (3.6 ppm), SS-07 (3 ppm), SS-09 (3.5 ppm), and SS-12 (2.8 ppm). Barium concentrations were greater than the background concentrations for samples SS-06 (118 ppm), SS-09 (80.1 ppm), and SS-10 (44.5 ppm). Chromium concentrations were greater than background concentrations for sample SS-09 (12.5 ppm). Selenium concentrations were greater than background concentrations for samples SS-05 (0.35 ppm), SS-06 (0.5 ppm), SS-07 (0.52 ppm), SS-09 (0.73 ppm), SS-10 (0.39 ppm), SS-11 (0.56 ppm), and SS-12 (0.5 ppm). Vanadium exceeded the background concentration in sample SS-06 (31 ppm). Zinc concentrations were greater than background concentrations for samples SS-04 (48.4 ppm), SS-06 (87.9 ppm), SS-10 (117 ppm), and SS-11 (130 ppm). Table 4 presents all of the inorganic data for the soil samples.

Sediment Samples

There were six analytes detected in the sediment samples above the bbc. The background sediment sample (SD-14) was taken east of the site in Long Creek. The three samples with contaminants above the BBC were SD-03, SD-08, and SD-16. Sample SD-03 was above the BBC for barium (217 ppm), and chromium (103 ppm). Sample SD-08 was above the BBC for barium (289 ppm), chromium (67.9 ppm), and nickel (9.4 ppm). Sample SD-16 was above the BBC for arsenic (70.6 ppm), chromium (80.5 ppm), vanadium (167 ppm), and zinc (93.9 ppm). These samples also had significant detections that were above the background concentrations but below the BBC. The samples and associated contaminants are as follows:

<u>SD-03</u> - arsenic (7.5 ppm), lead (91.2 ppm), nickel (5 ppm), selenium (0.73 ppm), vanadium (22.7 ppm), and zinc (58.6 ppm).

<u>SD-08</u> - arsenic (5.5 ppm), selenium (0.8 ppm), vanadium (60.5 ppm), and zinc (60.8 ppm).

<u>SD-16</u> - barium (50.5 ppm), lead (78.1 ppm), nickel (5.6 ppm), and selenium (1.7 ppm).

Table 4 presents all of the inorganic data for the sediment samples.

Surface Water

A surface water background sample (SW-15) was collected in Long Creek at the same location as the background sediment sample. Sample SW-02 was a duplicate sample of SW-01, therefore only SW-01 sample results will be discussed in this section. Sample SW-01 contained two contaminants at levels above background concentrations but below the BBC. Barium at 206 ppb and nickel at 15.8 ppb both fit this category. However, the following analytes were detected above the BBC: arsenic (4.1 ppb),

chromium (60 ppb), lead (34.4 ppb), vanadium (40.5 ppb), and zinc (138 ppb). Table 4 presents all of the inorganic data for the surface water samples.

Drinking Water Samples

There were three drinking water samples collected during this sampling inspection. Sample DW-18 was the background sample selected located at the (b) (6) [redacted] residence. Sample DW-19 was a duplicate of DW-18 and will not be discussed in this text. Sample DW-20 was collected at the (b) (6) [redacted] residence, 1.49 miles NE of the site. This sample contained a lead concentration of 5.7 ppb, which was above the BBC. Barium (79 ppb) and zinc (273 ppb) were also detected. Table 4 presents all of the inorganic data for the drinking water samples.

Organic Analytical Results

Quality assurance results achieved by the laboratory were generally acceptable. All of the VOA samples were reported as having exceeded holding time limits except for sample SS-04. Several VOA and BNA compounds were out of control limits for percent relative standard deviation (%RSD) or percent difference (%D) calibration criteria. The affected samples were qualified as estimated. There were no gross variations noted in the sample results of the field duplicates.

Soil Samples

Sample SS-13 (background soil sample) was collected in a grassy area east of Gum Springs Road. Samples discussed in this text are compared to background benchmark concentrations (BBC or 3x Background). Sample SS-04 contained a concentration above the BBC for gamma-BHC (Lindane) (3.2 ppb). There were no other volatile, semi-volatile, or pesticide compounds detected above the BBC

in this sample. However, fluoranthene, pyrene, chrysene, and benzo(b)Fluoranthene were detected at concentrations above the background concentrations. Sample SS-07 contained a concentration above the BBC for 2-butanone (17 ppb). No other organic sample contaminants were detected above the BBC or background in sample SS-07. Sample SS-09 contained the following contaminants above the BBC: toluene (17,000 ppb), ethylbenzene (31,000 ppb), xylene (total) (160,000 ppb), and naphthalene (1400 ppb). Tetrachloroethane and 2-Butanone were detected below the BBC but above the background concentrations. Sample SS-11 contained concentrations above the BBC for acetone (12,000 ppb), 2-butanone (13,000 ppb), toluene (200,000 ppb), 1,2-dichloroethane (3,100 ppb), tetrachloroethene (24,000 ppb), ethylbenzene (68,000 ppb), trichloroethene (8400 ppb), total xylene (260,000 ppb), naphthalene (3,800 ppb), 2-methylnaphthalene (6,100 ppb), endosulfan II (7 ppb), and endrin (4.4 ppb). There no concentrations reported below the BBC but above the background. Table 5 presents all of the organic data for the soil samples.

Sediment Samples

Sample SD-14 (background sediment sample) was collected upstream of the site in Long Creek. Sample SD-03 contained concentrations of the BBC for endrin (5.4 ppb). Sample SD-16 contained concentrations above the BBC for dieldrin (11 ppb) and endrin (17 ppb). This sample also contained the following organic compounds at a concentration greater than background but less than BBC: acenaphthene (70,000 ppb), and carbozole (4,200 ppb). Organic compound concentrations reported for SD-14 were high, therefore contamination observed in sample SD-16 will not be attributed to the Dixie site. Table 5

presents all of the organic data for the sediment samples.

Surface and Drinking Water Samples

There were no significant detections of organic compounds in the surface or drinking water samples. There were some detections of volatile compounds in the surface water samples, however, these results were below the normal required detection limit. Table 5 and Attachment 6 present all of the organic data for the surface and drinking water samples.

Summary

Sample numbers, locations, and analytical results from the SI sampling inspection are summarized in Tables 2,3,4, and 5. Sample analyses indicate that there are elevated metals and organic compounds associated with Dixie (TEI) Petro-Chemical.

Drinking water within a four mile radius of the Dixie site is supplied by the Sabine River and Lake Cherokee. There are no drinking water intakes along the fifteen mile target distance limit of the site. The Sabine River intake is upstream of the primary point of entry (PPE) from the site. The Lake Cherokee is not located along the fifteen mile target distance limit. Available information indicates that there are five water wells within a four mile radius of the site. These wells are listed as either domestic or public wells and could be used for drinking water. Two of these wells were evaluated during this SI. The well at the (b) (6) [redacted] residence was sampled for the background ground water sample and was found to have lead and zinc in the water. The (b) (6) [redacted] well is located approximately 1.02 miles southeast of the site. The sample results for the

(b) (6) [redacted] well showed levels of selenium above the BBC.

There is documented metals contamination in the sediment samples collected both on and off site. Chromium was detected in an on-site sediment sample at a level above the BBC. This sample (SD-08) was collected in a shallow ground water area. Chromium was also detected above the BBC in the drainage path from the site out to a distance of 1/2 of a mile. It is undetermined what former on-site activities could have caused chromium contamination. Nickel was also detected above the BBC in sample SD-08 but not in the other downstream sediment samples. Arsenic was also detected above the BBC at the PPE to Long Creek, however it was not detected above BBC in any on-site samples. There is extensive organic compound contamination detected in the sediment samles collected in Long Creek (SD-14 & SD-16). The majority of the high level contaminants are found in the background sample (SD-14), therefore the organic contaminant results found in the two Long Creek samples will not be attributed to the Dixie site. There are extensive wetlands in the area. The Sabine River is also designated as a major fishery (Ref. 22).

There are currently four workers on the site. The threat to off-site population is minimal due to the properly maintained fence around the site and the small number of drinking water wells within four miles of the site. There are three residences located within 200 feet of the site. However, there was no observed contamination within 200 feet of these residences. Extensive organic chemical contamination was observed on-site. Five on-site subsurface soil samples were collected in the former UST area of the site. Three of the five samples collected contained high elevated of various organic compounds. These on-site samples also contained chromium, and nickel at levels greater than BBC.

The air pathway is being evaluated on a potential to release basis. There are no data to document a release to the air. The site is slightly vegetated in areas and well vegetated in areas. There are extensive wetlands nearby. The population within four miles of the site is approximately 45,444.

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TABLES

TABLE 1

LIST OF BULK CHEMICALS HANDLED ON-SITE

TABLE 1
LIST OF BULK CHEMICALS HANDLED ON-SITE

PRODUCT	TANK CAPACITY	EST. ANNUAL THRU PUT
Acetone	8000 gal.	800,000 lbs.
Anti-Freeze	8000 gal.	325,500 lbs.
Glycol Ether DB	1,000 gal.	45,000 lbs.
Glycol Ether EB	4,000 gal.	260,000 lbs.
Diethanolamine 85%	2,000 gal.	40,000 lbs.
Ethyl Acetate	4,000 gal.	185,000 lbs.
Ethyl Alcohol	4,000 gal.	264,000 lbs.
Ethylene Glycol	2,000 gal.	74,400 lbs.
Heavy Aromatic Naptha	8,000 gal.	584,000 lbs.
Isopropyl Alcohol	8,000 gal.	975,000 lbs.
Lacquer Dilutent	4,000 gal.	78,000 lbs.
Methanol	30,000 gal.	6,600,000 lbs.
Methyl Ethyl Ketone	8,000 gal.	540,000 lbs.
Methyl Isobutyl Ketone	2,000 gal.	130,000 lbs.
Methylene Chloride	4,000 gal.	135,000 lbs.
Mineral Seal Oil	2,000 gal.	150,000 lbs.
Mineral Sprits	8,000 gal.	795,000 lbs.
Naphthol Spirits	2,000 gal.	105,000 lbs.
N. Butyl Acetate	2,000 gal.	45,000 lbs.
N. Butyl Alcohol	8,000 gal.	160,000 lbs.
N. Propyl Acetate	2,000 gal.	150,000 lbs.
N. Propyl Alcohol	4,000 gal.	80,000 lbs.
Perchlorethylene	2,000 gal.	110,000 lbs.
Solvent 100	2,000 gal.	146,000 lbs.
Solvent 150	2,000 gal.	58,000 lbs.
140 Solvent	2,000 gal.	52,800 lbs.
Toluol	30,000 gal.	1,000,000 lbs.
1-1-1 Trichlorethane	4,000 gal.	550,000 lbs.
Triethylene Glycol	8,000 gal.	750,000 lbs.
VM&P	8,000 gal.	760,000 lbs.
Xylene	8,000 gal.	875,000 lbs.
Caustic Soda 50%	8,000 gal.	600,000 lbs.

TABLE 2

SAMPLING INFORMATION SUMMARY TABLE

TABLE 2
SAMPLE INFORMATION SUMMARY TABLE
Dixie (TEI) Petro–Chemical
Sampling Event – May 24, 1993

Sample Number	CLP Number IN./ORG.	Depth	Matrix	Location
SW01	MFAQ06/FZ908	N.A.	Surface Water	Drainage Ditch South of Site
SW02	MFAQ07/FZ909	N.A.	Surface Water	Duplicate of SW01
SD03	MFAQ08/FZ910	(0–6 inches)	Sediment	Drainage Ditch South of Site
SS04	MFAQ01/FZ903	(0–6 inches)	Soil	Trailer Park – Lot 41
SS05	MFAQ02/FZ904	(0–6 inches)	Soil	Trailer Park – Lot 38
SS06	MFAQ09/FZ911	(0–6 inches)	Soil	UST area South of Warehouse
SS07	MFAQ10/FZ912	(4–6 feet)	Soil	UST area South of Warehouse
SD08	MFAQ11/FZ913	(0–6 inches)	Sediment	Ponded Water (West)
SS09	MFAQ12/FZ914	(4–6 feet)	Soil	UST area North of Warehouse
SS10	MFAQ14/FZ916	(0–3 feet)	Soil	UST area North of Warehouse
SS11	MFAQ15/FZ917	(0–3 feet)	Soil	UST area North of Warehouse
SS12	MFAQ16/FZ918	(4–6 feet)	Soil	UST area North of Warehouse
SS13	MFAQ00/FZ902	(0–6 inches)	Soil	BCKG–E. of Gum Springs Rd
SD14	MFAQ03/FZ905	(0–6 inches)	Sediment	BCKG–Long Creek
SW15	MFAQ04/FZ906	N.A.	Surface Water	BCKG–Long Creek
SD16	MFAQ05/FZ907	(0–6 inches)	Sediment	Long Creek & Intermittent
FB17	MFAQ17/FZ919	N.A.	Field Blank	Field Blank
DW18	N.A.	N.A.	Drinking Water	(b) (6) [redacted] Residence
DW19	N.A.	N.A.	Drinking Water	Duplicate of DW18
DW20	N.A.	N.A.	Drinking Water	(b) (6) [redacted] Residence
RB21	MFAQ13/FZ915	N.A.	Rinsate Blank	Rinsate Blank

TABLE 3

SAMPLING LOCATION AND RATIONALE

TABLE 3
SAMPLING LOCATIONS AND RATIONALE

SAMPLE NUMBER	*SAMPLE LOCATION AND RATIONALE*
1	Low concentration water sample: Collected surface water sample from drainage ditch south of the site. **Rationale:** To document a potential to release to surface water.
2	Duplicate of Sample # 1.
3	Low concentration sediment sample: Collected sediment sample from drainage ditch south of the site. **Rationale:** To characterize potential contamination off-site.
4	Low concentration soil sample: Collected soil sample from a residence in the adjacent trailer park (south of site). **Rationale:** To characterize potential observed contamination at an off-site residence (Soil Exposure Pathway).
5	Low concentration soil sample: Collected soil sample from a residence in the adjacent trailer park (south of the site). **Rationale:** To characterize potential observed contamination at an off-site residence (Soil Exposure Pathway).
6	Low concentration soil sample: Collected soil sample from former underground storage tank area located south of the warehouse. Sample was taken near the concrete pad and drainage ditch that flows off-site. **Rationale:** To characterize potential contamination on-site. (source characterization)
7	Low concentration soil sample: Collected soil sample from underground fuel tank area located south of the warehouse. Sample was taken (4-6 ft. depth) on the north side of concrete pad in area where extensive cavitation has occurred.

TABLE 3 (CONT.)
SAMPLING LOCATIONS AND RATIONALE

SAMPLE NUMBER	*SAMPLE LOCATION AND RATIONALE*
	Rationale: To characterize potential contamination on-site. (source characterization)
8	Low concentration sediment sample: Collected sediment sample from ponded water area next to concrete pad. (West side of site)
	Rationale: To characterize potential contamination on-site.
9	Low concentration soil sample: Collected soil sample (4-6 ft. depth) from the former UST area north of warehouse. Sample was taken on western end of this area.
	Rationale: To characterize potential contamination on-site. (source characterization)
10	Low concentration soil sample: Collected soil sample (0-3 ft. depth) from the former UST area north of warehouse. Sample was taken along northern side of area that has stressed vegetation. The sample depth was originally 4-6 feet, due to a significant reading on the Hnu the sample was taken at this depth.
	Rationale: To characterize potential contamination on-site. (source characterization)
11	Duplicate of Sample # 11.
12	Low concentration soil sample: Collected soil sample (4-6 ft. depth) from former UST area north of the warehouse. Sample was taken from eastern side of area. (North of warehouse ramp)
	Rationale: To characterize potential contamination across the former UST area north of warehouse. (source characterization)
13	Low concentration soil sample: Collected soil sample from grassy area east of Gum Springs Road.
	Rationale: To determine background soil concentrations.

TABLE 3 (CONT.)
SAMPLING LOCATIONS AND RATIONALE

SAMPLE NUMBER	*SAMPLE LOCATION AND RATIONALE*
14	Low concentration sediment sample: Collected sediment sample from Long Creek northeast of site. **Rationale:** To determine background sediment concentrations.
15	Low concentration water sample: Collected surface water from Long Creek northeast of site. **Rationale:** To determine background surface water concentrations.
16	Low concentration sediment sample: Collected sediment sample at the confluence of Long Creek (ppe) and the intermittent stream. **Rationale:** To determine off-site sediment contamination.
17	Trip Blank.
18	Low concentration drinking water sample: Collected drinking water sample from the (b) (6) [redacted] residence. Sample was taken approximately 1.02 miles southeast of the site. **Rationale:** To characterize possible off-site ground water contamination.
19	Duplicate of sample # 18.
20	Low concentration drinking water sample: Collected drinking water sample from the (b) (6) [redacted] residence. Sample was taken approximately 1.49 miles northeast of the site. **Rationale:** To determine off-site background ground water concentrations.
21	Rinsate

TABLE 4
INORGANIC ANALYTICAL RESULTS

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TABLE 4
SUMMARY OF INORGANIC ANALYTICAL RESULTS
Dixie (TEI) Petro-Chemical
May 24-25, 1993

Station Location	Compound or Element	Concentration (mg/kg)	Qualifier	CLP Sample Number	Comments
	SURFACE SOIL BACKGROUND SAMPLE				
SS13	Arsenic	1.8	J	MFAQ00	Background
SS13	Barium	43.8	B	MFAQ00	Background
SS13	Chromium	11.3	J	MFAQ00	Background
SS13	Lead	67.6		MFAQ00	Background
SS13	Nickel	3.9	B	MFAQ00	Background
SS13	Selenium	0.34	B	MFAQ00	Background
SS13	Vanadium	17.6		MFAQ00	Background
SS13	Zinc	48.0		MFAQ00	Background
	BACKGROUND BENCHMARK CONCENTRATIONS/SOIL				
SS13	Arsenic	5.4		MFAQ00	3 X Background
SS13	Barium	131.4		MFAQ00	3 X Background
SS13	Chromium	33.9		MFAQ00	3 X Background
SS13	Lead	202.8		MFAQ00	3 X Background
SS13	Nickel	11.7		MFAQ00	3 X Background
SS13	Selenium	1.02		MFAQ00	3 X Background
SS13	Vanadium	52.8		MFAQ00	3 X Background
SS13	Zinc	144.0		MFAQ00	3 X Background
	SOIL SAMPLE RESULTS				
SS04	Arsenic	1.1	J	MFAQ01	Surface Soil
SS04	Barium	21	J	MFAQ01	Surface Soil
SS04	Chromium	7.7	J	MFAQ01	Surface Soil
SS04	Lead	8.9		MFAQ01	Surface Soil
SS04	Nickel	2.7	B	MFAQ01	Surface Soil
SS04	Selenium	0.24	U	MFAQ01	Surface Soil
SS04	Vanadium	13.4		MFAQ01	Surface Soil
SS04	Zinc	48.4		MFAQ01	Surface Soil
SS05	Arsenic	0.44	J	MFAQ02	Surface Soil
SS05	Barium	21.3	B	MFAQ02	Surface Soil
SS05	Chromium	5.4	J	MFAQ02	Surface Soil
SS05	Lead	5.8		MFAQ02	Surface Soil
SS05	Nickel	2.6	U	MFAQ02	Surface Soil
SS05	Selenium	0.35	J	MFAQ02	Surface Soil
SS05	Vanadium	5.9	B	MFAQ02	Surface Soil
SS05	Zinc	43.4		MFAQ02	Surface Soil

Station Location	Compound or Element	Concentration (mg/kg)	Qualifier	CLP Sample Number	Comments
SS06	Arsenic	3.6	J	MFAQ09	Surface Soil
SS06	Barium	118		MFAQ09	Surface Soil
SS06	Chromium	43.6 *	J	MFAQ09	Surface Soil
SS06	Lead	16.5		MFAQ09	Surface Soil
SS06	Nickel	7	B	MFAQ09	Surface Soil
SS06	Selenium	0.5	B	MFAQ09	Surface Soil
SS06	Vanadium	31		MFAQ09	Surface Soil
SS06	Zinc	87.9		MFAQ09	Surface Soil
SS07	Arsenic	3	J	MFAQ10	Sub-Surface Soil
SS07	Barium	6.9	B	MFAQ10	Sub-Surface Soil
SS07	Chromium	5.7	J	MFAQ10	Sub-Surface Soil
SS07	Lead	3.9		MFAQ10	Sub-Surface Soil
SS07	Nickel	2.6	U	MFAQ10	Sub-Surface Soil
SS07	Selenium	0.52	B	MFAQ10	Sub-Surface Soil
SS07	Vanadium	8.9	B	MFAQ10	Sub-Surface Soil
SS07	Zinc	2.3	B	MFAQ10	Sub-Surface Soil
SS09	Arsenic	3.5	J	MFAQ12	Sub-Surface Soil
SS09	Barium	80.1		MFAQ12	Sub-Surface Soil
SS09	Chromium	12.5	J	MFAQ12	Sub-Surface Soil
SS09	Lead	9.2		MFAQ12	Sub-Surface Soil
SS09	Nickel	19.8 *		MFAQ12	Sub-Surface Soil
SS09	Selenium	0.73	B	MFAQ12	Sub-Surface Soil
SS09	Vanadium	21.3		MFAQ12	Sub-Surface Soil
SS09	Zinc	11.5		MFAQ12	Sub-Surface Soil
SS10	Arsenic	0.93	J	MFAQ14	Sub-Surface Soil
SS10	Barium	44.5	B	MFAQ14	Sub-Surface Soil
SS10	Chromium	6.5	J	MFAQ14	Sub-Surface Soil
SS10	Lead	7.4		MFAQ14	Sub-Surface Soil
SS10	Nickel	27.9 *		MFAQ14	Sub-Surface Soil
SS10	Selenium	0.39	B	MFAQ14	Sub-Surface Soil
SS10	Vanadium	12.5		MFAQ14	Sub-Surface Soil
SS10	Zinc	117		MFAQ14	Sub-Surface Soil
SS11	Arsenic	1.2	J	MFAQ15	Sub-Surface Soil
SS11	Barium	37.7	B	MFAQ15	Sub-Surface Soil
SS11	Chromium	5.7	J	MFAQ15	Sub-Surface Soil
SS11	Lead	7.9		MFAQ15	Sub-Surface Soil
SS11	Nickel	29.6 *		MFAQ15	Sub-Surface Soil
SS11	Selenium	0.56	B	MFAQ15	Sub-Surface Soil
SS11	Vanadium	12.3		MFAQ15	Sub-Surface Soil
SS11	Zinc	130		MFAQ15	Sub-Surface Soil
SS12	Arsenic	2.8	J	MFAQ16	Sub-Surface Soil
SS12	Barium	3.6	B	MFAQ16	Sub-Surface Soil
SS12	Chromium	4.8	J	MFAQ16	Sub-Surface Soil
SS12	Lead	2.9		MFAQ16	Sub-Surface Soil
SS12	Nickel	12.3 *		MFAQ16	Sub-Surface Soil
SS12	Selenium	0.5	B	MFAQ16	Sub-Surface Soil
SS12	Vanadium	10.5	B	MFAQ16	Sub-Surface Soil
SS12	Zinc	2	B	MFAQ16	Sub-Surface Soil

Station Location	Compound or Element	Concentration (mg/kg)	Qualifier	CLP Sample Number	Comments
	SEDIMENT BACKGROUND RESULTS				
SD14	Arsenic	4.2	J	MFAQ03	Background Sediment
SD14	Barium	35.4	B	MFAQ03	Background Sediment
SD14	Chromium	15	J	MFAQ03	Background Sediment
SD14	Lead	48.5		MFAQ03	Background Sediment
SD14	Nickel	3	U	MFAQ03	Background Sediment
SD14	Selenium	0.65	B	MFAQ03	Background Sediment
SD14	Vanadium	21.1		MFAQ03	Background Sediment
SD14	Zinc	25.8		MFAQ03	Background Sediment
	BACKGROUND BENCHMARK CONCENTRATIONS/SEDIMENT				
SD14	Arsenic	12.6		MFAQ03	3 X Background
SD14	Barium	106.2		MFAQ03	3 X Background
SD14	Chromium	45.0		MFAQ03	3 X Background
SD14	Lead	145.5		MFAQ03	3 X Background
SD14	Nickel	9.0		MFAQ03	3 X Background
SD14	Selenium	2.0		MFAQ03	3 X Background
SD14	Vanadium	63.3		MFAQ03	3 X Background
SD14	Zinc	77.4		MFAQ03	3 X Background
	SEDIMENT SAMPLE RESULTS				
SD03	Arsenic	7.5	J	MFAQ08	Sediment
SD03	Barium	217 *		MFAQ08	Sediment
SD03	Chromium	103 *	J	MFAQ08	Sediment
SD03	Lead	91.2		MFAQ08	Sediment
SD03	Nickel	5	B	MFAQ08	Sediment
SD03	Selenium	0.73	J	MFAQ08	Sediment
SD03	Vanadium	22.7		MFAQ08	Sediment
SD03	Zinc	58.6		MFAQ08	Sediment
SD08	Arsenic	5.5	J	MFAQ11	Sediment
SD08	Barium	289 *		MFAQ11	Sediment
SD08	Chromium	67.9 *	J	MFAQ11	Sediment
SD08	Lead	15.4		MFAQ11	Sediment
SD08	Nickel	9.4 *	B	MFAQ11	Sediment
SD08	Selenium	0.8	B	MFAQ11	Sediment
SD08	Vanadium	60.5		MFAQ11	Sediment
SD08	Zinc	60.8		MFAQ11	Sediment
SD16	Arsenic	70.6 *	J	MFAQ05	Sediment
SD16	Barium	50.5		MFAQ05	Sediment
SD16	Chromium	80.5 *	J	MFAQ05	Sediment
SD16	Lead	78.1		MFAQ05	Sediment
SD16	Nickel	5.6	B	MFAQ05	Sediment
SD16	Selenium	1.7		MFAQ05	Sediment
SD16	Vanadium	167 *		MFAQ05	Sediment
SD16	Zinc	93.9 *		MFAQ05	Sediment

Station Location	Compound or Element	Concentration (ug/kg)	Qualifier	CLP Sample Number	Comments
	SURFACE WATER BACKGROUND RESULTS				
SW15	Arsenic	1	UJ	MFAQ04	Background Surface Water
SW15	Barium	101	B	MFAQ04	Background Surface Water
SW15	Chromium	5	U	MFAQ04	Background Surface Water
SW15	Lead	3.5	J	MFAQ04	Background Surface Water
SW15	Nickel	11	U	MFAQ04	Background Surface Water
SW15	Selenium	2.5	B	MFAQ04	Background Surface Water
SW15	Vanadium	4	U	MFAQ04	Background Surface Water
SW15	Zinc	8.9	B	MFAQ04	Background Surface Water
	BACKGROUND BENCHMARK CONCENTRATIONS/SURFACE WATER				
SW15	Arsenic	3		MFAQ04	3X Background
SW15	Barium	303		MFAQ04	3X Background
SW15	Chromium	15		MFAQ04	3X Background
SW15	Lead	10.5		MFAQ04	3X Background
SW15	Nickel	33		MFAQ04	3X Background
SW15	Selenium	7.5		MFAQ04	3X Background
SW15	Vanadium	12		MFAQ04	3X Background
SW15	Zinc	26.7		MFAQ04	3X Background
	SURFACE WATER SAMPLE RESULTS				
SW01	Arsenic	4.1 *	B	MFAQ06	SURFACE WATER
SW01	Barium	206		MFAQ06	SURFACE WATER
SW01	Chromium	60 *		MFAQ06	SURFACE WATER
SW01	Lead	34.4 *	J	MFAQ06	SURFACE WATER
SW01	Nickel	15.8	B	MFAQ06	SURFACE WATER
SW01	Selenium	1.5	B	MFAQ06	SURFACE WATER
SW01	Vanadium	40.5 *	B	MFAQ06	SURFACE WATER
SW01	Zinc	138 *		MFAQ06	SURFACE WATER
SW02	Arsenic	3.7 *	B	MFAQ07	SURFACE WATER
SW02	Barium	186	B	MFAQ07	SURFACE WATER
SW02	Chromium	50.2 *		MFAQ07	SURFACE WATER
SW02	Lead	29.7 *	J	MFAQ07	SURFACE WATER
SW02	Nickel	18.1	B	MFAQ07	SURFACE WATER
SW02	Selenium	1.7	B	MFAQ07	SURFACE WATER
SW02	Vanadium	34.8 *	B	MFAQ07	SURFACE WATER
SW02	Zinc	124 *		MFAQ07	SURFACE WATER

Station Location	Compound or Element	Concentration (ug/kg)	Qualifier	CLP Sample Number	Comments
	DRINKING WATER BACKGROUND RESULTS				
DW20	Arsenic	5.8	U	N.A.	Background Drinking Water
DW20	Barium	79		N.A.	Background Drinking Water
DW20	Chromium	10	U	N.A.	Background Drinking Water
DW20	Lead	5.7	*	N.A.	Background Drinking Water
DW20	Nickel	20	U	N.A.	Background Drinking Water
DW20	Selenium	2.9	U	N.A.	Background Drinking Water
DW20	Vanadium	30	U	N.A.	Background Drinking Water
DW20	Zinc	273		N.A.	Background Drinking Water
	BACKGROUND BENCHMARK CONCENTRATIONS/DRINKING WATER				
DW20	Arsenic	5.8	U	N.A.	3X Background
DW20	Barium	237		N.A.	3X Background
DW20	Chromium	10	U	N.A.	3X Background
DW20	Lead	17.1		N.A.	3X Background
DW20	Nickel	20	U	N.A.	3X Background
DW20	Selenium	3.3	U	N.A.	3X Background
DW20	Vanadium	30	U	N.A.	3X Background
DW20	Zinc	819		N.A.	3X Background
	DRINKING WATER SAMPLE RESULTS				
DW18	Arsenic	5.8	U	N.A.	(b) (6) Residence
DW18	Barium	27		N.A.	[redacted] Residence
DW18	Chromium	10	U	N.A.	[redacted] Residence
DW18	Lead	3.3	U	N.A.	[redacted] Residence
DW18	Nickel	20	U	N.A.	[redacted] Residence
DW18	Selenium	5.8		N.A.	[redacted] Residence
DW18	Vanadium	30	U	N.A.	[redacted] Residence
DW18	Zinc	99		N.A.	[redacted] Residence
DW19	Arsenic	5.8	U	N.A.	Duplicate of DW-18
DW19	Barium	27		N.A.	Duplicate of DW-18
DW19	Chromium	10	U	N.A.	Duplicate of DW-18
DW19	Lead	3.3	U	N.A.	Duplicate of DW-18
DW19	Nickel	20	U	N.A.	Duplicate of DW-18
DW19	Selenium	2.9	U	N.A.	Duplicate of DW-18
DW19	Vanadium	30	U	N.A.	Duplicate of DW-18
DW19	Zinc	108		N.A.	Duplicate of DW-18

B – Analyte was detected above the Instrument Detection Limit but below the Contract Required Detection Limit.
J – The associated value is an estimated quantity.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate.
* – Analyte is greater than three times background concentration or greater than quantitation limit.

TABLE 5

ORGANIC ANALYTICAL RESULTS

TABLE 5
SUMMARY OF ORGANIC AND PESTICIDE COMPOUND RESULTS, SURFACE SOIL AND SEDIMENT SAMPLES
Dixie (TEI) Petro-Chemical
May 24-25, 1993

Station Location:	SS13		SS13		SS04		SS05		SS06		SS07		SS09		SS10		SS11		SS12			SD14		SD14		SD03		SD08		SD16	
CLP Sample Number:	FZ902		FZ902		FZ903		FZ904		FZ911		FZ912		FZ914		FZ916		FZ917		FZ918			FZ905		FZ905		FZ910		FZ913		FZ907	
Comments:	Background		Benchmark Concentration		Tr. Park Lot 41		Tr. Park Lot 38		UST Area S. of W'House		UST Area S. of W'House		UST Area N. of W'House		UST Area N. of W'House		Duplicate of SS10		UST Area N. of W'House			Background		Benchmark Concentrations		S. Drainage Ditch		Ponded Water Area		PPE Intermittent & Long Creek	
Analyte	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q		(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q
VOA																																
Acetone	12	J	36		12	UJ	19	B	31	B	33	B	7000	BJ	30000*	B	12000*	B	36*	B		43	B	129		17	B	34	B	10	BJ
2-Butanone		U	10			U		U		U	17*		5100	J	16000	B	13000*	B	9	J			U	10			U	11		11	
Toluene	2	U	10		2	BJ	4	J	21	B	3	BJ	17000*	B	110000*	B	200000*	J	7	BJ		4	BJ	10		2	BJ	3	BJ	2	BJ
Methylene Chloride	5	BJ	15		7	BJ	11	BJ	6	J	12	UJ	1700	U	28000	UJ	1300	UJ	12	BJ		7	BJ	10		5	BJ	7	BJ	5	BJ
1,2-Dichloroethene (Total)	12	J	36		2	J	12	UJ	13	UJ	12	UJ	7700	U	28000	UJ	3100*		12	UJ		13	UJ	13		6	J	11	UJ	13	UJ
Tetrachloroethene	12	J	36		12	UJ	12	UJ	3	J	12	UJ	2100	J	10000	J	24000*		12	UJ		13	UJ	13		12	UJ	11	UJ	13	UJ
Ethylbenzene		U	10			U		U		U	12	UJ	31000*		58000*	J	68000*	J	12	UJ			U	10			U	11	UJ	13	UJ
Xylene (Total)	12	J	36		12	UJ	12	UJ	7	J	12	UJ	180000*	J	410000*	J	260000*	J	2	J		13	UJ	13		12	UJ	11	UJ	13	UJ
1,1,1-Dichloroethane		U	10			U		U		U	12	UJ	7700	UJ	28000	UJ	1200	J	12	UJ			U	10			U	11	UJ	13	UJ
Trichloroethene	12	J	36		2	J	12	UJ	3	J	12	UJ	7700	UJ	28000	UJ	8400*	J	12	UJ		13	UJ	13		12	UJ	11	UJ	13	UJ
1,2-Dichloropropane		U	10			U		U		U	12	UJ	7700	UJ	28000	UJ	420	J	12	UJ			U	10			U	11	UJ	13	UJ
Acid/Base Neutral																																
Acenaphthene	440	U	440		430	U	390	U	420	U	390	U	81	J	1900	U	2200	U	410	U		32000	J	98000		63	J	360	U	70000	J
Fluorene	440	U	440		430	U	390	U	420	U	390	U	120	J	280	J	610	J	410	U		30000	J	90000		58	J	360	U	8600	J
Phenanthrene	46	J	440		430	U	390	U	420	U	390	U	420	J	700	J	2000	J	48	J		98000	J	294000		110	J	43	J	93000	J
Fluoranthene	180	J	540		92	J	390	U	90	J	390	U	290	J	1900	U	2200	U	410	U		57000	J	171000		140	J	110	J	23000	J
Pyrene	230	J	690		77	J	390	U	84	J	390	U	100	J	1900	U	450	J	410			37000	J	111000		170	J	100	J	15000	J
Chrysene	290	J	870		56	J	390	U	56	J	390	U	74	J	1900	U	2200	U	410	U		7700	J	23100		49	J	74	J	4100	J
Butylbenzylphthalate	35	J	440		430	U	390	U		U	390	U		U		U		U		U		13000	U	13000			U		U	4200	J
Benzo (b) Fluoranthene	620		1860		80	J	390	U	110	J	390	U	120	J	1900	U	2200	U	410	U		5100	J	13000		62	J	83	J	4300	J
Benzo (a) Pyrene	260	J	640		430	U	390	U	93	J	390	U	420	U	1900	U	2200	U	410	U		3100	J	13000		49	J	72	J	2900	J
Anthracene	440	U	440		430	U	390	U	12	J	390	U	420	U	1900	U	2200	U	410	U		11000	J	13000		400	U	360	U	2600	J
Carbazole	440	U	440		430	U	390	U	420	U	390	U	420	U	1900	U	2200	U	410	U		2400	J	13000		400	U	51	J	4200	J
Benzo (a) Anthracene	190	J	570		430	U	390	U	420	U	390	U	68	J	1900	U	2200	U	410	U		9500	J	13000		400	U	69	J	6000	J
Benzo (k) Fluoranthene	270	J	810		430	U	390	U	420	U	390	U	420	U	1900	U	2200	U	410	U		2900	J	13000		400	U	61	J	1400	J
Naphthalene	440	U	440		430	U	390	U	420	U	390	U	1400*		2200*		3800*		100	J		41000	J	123000		400	U	360	U	600	J
2-Methylnaphthalene	440	U	440		430	U	390	U	420	U	390	U	310	J	4000*		6100*		160	J		16000	J	48000		400	U	360	U	600	J
Dibenzofuran	440	U	440		430	U	390	U	420	U	390	U	74	J	1900	U	2200	U	410	U		22000	J	68000		400	U	360	U	4000	J
Pesticide																																
Dieldrin	4.4	U	4.4		4.3	U	3.9	U	4.2	U	3.9	U	4.2	U	3.8	U		U	4.1	U		4.4	U	4.4		4	U		U	11*	J
Gamma-BHC (Lindane)	2.3	U	2.3		3.2*		2	U	2.2	U	2	U	2.2	U	2	U	1.7	J	2.1	U		2.3	U	2.3		2	U	1.9	U	2.2	U
Gamma-Chlordane	2.3	U	2.3			U	2	U	2.2	U	2	U	2.2	U	2	U		U	2.1	U		2.3	U	2.3			U		U		U
Endosulfan II	4.4	U	4.4		4.3	U	3.9	U	4.2	U	3.9	U	4.2	U	3.8	U	7*	J	4.1	U		4.4	U	4.4			U	1.9	U		U
Endrin	4.4	U	4.4		4.3	U	3.9	U	4.2	U	2	U	4.2	U	3.8	U	4.4*	J	4.1	U		4.4	U	4.4		5.4*	J	1.9	U	17*	J

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TABLE 5
SUMMARY OF ORGANIC AND PESTICIDE COMPOUND RESULTS, SURFACE & DRINKING WATER SAMPLES
Dixie (TEI) Petro-Chemical
May 24-25, 1993

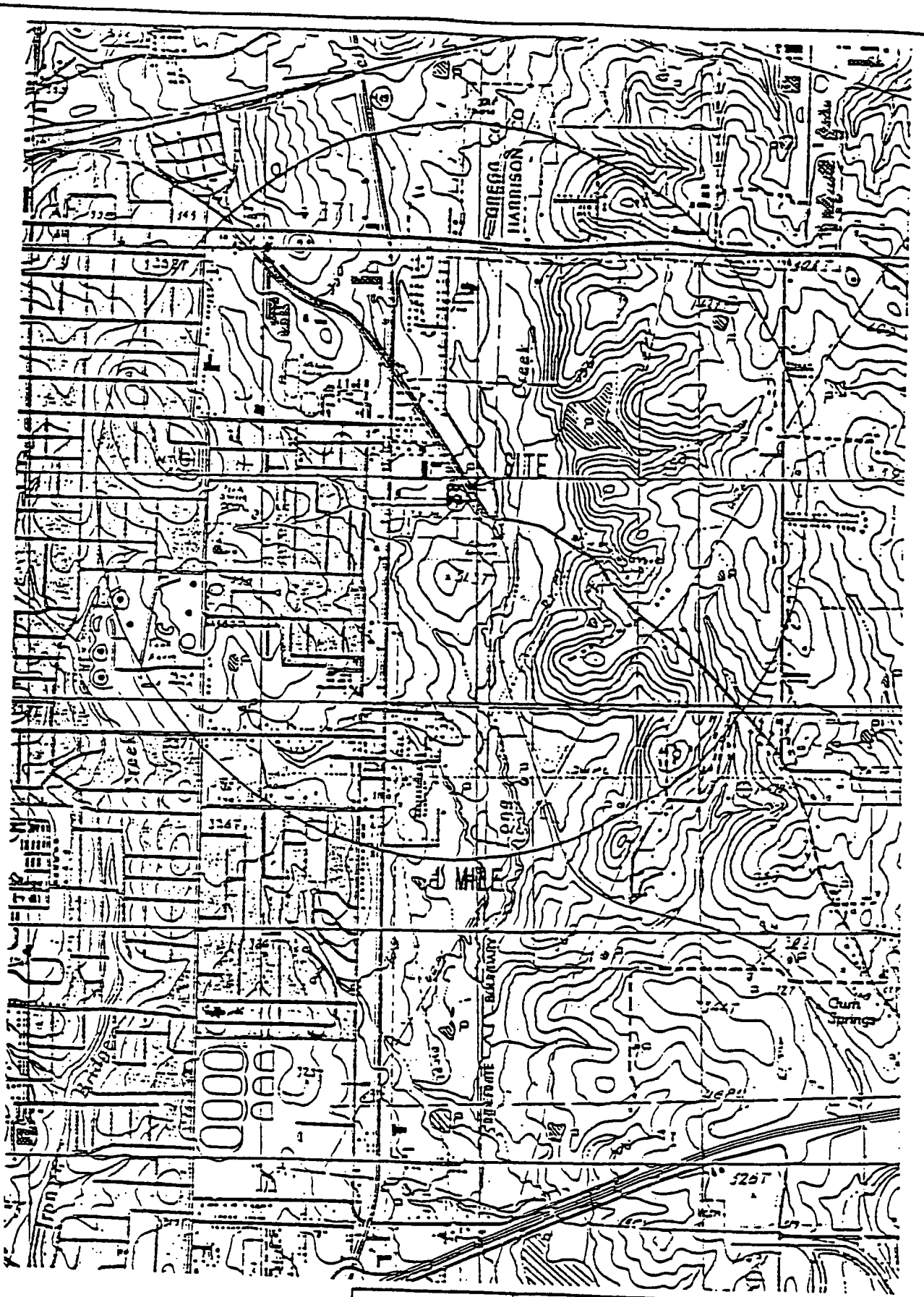
Station Location:	SW15		SW15		SW01		SW02		DW20		DW20		DW18		DW19	
CLP Sample Number:	FZ906		FZ906		FZ908		FZ909		N.A.		N.A.		N.A.		N.A.	
Comments:	Background		Benchmark Concentration		S. Drainage Ditch		Duplicate of SW01		Background		Benchmark Concentration		Hewes Residence		Duplicate of DW18	
Analyte	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q	(ug/kg)	Q
VOA																
Acetone	3	BJ	10		6	BJ	4	BJ	5	U	5		5	U	5	U
2-Butanone	2	J	10		10	U	10	U	5	U	5		5	U	5	U
Toluene	10	U	10		10	U	10	U	5	U	5		5	U	5	U
Methylene Chloride	3	J	10		10	U	10	U	5	U	5		5	U	5	U
1,2-Dichloroethene (Total)	10	U	10		4	J	4	J	2	U	2		2	U	2	U
Acid/Base Neutral																
* There were no significant semi-volatile compound detections for these samples.																
Pesticide																
* There were no pesticide compound detections in these samples.																

J - The associated value is an estimated quantity.
U - The material was analyzed for but was not detected above the level of the associated value.
* - Analyte is greater than the Background Benchmark Concentration (i.e., quantitation limit or 3x the background concentration).
B - Analyte was detected above the IDL but below the CRDL.

FIGURES

FIGURE 1

SITE LOCATION MAP



U.S.G.S. 7.5 MIN. TOPOGRAPHIC MAP
LAKEPORT, QUADRANGLE

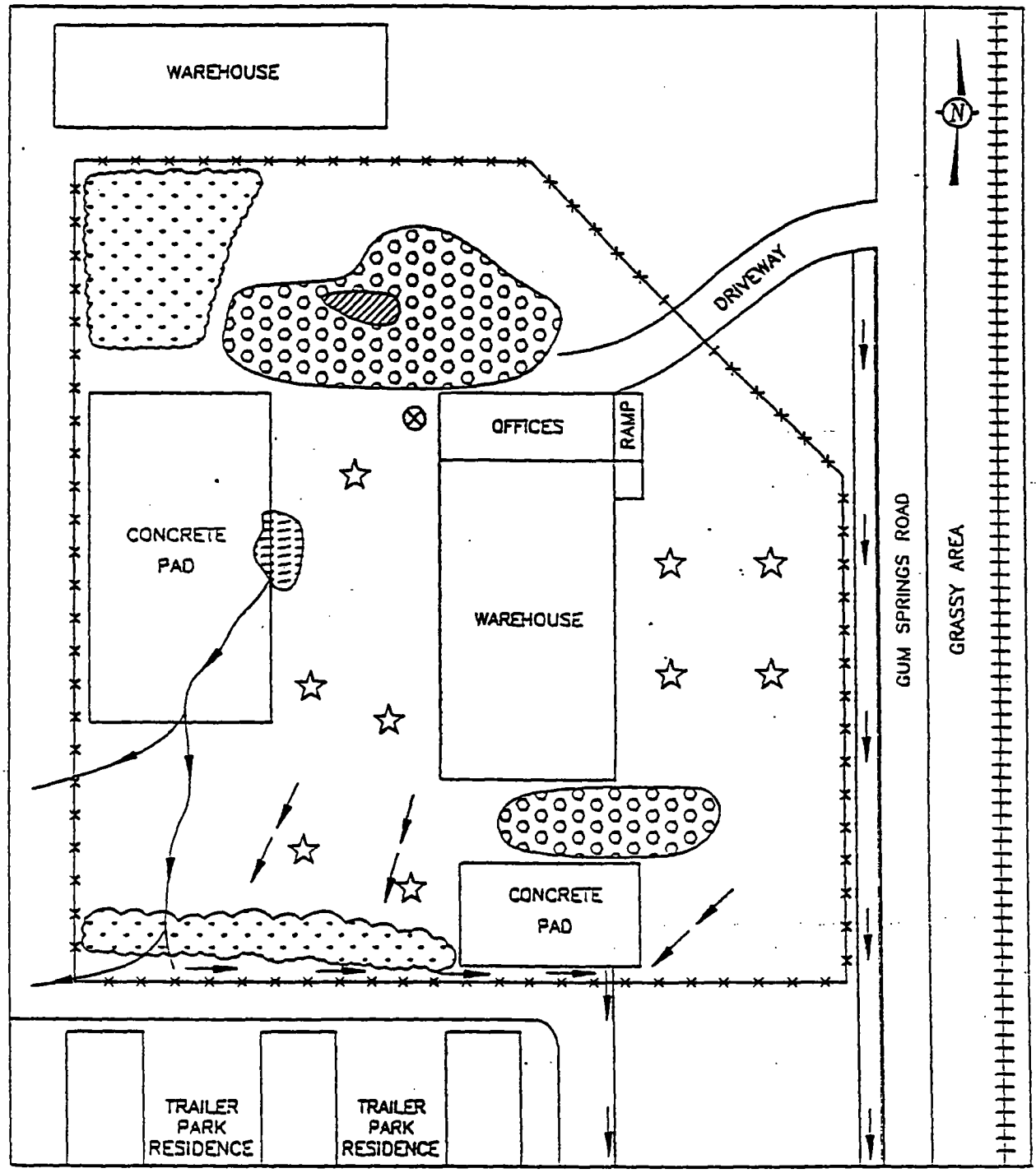
FLUOR DANIEL

FIGURE 1
SITE LOCATION MAP
DIXIE (TE) PETRO-CHEM
LONGVIEW, TEXAS

CAD FILE NO.

FIGURE 2

SITE SKETCH



LEGEND:

- STRUCTURE
- ROAD
- RAILROAD
- SITE BOUNDARY
- DRAINAGE PATHWAY
- SEPTIC TANK
- INDICATES EXTENSIVE RAILCAR PARTS STORAGE AREA
- POND WATER
- FORMER UST AREA
- AREA OF EXTENSIVE VEGATATION
- AREA OF STRESSED VEGATATION

NOTE TO SCALE

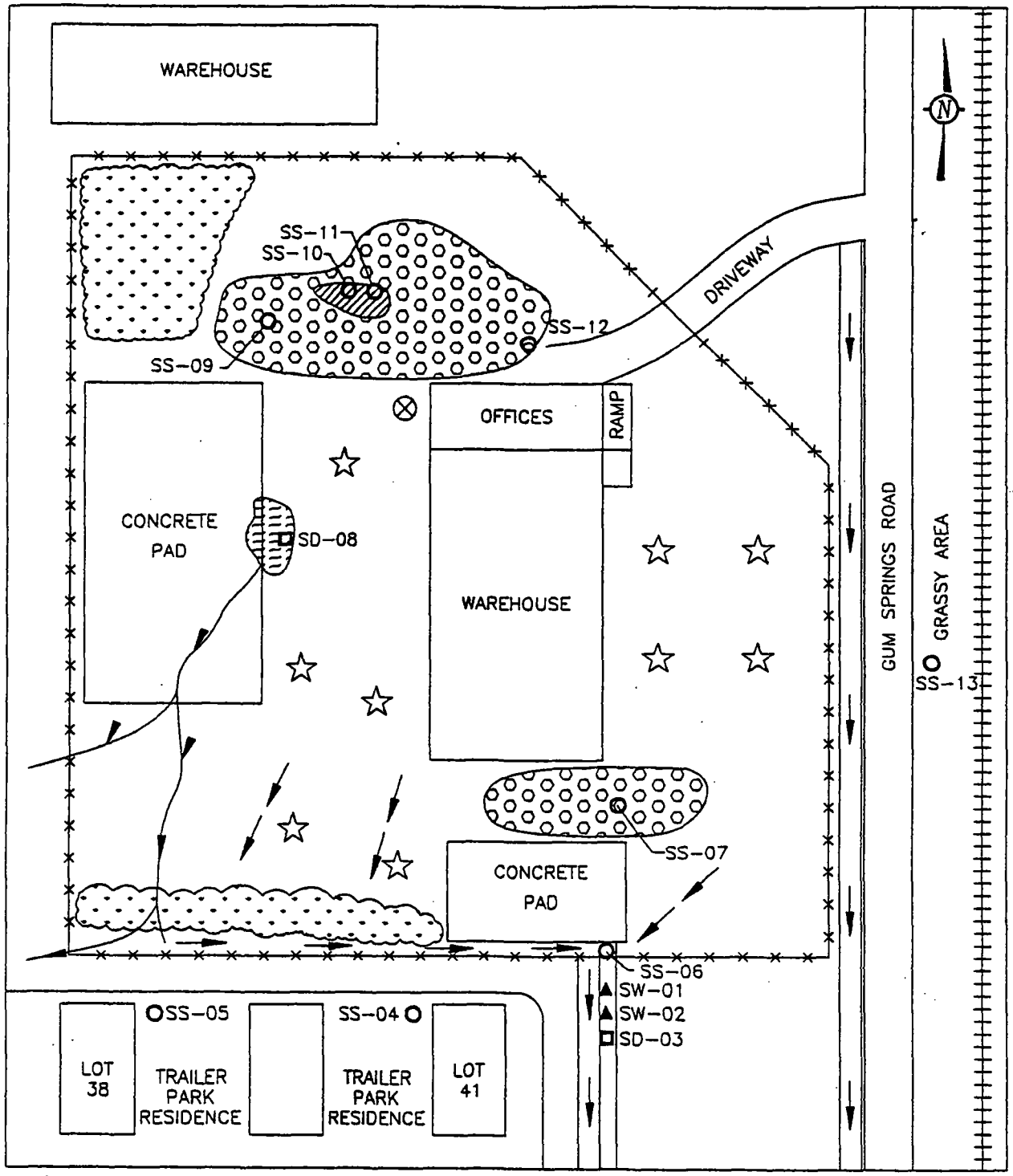
FLUOR DANIEL

FIGURE 2
SITE SKETCH
DIXIE (TEI) PETRO-CHEM
LONGVIEW, TEXAS

CAD FILE No. PC-2

FIGURE 3

SAMPLING LOCATION MAP



LEGEND:

- STRUCTURE
- ROAD
- RAILROAD
- SITE BOUNDARY
- DRAINAGE PATHWAY
- SEPTIC TANK
- POND WATER
- FORMER UST AREA
- AREA OF EXTENSIVE VEGATATION
- AREA OF STRESSED VEGATATION
- INDICATES EXTENSIVE RAILCAR PARTS STORAGE AREA
- ▲ SW-04 SURFACE WATER SAMPLE LOCATION
- ◻ SD-04 SEDIMENT SAMPLE LOCATION
- ○ SS-04 SOIL SAMPLE LOCATION

NOTE:
LOCATIONS 14 - 20 ARE NOT SHOWN ON MAP

NOTE TO SCALE

FLUOR DANIEL

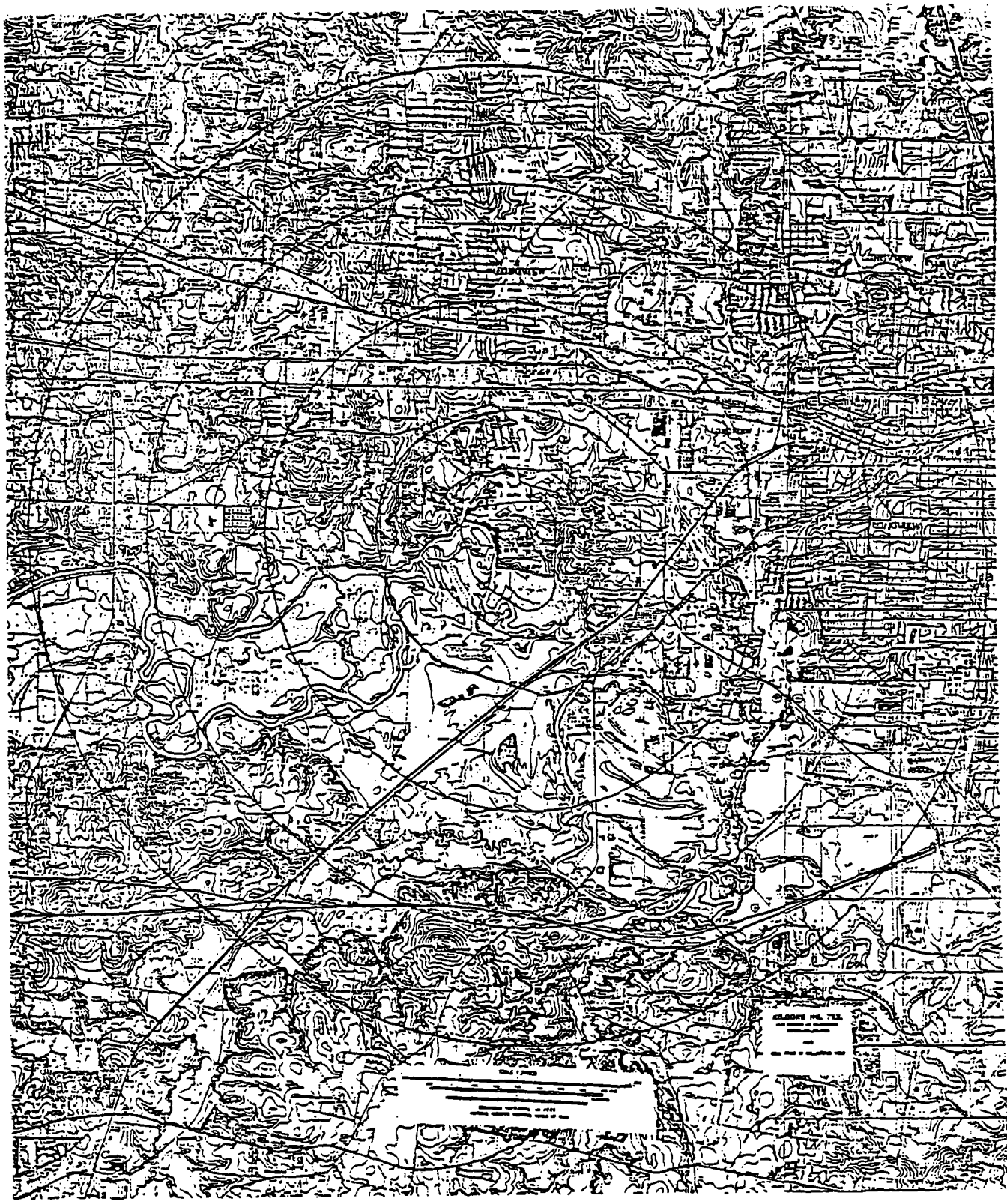
FIGURE 3
SAMPLING LOCATION MAP
DIXIE (TEI) PETRO-CHEM
LONGVIEW, TEXAS

CAD FILE No. FIG-3

4-49(a)

FIGURE 4

FOUR MILE RADIUS MAP



U.S.G.S. 7.5 MIN. TOPOGRAPHIC MAP
LAKEPORT, QUADRANGLE

FLUOR DANIEL

FIGURE 4

4-MILE RADIUS MAP
DIXIE (TEI) PETRO-CHEM
LONGVIEW, TEXAS

CAD FILE No. FG-4

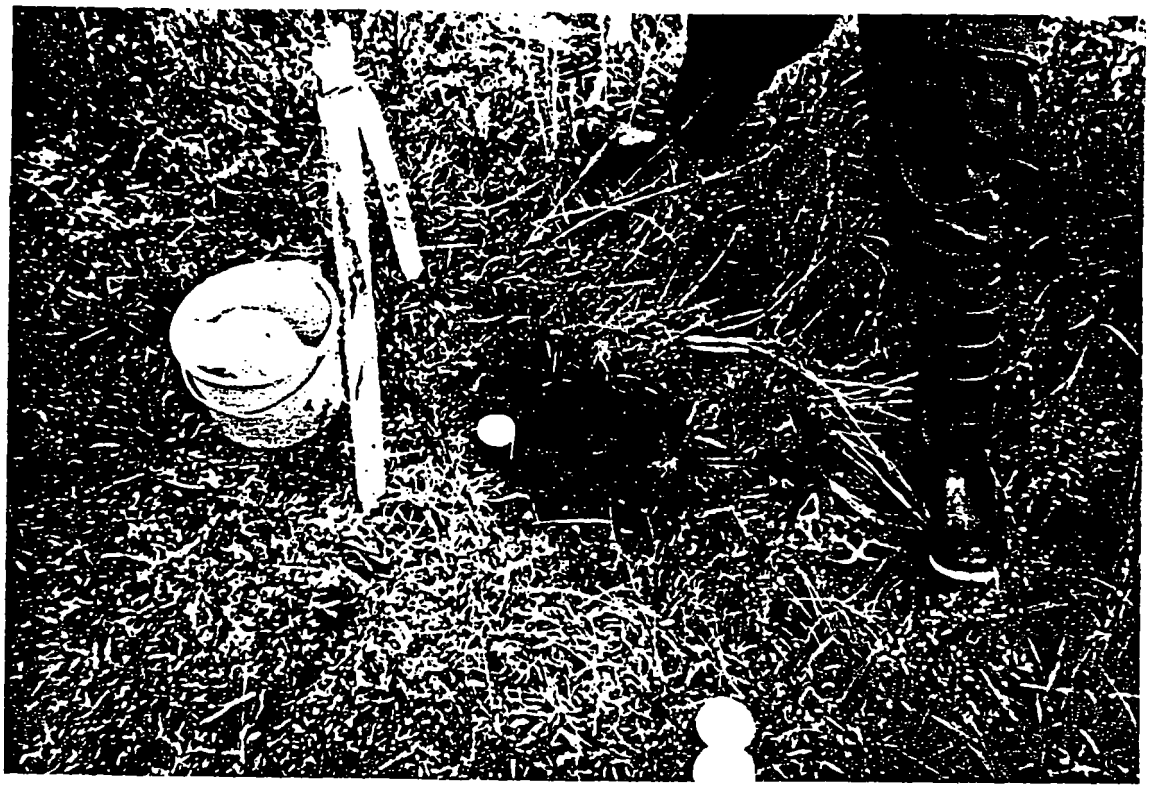
ATTACHMENTS

ATTACHMENT A

SITE (SAMPLING EVENT) PHOTOGRAPHS

Photo No.

1



Site Name:
Dixie (TEI)

Petro–Chemical

Location:
Longview, Texas

Project # WA #25–6JZZ

Photographer/Witness Keith Westberry/George Farmer

Date 5/24/93 Time A.M. Direction North

Description View of background soil sample location (SS–13), taken east of Gum Springs Road.

Photo No.

2

Page 1
Of 7

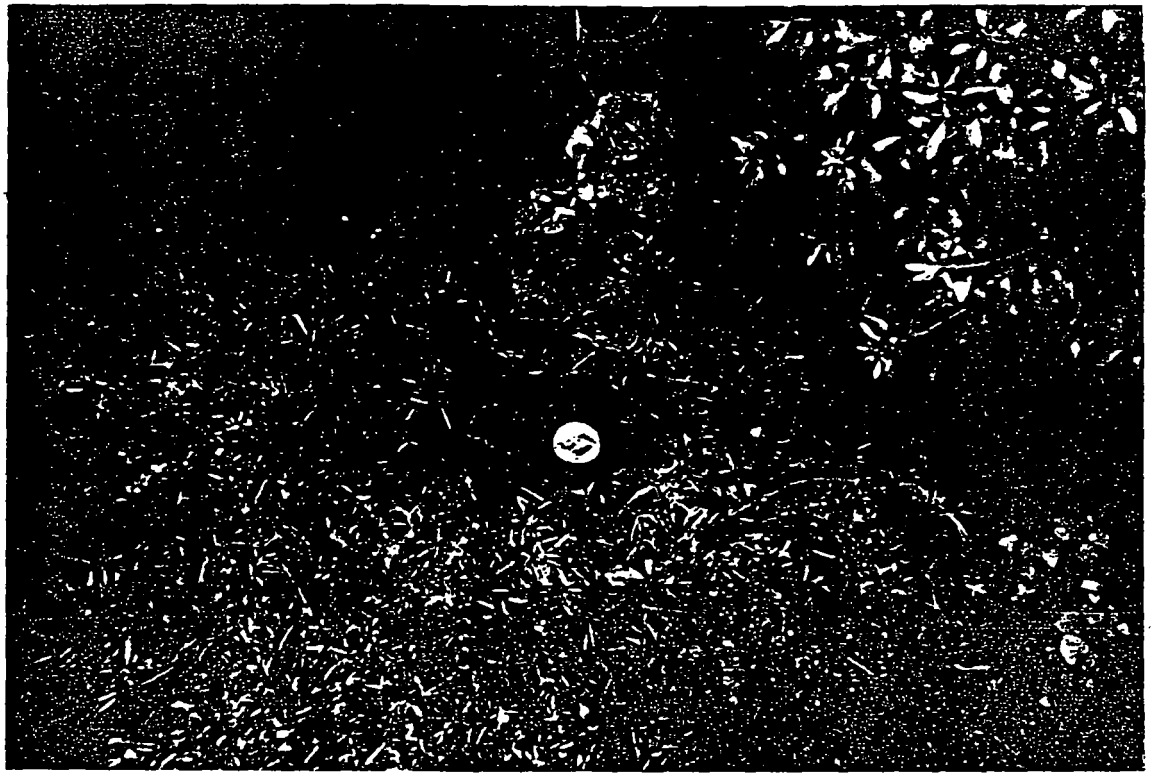
Photographer/Witness Keith Westberry/George Farmer

Date 5/24/93 Time A.M. Direction North

Description View of Sample SS–05 sample location/ sample taken 25' east of the trail on Lot 38 in trailer park south of site.

Photo No.

3



Site Name:
Dixie (TEI)
Petro–Chemical
Location:
Longview, Texas
Project # WA #25–6JZZ

Photographer/Witness Keith Westberry/George Farmer
Date 5/24/93 Time A.M. Direction North
Description View of Sample SS–04 location/taken approximately 5' east of Lot 41 trailer park south of the site.

Photo No.

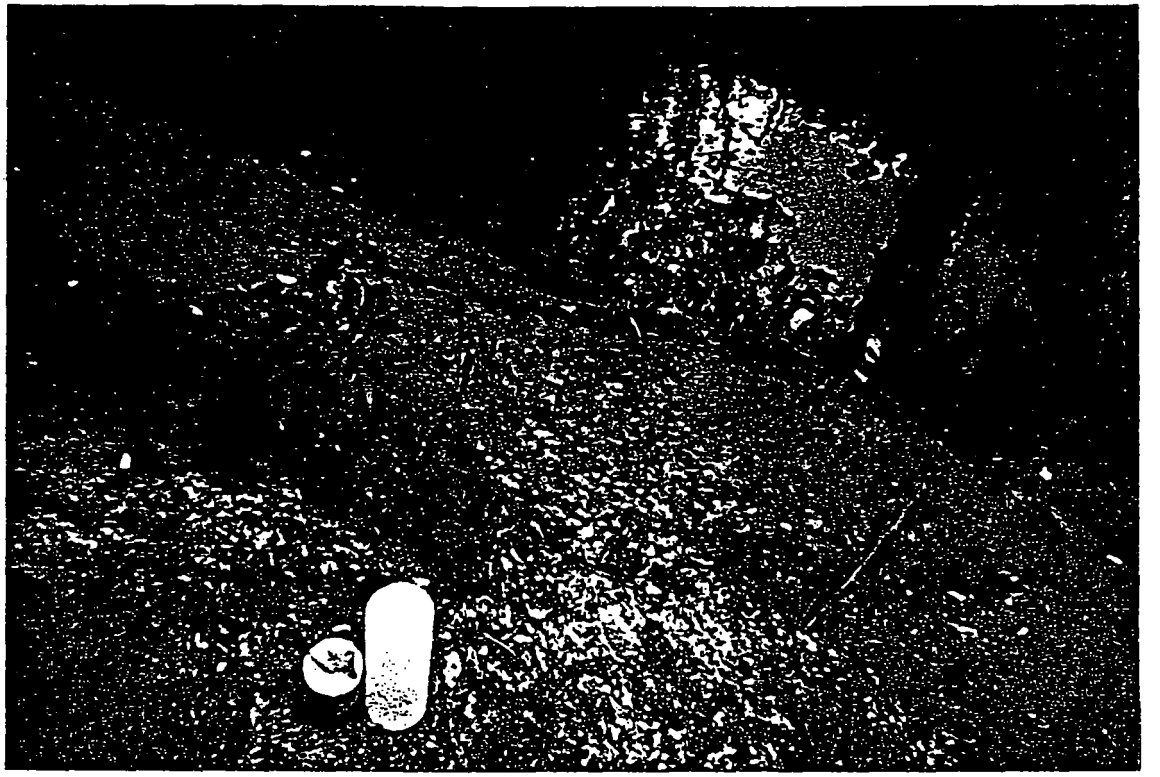
4

Page 2
Of 7

Photographer/Witness Keith Westberry/George Farmer
Date 5/24/93 Time A.M. Direction West
Description View of sample location SW–01, SW–02. & SD–03/taken in intermittent stream that receives runoff from the site/south of site.

Photo No.

5



Site Name:
Dixie (TEI)

Petro–Chemical

Location:
Longview, Texas

Project # WA #25–6JZZ

Photographer/Witness KW Keith Westberry/George Farmer GF

Date 5/24/93 Time A.M. Direction West

Description View of sample locations SD–14 & SW–15/taken in Long Creek northeast of the site/background sediment and surface water locations.

Photo No.

6

Page 3
Of 7

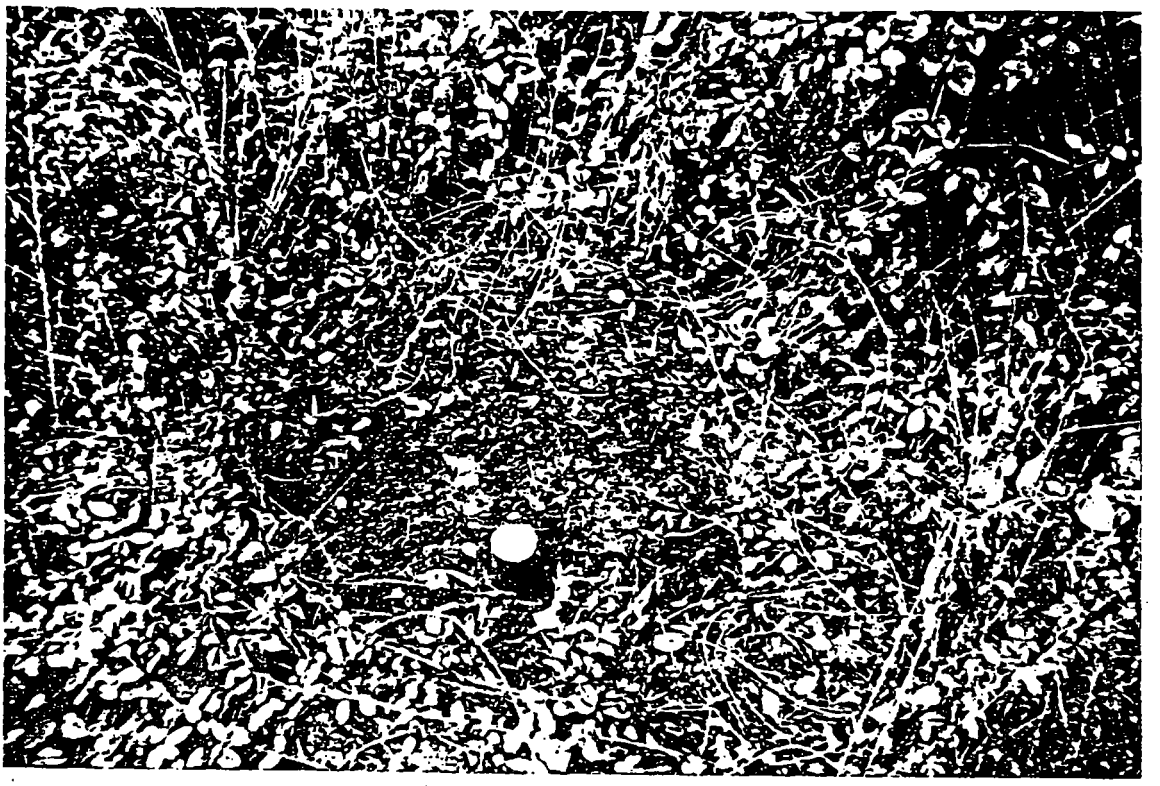
Photographer/Witness KW Keith Westberry/George Farmer GF

Date 5/24/93 Time A.M. Direction East

Description View of sample location SD–16/taken at confluence of intermittent stream and Long Creek.

Photo No.

7



Site Name:
Dixie (TEI)

Petro–Chemical

Location:
Longview, Texas

Project # WA #25–6JZZ

Photographer/Witness KW Keith Westberry/George Farmer GF

Date 5/24/93 Time P.M. Direction South

Description View of sample location SS–06/taken next to concrete drainage pad and just east of off–site outfall.

Photo No.

8

Page 4
Of 7

Photographer/Witness KW Keith Westberry/George Farmer GF

Date 5/24/93 Time P.M. Direction West

Description View of sample location SS–07/taken between former UST area and the south end of the warehouse.

Photo No.

9

Site Name:
Dixie (TEI)
Petro–Chemical
Location:
Longview, Texas
Project # WA #25–6JZZ

Photographer/Witness KW Keith Westberry/George Farmer GF
Date 5/25/93 Time A.M. Direction West
Description View of sample location SD–08/taken in shallow groundwater area west of the site/observe oily sheen on water and extensive gravel.

Photo No.

10

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Of 7

Photographer/Witness KW Keith Westberry/George Farmer GF
Date 5/25/93 Time A.M. Direction West
Description View of sample location SS–09/taken in former UST area north of the warehouse.

Photo No.

11

Site Name:
Dixie (TEI)

Petro–Chemical

Location:
Longview, Texas

Project # WA #25–6JZZ

Photographer/Witness KW Keith Westberry/George Farmer GF

Date 5/25/93 Time A.M. Direction West

Description View of sample locations SS–10 & SS–11/taken in the former UST area north of the warehouse.

Photo No.

12

Page 6
Of 7

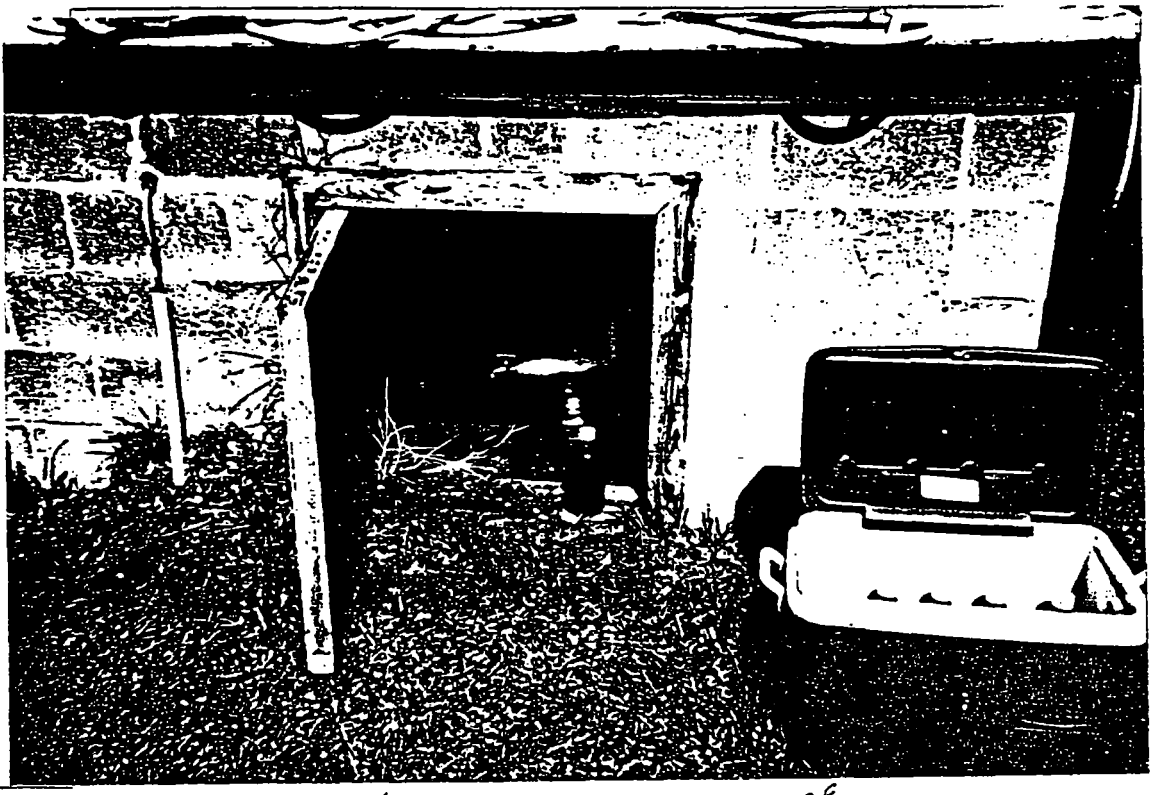
Photographer/Witness KW Keith Westberry/George Farmer GF

Date 5/25/93 Time P.M. Direction East

Description View of sample location SS–12/taken in former UST area north of warehouse.

Photo No.

13



Site Name:
Dixie (TEI)

Petro–Chemical

Location:
Longview, Texas

Project # WA #25–6JZZ

Photographer/Witness Keith Westberry/George Farmer GF

Date 5/25/93 Time P.M. Direction East

Description View of drinking water sample locations DW–18 & DW–19/taken from the (b) (6) residence well

Photo No.

No Photo Available

Page 7
Of 7

Photographer/Witness

Date Time Direction

Description

4-60

ATTACHMENT B

INORGANIC DATA QUALITY ASSURANCE REVIEW AND RESULTS

INORGANIC
DATA QUALITY ASSURANCE REVIEW

Site Name:	Dixie Petro Chem
Site Code:	
Case #:	20054
Laboratory	Silver Valley Labs Kellogg, ID 83837
Soil Samples:	MFAQ - 00, 01, 02, 03, 05, 08, 09, 10, 11, 12, 14, 15, & 16
Water Samples:	MFAQ - 04, 06, 07, 13, & 17

The data package consisted of 13 soil samples and five water samples analyzed for TCL metals and cyanide.

1. Analytical Parameters: All samples analyzed using low concentration methods.

2. Holding Times: All holding time criteria were met.

3. Calibrations: Calibration results were within control limits

4. Blanks - For soil samples: initial calibration blank for selenium and sodium reported concentrations above the IDL and below the CRDL; continuing calibration blanks for barium, beryllium, calcium, chromium, copper, iron, magnesium, manganese, potassium, sodium, silver, vanadium reported concentrations above the IDL and below the CRDL; prep blanks for iron, and vanadium reported concentration above the IDL and below the CRDL.

   For water samples: continuing calibration blanks for cobalt, lead, selenium, sodium and vanadium reported concentrations above the IDL and below the CRDL; prep blanks for lead reported concentrations above the IDL and below the CRDL. These affected samples results were qualified non-detect (u) if reported concentration were above the IDL but less than five times the highest associated blank concentrations.

5. ICS: Interference check sample criteria were met.

6. LCS: Laboratory control sample results were within control limits.

7. Duplicate analysis: Gross variations between duplicate samples were not noted, except for chromium, iron, and manganese. Affected samples were qualified "j" or "uj".

8. Matrix Spike Recoveries: Antimony, arsenic, lead, and manganese were reported to be out of control limits for percent recovery. Positive hits are qualified "j", non-detects "uj".

9. MSA: MSA were within control limits except for sample MFAQ 16. However, upon rerun of MSA an acceptable result was obtained. Affected results were flagged "j", or "uj".

10. Other QC: Chromium results for all soil samples are qualified as estimated (J) or (uj) due to ICP serial dilution out of control limits. Other analytes were reported as out of control limits.

However, these were disregarded due to the low sample concentration results.

11. Field Duplicates: MFAQ14 & 15 and the pair 06 & 07 were identified as field duplicates. Gross variations were not noted in sample results except in calcium for the soil samples. The affected results were flagged estimated (j).

12. Overall Assessment:

False negatives for sodium are possible for seven samples due to calibration blank contamination. Cyanide results for water samples are qualified as estimated due to sample temperature requirements.

Chromium and manganese results for soil samples are qualified due to duplicate control limits.

Antimony, arsenic, manganese and lead results for soil sample are qualified due to matrix spike recovery control limits.

Blank concentrations as specified above were above instrument detection limits.

INORGANIC CHEMICAL DATA SUMMARY

Site Name and Code: Dixie (Tie) Petro-Chemical
Case Number: 20054
Concentrations: In milligrams per kilograms (mg/kg)
Compiled by: Fluor Daniel

Inorganic Traffic No.			MFAQ08		MFAQ09		MFAQ10		MFAQ11		MFAQ12		MFAQ14		MFAQ15					
Sample I.D																				
Matrix:			SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL					
Percent Solids			73.0		79.9		84.3		79.8		74.9		88.4		88.0					
Location: and or Sample Description:			SD-03		SS-06		SS-07		SD-08		SD-09		SS-10		SS-11					
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q				
ALUMINUM	7429-90-5	INO	13300		7810		2410		19700		7190		5230		3970					
ANTIMONY	7440-36-0	INO	11.2	UJ	10.3	UJ	9.7	UJ	10.3	UJ	12.2	J	9.3	UJ	9.3	UJ				
ARSENIC	7440-38-2	INO	7.5	J	3.6	J	3	J	5.5	J	3.5	J	0.93	J	1.2	J				
BARIUM	7440-39-3	INO	217		118		6.9	B	289		80.1		44.5	B	37.7	B				
BERYLLIUM	7440-41-7	INO	1.2	B	0.65	B	0.24	U	1.9		0.39	B	0.26	B	0.23	U				
CADMIUM	7440-43-9	INO	1.1	U	1	U	1.1	B	1	U	1.1	U	0.9	U	0.91	U				
CALCIUM	7440-70-2	INO	23900		17100		757	B	51100		7520		6510		4430					
CHROMIUM	7440-47-3	INO	103	J	43.6	J	5.7	J	67.9	J	12.5	J	6.5	J	5.7	J				
COBALT	7440-48-4	INO	3.7	B	4.1	B	1.6	B	5.2	B	2	B	1.4	U	1.4	U				
COPPER	7440-50-8	INO	42.7		14.9		2	B	26.9		5.9	B	3.4	B	4.5	B				
IRON	7439-89-6	INO	11500	J	15500	J	2690	J	29400	J	11600	J	5630	J	5710	J				
LEAD	7439-92-1	INO	91.2		16.5		3.9		15.4		9.2		7.4		7.9					
MAGNESIUM	7439-95-4	INO	3440		3070		142	B	8210		1520		568	B	352	B				
MANGANESE	7439-96-5	INO	364	J	636	J	14.1	J	973	J	92.2	J	47.4	J	39.7	J				
MERCURY	7439-97-6	INO	0.14	U	0.13	U	0.12	U	0.13	U	0.13	U	0.11	U	0.11	U				
NICKEL	7440-02-0	INO	5	B	7	B	2.6	U	9.4	B	19.8		27.9		29.6					
POTASSIUM	7440-09-7	INO	630	B	475	B	265	B	916	B	502	B	301	B	224	B				
SELENIUM	7782-49-2	INO	0.73	J	0.5	B	0.52	B	0.8	B	0.73	B	0.39	B	0.56	B				
SILVER	7440-22-4	INO	1.4	U	1.3	U	1.2	U	1.3	U	1.3	U	1.1	U	1.1	U				
SODIUM	7440-23-5	INO	301	B	179	B	17.3	B	627	B	702	B	91.7	B	86.1	B				
THALLIUM	7440-28-0	INO	0.27	UJ	0.25	UJ	0.26	B	0.33	J	0.27	UJ	0.23	U	0.23	U				
VANADIUM	7440-62-2	INO	22.7		31		8.9	B	60.5		21.3		12.5		12.3					
ZINC	7440-66-6	INO	58.6		87.9		2.3	B	60.8		11.5		117		130					
CYANIDE		INO	0.68	U	0.63		0.59	U	0.63	U	0.67	U	0.57	U	0.57	U				

LEGEND
INO – Inorganic
Q – Analytical results' Qualifier (listed below).
B – Analyte was detected above the CRDL but below 5X Blank Concentration.
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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INORGANIC CHEMICAL DATA SUMMARY

Site Name and Code: Dixie (Tie) Petro-Chemical
Case Number: 20054
Concentrations: In micrograms per liters (µg/L)
Compiled by: Fluor Daniel

		Inorganic Traffic No.	MFAQ04		MFAQ06		MFAQ07		MFAQ13		MFAQ17					
		Sample I.D.														
		Matrix:	WATER		WATER		WATER		WATER		WATER					
		Percent Solids														
		Location: and or Sample Description:	SW-15		SW-01		SW-02		RB-21		FB-17					
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q
ALUMINUM	7429-90-5	INO	329		16500		14600		24	B	22	U				
ANTIMONY	7440-36-0	INO	41	U	41	U	41	U	41	U	41	U				
ARSENIC	7440-38-2	INO	1	UJ	4.1	B	3.7	B	1	UJ	1	UJ				
BARIUM	7440-39-3	INO	101	B	208		186	B	1.4	B	1	U				
BERYLLIUM	7440-41-7	INO	1	U	1.2	B	1	U	1	U	1	U				
CADMIUM	7440-43-9	INO	4	U	4	U	4	U	4	U	4	U				
CALCIUM	7440-70-2	INO	17400		45100		43500		37	U	37	U				
CHROMIUM	7440-47-3	INO	5	U	60		50.2		5	U	5	U				
COBALT	7440-48-4	INO	6	U	10.2	B	13.3	B	6	U	7.5	U				
COPPER	7440-50-8	INO	3	U	44		42.5		3	U	3	B				
IRON	7439-89-6	INO	2730		25600		22500		16.4	B	9.4	B				
LEAD	7439-92-1	INO	3.5	J	34.4	J	29.7	J	1	UJ	1	U				
MAGNESIUM	7439-95-4	INO	4930	B	5770		5600		48	U	48	U				
MANGANESE	7439-96-5	INO	131		2820		2770		2	U	2	U				
MERCURY	7439-97-6	INO	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U				
NICKEL	7440-02-0	INO	11	U	15.8	B	18.1	B	23.3	B	11	U				
POTASSIUM	7440-09-7	INO	1990	B	3050	B	2830	B	644	U	644	U				
SELENIUM	7782-49-2	INO	2.5	B	1.5	B	1.7	B	1	U	1	U				
SILVER	7440-22-4	INO	5	U	5	U	5	U	5	UJ	5	U				
SODIUM	7440-23-5	INO	15600		13500		13300		43.2	B	21	UJ				
THALLIUM	7440-28-0	INO	1	UJ	1	U	1	U	1	UJ	1	U				
VANADIUM	7440-62-2	INO	4	U	40.5	B	34.8	B	5.2	B	5.2	B				
ZINC	7440-66-6	INO	8.9	B	138		124		4	U	4	U				
CYANIDE		INO	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ				

LEGEND
INO – Inorganic
Q – Analytical results' Qualifier (listed below).
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J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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INORGANIC CHEMICAL DATA SUMMARY

Site Name and Code: Dixie (Tie) Petro-Chemical
Case Number: 20054
Concentrations: In milligrams per kilograms (mg/kg)
Compiled by: Fluor Daniel

		Inorganic Traffic No.	MFAQ16		MFAQ00		MFAQ01		MFAQ02		MFAQ03		MFAQ05							
		Sample I.D																		
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL							
		Percent Solids	76.1		74.5		82.9		84.4		73.2		81.1							
		Location: and or Sample Description:	SS-12		SS-13		SS-04		SS-05		SD-14		SD-16							
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q				
ALUMINUM	7429-90-5	INO	1720		5780		2240		1520		8130		6700							
ANTIMONY	7440-36-0	INO	10.8	UJ	11	UJ	10.5	J	9.7	UJ	11.2	UJ	10.1	UJ						
ARSENIC	7440-38-2	INO	2.8	J	1.8	J	1.1	J	0.44	J	4.2	J	70.6	J						
BARIUM	7440-39-3	INO	3.6	B	43.8	B	21		21.3	B	35.4	B	50.5							
BERYLLIUM	7440-41-7	INO	0.26	U	0.28	B	0.24	U	0.24	U	0.27	U	1.9							
CADMIUM	7440-43-9	INO	1.1	U	1.1		0.97	U	0.95	U	1.1	U	0.99	U						
CALCIUM	7440-70-2	INO	70.9	B	1650		997		270	B	546	B	3110							
CHROMIUM	7440-47-3	INO	4.8	J	11.3	J	7.7	J	5.4	J	15	J	80.5	J						
COBALT	7440-48-4	INO	1.6	U	4.9	B	2.6		2.1	B	2.6	B	9.9	B						
COPPER	7440-50-8	INO	1.7	B	17.1		3.7		4.8	B	15.3		16.5							
IRON	7439-89-6	INO	3080	J	11600		4600	J	2110	J	24100	J	108000	J						
LEAD	7439-92-1	INO	2.9		67.6		8.9		5.8		48.5		78.1							
MAGNESIUM	7439-95-4	INO	45.6		657	B	232		102	B	486	B	526	B						
MANGANESE	7439-96-5	INO	3.2	J	124	J	103	J	115	J	50.3	J	144	J						
MERCURY	7439-97-6	INO	0.13	U	0.13	U	0.12	U	0.12	U	0.14	U	0.12	U						
NICKEL	7440-02-0	INO	12.3		3.9	B	2.7	B	2.6	U	3	U	5.6	B						
POTASSIUM	7440-09-7	INO	169	U	391	B	272	B	153	U	530	B	279	B						
SELENIUM	7782-49-2	INO	0.5	B	0.34	B	0.24	U	0.35	J	0.65	B	1.7							
SILVER	7440-22-4	INO	1.3	U	1.3	U	1.2	U	1.2	U	1.4	U	1.2							
SODIUM	7440-23-5	INO	27.2	B	133	B	14.3	B	5.3	B	22	B	44.4	B						
THALLIUM	7440-28-0	INO	0.26	U	0.27	U	0.24	U	0.24	U	0.27	U	0.4	J						
VANADIUM	7440-62-2	INO	10.5	B	17.6		13.4		5.9	B	21.1		167							
ZINC	7440-66-6	INO	2	B	48		48.4		43.4		25.8		93.9							
CYANIDE		INO	0.66	U	0.67	U	0.6	U	0.59	U	0.68	U	0.62	U						

LEGEND
INO – Inorganic
Q – Analytical results' Qualifier (listed below).
B – Analyte was detected above the CRDL but below 5X Blank Concentration.
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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ATTACHMENT C

ORGANIC DATA QUALITY ASSURANCE REVIEW AND RESULTS

ORGANIC
DATA QUALITY ASSURANCE REVIEW

Site Name:	Dixie Petro Chem
Site Code:	
Case Number:	20549
Laboratory:	Clayton Environmental Consultants Novi, Mich.
Water Samples:	FZ906, 908, 909, 915, 919.
Soil Samples:	FZ902, 903, 904, 905, 907, 910, 911, 912, 913, 914, 916, 917, 918.

The data package consisted of five water and thirteen soil samples analyzed for volatile organics, semivolatile organics and pesticides/PCB's.

1. Analytical Parameters: Soil and water samples were analyzed for complete RAS CLP organics analysis.

2. Holding Times: All VOA soil samples were reported as having exceeded holding time limits except for FZ903. Samples qualified as per guidance.

3. Instrument Tunings: No qualifications were performed due to tuning/performance criteria.

4. Calibration Verification: Several VOA and BNA compounds were out of control limits for %RSD or %D calibration criteria. Affected samples were qualified as estimated.

5. Blanks: Field blank results associated to a particular group of samples must be used to qualify data. Trip blanks are used to qualify only those samples with which they were shipped and are not required for non-aqueous matrices. Typically, if sample concentration is greater than five times a blank value that is not considered a common lab artifact, no qualification is needed. If sample concentration is greater than ten times a blank value and is considered a common lab artifact, no qualification is needed. If the reported value is less than stated above, qualifications are applied in accordance with guidance. No field blank/trip blank/rinsate blank/ were reported to be associated with this SDG. Lab blanks for VOAs and BNAs were reported as containing common lab artifacts. Qualifications in accordance with guidance were made to the affected results. No contamination was reported in the Pest/PCB blank.

6. Matrix Spike Recoveries: No qualifications were performed due to MS/MSD criteria.

7. Duplicates: FZ908 & 909; & 916 & 917 were reportedly field duplicates of each other. No gross variations were noted in sample results.

8. SMC/Surrogates: Surrogate recoveries generally met QC criteria. No qualifications were performed due to surrogate recovery.

9. Target Compound Identification and Quantification: Sample spectra met identification criteria for the VOA and BNA samples. Positive hits were qualified as "P" by the laboratory and "j" by the reviewer due to two column quantitation differing by >25%.

10. General Assessment: Blanks contained some contamination. %RSD and %D were out of control limits for some analytes.

Two column quantitation was out of control limits for some Pesticide PCB analytes.

CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

		Organic Traffic No.																
		Sample I.D	FZ912		FZ913		FZ914		FZ914DL		FZ916		FZ916DL		FZ917		FZ918	
		Marix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Percent Solids	85		91		78		78		86		86		89		80	
		Location: and or Sample Description:	SS-07		SD-08		SS-09		SS-09		SS-10		SS-10		SS-11		SS-12	
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q
Acetone	67-64-1	VOA	33	B	34	B	4200	B	7000	BJ	6800	B	30000	B	12000	B	36	B
2-Butanone	78-93-3	VOA	17		11		3600	B	5100	J	13000	B	16000	J	13000	B	9	J
Toluene	108-88-3	VOA	3	BJ	3	BJ	10000		17000	B	110000	J	110000	B	200000	J	7	BJ
Methylene Chloride	75-9-2	VOA	12	UJ	7	BJ	1500	UJ	1700	U	1400	UJ	28000	UJ	1300	UJ	12	BJ
1,2-Dichloroethene (Total)	540-59-0	VOA	12	UJ	11	UJ	490	J	7700	U	1100	J	28000	UJ	3100		12	UJ
Tetrachloroethene	127-18-4	VOA	12	UJ	11	UJ	1000	J	2100	J	9300		10000	J	24000		12	UJ
Ethylbenzene	100-41-4	VOA	12	UJ	11	UJ	18000		31000	J	53000	J	58000	J	68000	J	12	UJ
Xylene (Total)	1330-20-7	VOA	12	UJ	11	UJ	100000	J	160000	J	230000	J	410000	J	260000	J	2	J
1,1,1-Trichloroethane	71-55-6	VOA	12	UJ	11	UJ	1500	UJ	7700	UJ	400	J	28000	UJ	1200	J	12	UJ
Trichloroethene	79-01-6	VOA	12	UJ	11	UJ	1500	UJ	7700	UJ	1700		28000	UJ	8400	J	12	UJ
1,2-Dichloropropane	78-87-5	VOA	12	UJ	11	UJ	1500	UJ	7700	UJ	1400	UJ	28000	UJ	420	J	12	UJ

LEGEND
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CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

		Organic Traffic No.																		
		Sample I.D.	FZ902		FZ903		FZ904		FZ905		FZ907		FZ910		FZ911					
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL					
		Percent Solids	75		77		84		79		78		83		81					
		Location: and or Sample Description:	SS-13		SS-04		SS-05		SD-14		SD-16		SD-03		SS-06					
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q				
Methylene Chloride	75-9-2	VOA	5	BJ	7	BJ	11	BJ	7	BJ	4	BJ	5	BJ	8	J				
Toluene	108-88-3	VOA	2	BJ	2	BJ	4	J	4	BJ	2	BJ	2	BJ	21	B				
1.2 Dichloroethene (Total)	540-59-0	VOA	12	J	2	J	12	UJ	13	UJ	13	UJ	6	J	13	UJ				
Trichloroethene	79-01-6	VOA	12	J	2	J	12	UJ	13	UJ	13	UJ	12	UJ	3	J				
Acetone	67-64-1	VOA	12	J	12	UJ	19	B	43	B	10	BJ	17	B	31	B				
Tetrachloroethene	127-18-4	VOA	12	J	12	UJ	12	UJ	13	UJ	13	UJ	12	UJ	3	J				
Xylenes (Total)	1330-20-7	VOA	12	J	12	UJ	12	UJ	13	UJ	13	UJ	12	UJ	7	J				

LEGEND
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CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per liter (µg/l)
Compiled by: Fluor Daniel

		Organic Traffic No.										
		Sample I.D	FZ906		FZ908		FZ909		FZ915		FZ919	
		Marix:	WATER		WATER		WATER		WATER		WATER	
		Percent Solids										
		Location: and or Sample Description:	SW-15		SW-01		SW-02		RB-21		FB-17	
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q
Methylene Chloride	75-09-2	VOA	3	J	10	U	10	U	2	J	10	U
Acetone	67-64-1	VOA	3	BJ	6	BJ	4	BJ	3	BJ	2	BJ
2-Butanone	78-93-3	VOA	2	J	10	U	10	U	10	U	1	J
1,2-Dichloroethene (Total)	540-59-0	VOA	10	U	4	J	4	J	10	U	10	U
Toluene	108-88-3	VOA	10	U	10	U	10	U	1	BJ	1	BJ

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CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: in micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

	Organic Traffic No.													
	Sample I.D		FZ902		FZ903		FZ905		FZ911		FZ912		FZ913	
	Marix:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Percent Solids		75		77		79		81		85		91	
	Location: and or Sample Description:		SS-13		SS-04		SD-14		SS-06		SS-07		SD-08	
COMPOUND NAME	RT/SCAN#	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q
Naphthalene	25.08	TIC	280	J										
Benzothiophene	25.95	TIC	7	J										
C11H10 Hydrocarbon	27.23	TIC	86	J										
C8H14 Hydrocarbon	16.61	TIC			10	J								
C10H16 Hydrocarbon	20.31	TIC			270	J								
C10H16 Hydrocarbon	20.90	TIC			21	J								
C10H16 Hydrocarbon	21.96	TIC			7	J								
C10H16 Hydrocarbon	23.87	TIC			10	J								
Unknown Hydrocarbon	25.59	TIC			17	J								
C10H16 Hydrocarbon	25.85	TIC			7	J								
Unknown Siloxane	27.98	TIC			10	J								
Napthalene	23.31	TIC					89	J						
Cyclotetrasiloxane, octameth	23.68	TIC							29	J				
Furan, tetrahydro-	6.96	TIC									14	J		
C12H12 Hydrocarbon	26.75	TIC									34	J		
2-Furancarboxaldehyde	19.26	TIC											15	J

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CHEMICAL DATA SUMMARY

Site Name and Code: DixiePetro Chemical
Case Number: 90084
Concentrations: in micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

Organic Traffic No.												
Sample I.D.			FZ914		FZ914DL		FZ916		FZ916DL		FZ917	
Matrix			SOL		SOL		SOL		SOL		SOL	
Percent Solids			78		78		84		86		89	
Location and/or Sample Description			55-09		55-09		55-10		55-10		55-11	
COMPOUND NAME	RT/SCAN#	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q
C9H18Hydrocarbon	13.63	TIC	11000	J								
C9H20Hydrocarbon	14.06	TIC	11000	J								
C10H22Hydrocarbon	15.36	TIC	6800	J								
C10H22Hydrocarbon	17.02	TIC	2400	J								
C9H12 alkyl benzene	16.73	TIC	18000	J								
C10H22Hydrocarbon	20.74	TIC	3700	J								
C9H12 alkyl benzene	22.14	TIC	6600	J								
C10H24Hydrocarbon	22.59	TIC	3400	J								
C10H14 alkyl benzene	23.48	TIC	18000	J								
C11H24 Hydrocarbon and C14H8	23.95	TIC	4000	J								
C11H24 Hydrocarbon and C14H8	25.68	TIC	4400	J								
C11H24 Hydrocarbon and C14H8	26.63	TIC	17000	J								
C9H18Hydrocarbon	15.37	TIC			38000	J						
C9H20Hydrocarbon	16.73	TIC			98000	J						
C10H22Hydrocarbon	21.06	TIC			40000	J						
C10H22Hydrocarbon	22.16	TIC			72000	J						
C10H22Hydrocarbon	22.43	TIC			41000	J						
C10H22Hydrocarbon	23.48	TIC			140000	J						
C9H12 alkyl benzene	23.95	TIC			37000	J						
C10H24Hydrocarbon	24.28	TIC			42000	J						
C10H14 alkyl benzene	24.61	TIC			34000	J						
C11H24 Hydrocarbon and C14H8	25.68	TIC			80000	J						
C11H24 Hydrocarbon and C14H8	25.95	TIC			48000	J						
C10H24Hydrocarbon	26.62	TIC			14000	J						
C9H20Hydrocarbon	13.60	TIC					12000	J				
C10H22Hydrocarbon	14.06	TIC					8700	J				
C10H22Hydrocarbon	15.74	TIC					26000	J				
C10H22Hydrocarbon	20.76	TIC					11000	J				
C9H12 alkyl benzene	22.17	TIC					34000	J				
C9H12 alkyl benzene	22.46	TIC					22000	J				
C10H22Hydrocarbon	22.88	TIC					25000	J				
C9H12 alkyl benzene	22.9	TIC					20000	J				
C10H24Hydrocarbon	23.6	TIC					10000	J				
C10H12Hydrocarbon	23.87	TIC					16000	J				
C10H14 alkyl benzene	24.66	TIC					10000	J				
C11H24 Hydrocarbon and C14H8	25.66	TIC					34000	J				
C9H20Hydrocarbon	15.72	TIC							2100000	J		
C10H22Hydrocarbon	21.06	TIC							64000	J		
C10H22Hydrocarbon	22.16	TIC							2400000	J		
C10H22Hydrocarbon	22.42	TIC							1600000	J		
C9H12 alkyl benzene	22.65	TIC							1500000	J		
C9H12 alkyl benzene and C14H8	22.88	TIC							1300000	J		
C10H22Hydrocarbon	23.43	TIC							4900000	J		
C9H12 alkyl benzene	23.89	TIC							1300000	J		
C10H24Hydrocarbon	24.26	TIC							1900000	J		
C10H12Hydrocarbon	24.49	TIC							820000	J		
C10H14 alkyl benzene and C14	25.68	TIC							120000	J		
C11H24 Hydrocarbon and C14H8	26.62	TIC							2600000	J		
C9H20Hydrocarbon	15.78	TIC									130000	J
C10H22Hydrocarbon	22.16	TIC									160000	J
C9H12 alkyl benzene and C14H8	22.44	TIC									140000	J
C9H12 alkyl benzene	22.71	TIC									160000	J
C9H12 alkyl benzene	22.94	TIC									140000	J
C10H22Hydrocarbon	23.40	TIC									370000	J
C9H12 alkyl benzene	23.91	TIC									130000	J
C10H24Hydrocarbon	24.27	TIC									130000	J
C10H12Hydrocarbon	24.66	TIC									120000	J
C10H14 alkyl benzene	25.74	TIC									100000	J
C10H14 alkyl benzene and C14H	25.68	TIC									94000	J
C11H24 Hydrocarbon and C14H8	26.64	TIC									210000	J

LEGEND
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CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: in micrograms per liter (µg/l)
Compiled by: Fluor Daniel

		Organic Traffic No.				
		Sample I.D	FZ906		FZ908	
		Marix:	WATER		WATER	
		Percent Solids				
		Location: and or Sample Description:	SW-15		SW-01	
COMPOUND NAME	**RT/SCAN#**	**CLASS**	**Concentration**	**Q**	**Concentration**	**Q**
17-H-Cyclopenta[a]phenanthrene	7.7	TIC	6	J		
2-Furanmethanol, tetrahydro-	7.84	TIC	9	J		
Benzene,1,2,3,4-tetrachloro	27.48	TIC	15	J		
Unknown Hydrocarbon and Unknown	23.62	TIC			5	J

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CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

	Organic Traffic No					
	Sample I.D		FZ902		FZ903	
	Matrix		SOIL		SOIL	
	Percent Solids		75		77	
	Location and or Sample Description		SS-13		SS-04	
COMPOUND NAME	RT/SCAN	CLASS	Concentration	Q	Concentration	Q
C9H20 Hydrocarbon	4.31	TIC	1300	J		
4-Hydroxy-4-methyl-2-pentanone	4.84	TIC	41000	J		
Unknown Ketone or Ester	5.76	TIC	1100	J		
C9H20 Hydrocarbon	5.99	TIC	2800	J		
3-Hexene-2,5-dione	6.23	TIC	1100	J		
Unknown Ketone or Ester	6.56	TIC	190	J		
Unknown Ketone or Ester	8.13	TIC	1100	J		
Unknown Ketone or Ester	22.32	TIC	550	J		
Terphenyl	23.04	TIC	260	J		
C18H16 Hydrocarbon	23.3	TIC	270	J		
Unknown Hydrocarbon	23.35	TIC	230	BJ		
C18H16 Hydrocarbon	23.94	TIC	200	J		
Octadecanoic Acid, butyl est	24.08	TIC	300	JB		
Unknown Hydrocarbon	24.19	TIC	260	BJ		
C14H10 Hydrocarbon	25.05	TIC	990	J		
Unknown Hydrocarbon	25.83	TIC	230	BJ		
Unknown Hydrocarbon	26.01	TIC	590	BJ		
Unknown Hydrocarbon	26.23	TIC	560	BJ		
C20H12 Hydrocarbon	26.79	TIC	380	BJ		
Unknown Hydrocarbon	30.39	TIC	780	BJ		
Unknown	33.30	TIC	4800	J		
Unknown Hydrocarbon	33.45	TIC	520	BJ		
C22H14 Hydrocarbon	33.76	TIC	340	J		
Unknown Ketone or Ester	4.29	TIC			650	J
4-Hydroxy-4-methyl-2-pentanone	4.82	TIC			39000	J
Unknown Ketone or Ester	5.74	TIC			990	J
C9H20 Hydrocarbon	5.98	TIC			2700	J
3-Hexene-2,5-dione	6.23	TIC			870	J
Unknown Ketone or Ester	6.8	TIC			360	J
Unknown Ketone or Ester	8.17	TIC			2100	J
Phenanthrene carboxylic Acid	23.97	TIC			1000	J
Unknown Hydrocarbon	26.04	TIC			380	BJ
Phenol, 3-pentadecyl	26.2	TIC			570	J
Unknown Aldehyde	26.17	TIC			420	J
Unknown Hydrocarbon	26.62	TIC			740	BJ
Unknown Hydrocarbon	26.84	TIC			400	BJ
Unknown Hydrocarbon	26.26	TIC			1800	BJ
Unknown Acid	29.84	TIC			5400	J
Unknown	30.27	TIC			920	J
Unknown Hydrocarbon	30.42	TIC			1900	BJ
Unknown Hydrocarbon	30.70	TIC			1200	J
Unknown Acid	31.18	TIC			430	J
Unknown	33.31	TIC			640	J
Unknown Hydrocarbon	33.47	TIC			1100	BJ
C30H50 Hydrocarbon	35.09	TIC			1400	J
Unknown Hydrocarbon	38.10	TIC			830	J

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CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

		Organic Traffic No.				
		Sample ID	FZ904		FZ905	
		Matrix:	SOL		SOL	
		Percent Solids	84		79	
		Location: and or Sample Description:	SS-05		SD-14	
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q
Unknown Ketone or Ester	4.23	TIC	770	J		
Unknown Ketone or Ester	4.31	TIC	740	J		
4-Hydroxy-4-methyl-2-pentano	4.76	TIC	25000	J		
Unknown Ketone or Ester	5.82	TIC	350	BJ		
3-Hexane-2, 5-dione	6.35	TIC	430	JB		
Unknown Ketone or Ester	7.08	TIC	450	J		
C15H24 Hydrocarbon	14.47	TIC	270	J		
C15H24 Hydrocarbon	16.69	TIC	160	J		
Unknown	23.12	TIC	450	J		
Unknown	23.38	TIC	400	J		
Unknown	24.08	TIC	280	J		
Unknown	24.30	TIC	210	J		
Unknown	24.47	TIC	200	J		
Unknown	24.57	TIC	890	J		
Unknown	24.88	TIC	9600	J		
Unknown	26.33	TIC	190	J		
Unknown Hydrocarbon	26.78	TIC	170	J		
Unknown Hydrocarbon	28.43	TIC	290	J		
Unknown Hydrocarbon	30.66	TIC	510	J		
Unknown Hydrocarbon	33.83	TIC	240	J		
Unknown Ketone or Ester	4.21	TIC			610	J
4-Hydroxy-4-methyl-2-pentano	4.86	TIC			39000	JB
Unknown Ketone or Ester	5.76	TIC			890	BJ
C9H20 Hydrocarbon	5.98	TIC			1000	J
3-Hexane-2,5-dione	6.25	TIC			860	JB
Unknown Ketone or Ester	8.21	TIC			2600	J
Unknown Aromatic	22.04	TIC			640	J
C16H100 Hydrocarbon & Unknown	22.39	TIC			1400	J
C16H32 Hydrocarbon	22.49	TIC			830	J
C16H100 Hydrocarbon	22.57	TIC			1100	J
C17H12 Hydrocarbon	22.84	TIC			950	J
C18H16 Hydrocarbon	23.07	TIC			730	J
C17H12 Hydrocarbon	23.13	TIC			1500	J
C17H12 Hydrocarbon	23.29	TIC			2700	J
C18H16 Hydrocarbon	23.38	TIC			1300	J
Octadecanoic Acid, butyl est	24.09	TIC			1700	J
C18H14 Hydrocarbon & Unknown	24.2	TIC			1300	J
C16H105 Hydrocarbon	24.71	TIC			820	J
Unknown Hydrocarbon	25.02	TIC			1400	J
Unknown Hydrocarbon	25.84	TIC			910	J
Unknown Hydrocarbon	26.62	TIC			1000	J
Unknown Hydrocarbon	27.38	TIC			850	J
Unknown Hydrocarbon	28.25	TIC			530	J

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CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

	Organic Traffic No.					
	Sample ID		FZ905DL		FZ907	
	Matrix:		SOL		SOL	
	Percent Solids		79		78	
	Location: and or Sample Description:		SD-14		SD-16	
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q
Unknown Ketone or Ester	4.22		41000	J		
4-hydroxy-4-methyl-2-pentano	4.71		690000	JB		
Unknown Ketone or Ester	5.63		9000	BJ		
3-Hexane-2,5-dione	6.34		6100	JB		
Unknown Ketone or Ester	7.07		6100	J		
Unknown Ketone or Ester	8.24		18000	J		
C11H10Hydrocarbon	12.5		7700	J		
C12H10Hydrocarbon	13.46		4600	J		
C12H26Hydrocarbon	13.66		3400	J		
C13H12Hydrocarbon	14.03		3700	J		
C14H12Hydrocarbon	17.72		3500	J		
C12H8Hydrocarbon	18.44		5600	J		
C15H12Hydrocarbon	20.03		4400	J		
C15H12Hydrocarbon	20.11		5300	J		
C15H10Hydrocarbon	20.29		14000	J		
C17H12Hydrocarbon	23.31		3400	J		
C17H12Hydrocarbon	23.46		3700	J		
C17H12Hydrocarbon	23.69		3100	J		
C10H10Hydrocarbon	24.91		3200	J		
C18H12Hydrocarbon	25.83		3800	J		
Unknown Hydrocarbon	26.93		3100	J		
C20H12Hydrocarbon	29.08		9800	J		
Unknown Ketone or Ester	4.41				990	J
4-Hydroxy-4-methyl-2 pentano	4.78				34000	JB
Unknown Ketone or Ester	5.72				810	J
C9H20 Hydrocarbon	5.96				1300	J
3-Hexane-2,5-dione	6.25				1400	J
Unknown Ketone or Ester	6.12				1400	J
C11H10Hydrocarbon	18.88				810	J
C15H12Hydrocarbon	19.88				650	J
C15H10Hydrocarbon	20.21				1700	J
C17H12Hydrocarbon	23.37				740	J
Unknown Hydrocarbon & C18H8	24.21				2400	J
C17H26Hydrocarbon	24.42				780	J
C10H10Hydrocarbon	24.75				1500	J
C18H12Hydrocarbon	24.83				1200	J
C18H10Hydrocarbon	24.89				1000	J
C10H10Hydrocarbon & Unknown	24.98				790	J
Unknown Hydrocarbon	25.06				1700	BJ
C14H10Hydrocarbon	25.1				1400	J
C18H12Hydrocarbon	25.68				2100	J
Unknown Hydrocarbon	25.86				1000	BJ
Unknown Hydrocarbon	26.65				1500	JB
Unknown Hydrocarbon	26.26				630	JB
C20H12Hydrocarbon	28.86				2100	J

LEGEND
VOA – Volatile Organic Analysis
ABN – Acid/Base Neutral (semi-volatiles)
PEST – Pesticides/PCB Analysis
Q – Analytical results' Qualifier (listed below).
B – Analyte was detected above the CRDL but below 10X Blank Concentration.
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20064
Concentrations: In micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

	Organic Traffic No					
	Sample I.D		FZ907DL		FZ910	
	Matrix		SOIL		SOIL	
	Percent Solids		78		83	
	Location and or Sample Description		SD-16		SD-03	
COMPOUND NAME	RT/SCAN#	CLASS	Concentration	Q	Concentration	Q
Unknown Ketone or Ester	4.21	TIC	2600	J		
4-hydroxy-4-methyl-2-pentanone	4.8	TIC	49000	JB		
C13H100 Hydrocarbon	16.96	TIC	2200	J		
Unknown	17.26	TIC	1100	J		
Unknown Hydrocarbon	17.32	TIC	1900	J		
C14H12 Hydrocarbon	17.73	TIC	1300	J		
C12H8s Hydrocarbon	18.45	TIC	2300	J		
C15H12 Hydrocarbon	20.02	TIC	1900	J		
C15H12 Hydrocarbon	20.10	TIC	1400	J		
C15H10 Hydrocarbon	20.31	TIC	6000	J		
C16H12 Hydrocarbon	20.62	TIC	1300	J		
C18H14 Hydrocarbon	22.92	TIC	1500	J		
C17H12 Hydrocarbon	23.03	TIC	1300	J		
C17H12 Hydrocarbon	23.31	TIC	1400	J		
C17H12 Hydrocarbon	23.46	TIC	2000	J		
C16H16 Hydrocarbon	23.56	TIC	1500	J		
C18H14 Hydrocarbon & Unknown	24.36	TIC	1200	J		
C17H20 Hydrocarbon	24.56	TIC	2500	J		
C16H10s Hydrocarbon	24.91	TIC	1900	J		
C14H10 Hydrocarbon	25.26	TIC	1400	J		
C18H12 Hydrocarbon	25.81	TIC	2000	J		
Unknown Hydrocarbon	26.79	TIC	1400	J		
C20H12 Hydrocarbon	29.09	TIC	2000	J		
Benzene, methyl-	3.46	TIC			470	JB
Unknown Ketone or Ester	4.26	TIC			1300	J
4-Hydroxy-4-methyl-2-pentanone	4.80	TIC			21000	JB
3-Hexene-2,5-diona	6.2	TIC			390	J
Unknown Hydrocarbon	14.67	TIC			490	J
C14H12 Hydrocarbon	15.06	TIC			200	J
Unknown	15.3	TIC			290	J
Unknown Hydrocarbon	15.96	TIC			330	J
Unknown Hydrocarbon	17.19	TIC			1000	J
C10H2 Hydrocarbon & C1918	17.89	TIC			640	J
Unknown	18.12	TIC			200	J
C19H14 Hydrocarbon & C1111	18.22	TIC			480	J
Unknown Hydrocarbon	18.35	TIC			630	J
Unknown	18.41	TIC			620	J
C18H22 Hydrocarbon	18.51	TIC			280	J
Unknown Hydrocarbon	19.46	TIC			530	J
Unknown	19.75	TIC			280	J
Unknown	19.81	TIC			600	J
Unknown	20.1	TIC			350	J
Unknown	20.16	TIC			780	J
Unknown	20.3	TIC			1500	J
Unknown Hydrocarbon	20.51	TIC			390	J
Unknown Hydrocarbon	21.5	TIC			310	J

LEGEND
VOA - Volatile Organic Analysis
ABN - Acid/Base Neutral (semi-volatiles)
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J - The associated value is an estimated quantity.
R - Data for analyte is unusable.
U - The material was analyzed for but was not detected above the level of the associated value.
UJ - The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

		Organic Traffic No.				
		Sample I.D.	FZ911		FZ912	
		Matrix:	SOIL		SOIL	
		Percent Solids	79		85	
		Location: and or Sample Description:	SS-06		SS-07	
COMPOUND NAME	RT/SCAN#	CLASS	Concentration	Q	Concentration	Q
Benzene, methyl	3.45	TIC	170	JB		
Unknown Ketone or Ester	4.43	TIC	2300	J		
4-Hydroxy-4-methyl-2-pentano	4.88	TIC	6000	JB		
Unknown Ketone or Ester	5.29	TIC	87	J		
Unknown Ketone or Ester	5.78	TIC	1200	J		
C9H20 Hydrocarbon	6.00	TIC	1500	J		
3-Hexene-2, 5-dione	6.27	TIC	1300	J		
Unknown Ketone or Ester	6.45	TIC	130	J		
Unknown Ketone or Ester	6.57	TIC	180	J		
Unknown	6.82	TIC	230	J		
Unknown Ketone or Ester	8.13	TIC	1100	J		
Unknown Hydrocarbon	17.15	TIC	100	J		
Unknown Hydrocarbon	18.81	TIC	100	J		
Unknown Ketone or Ester	20.09	TIC	130	J		
Unknown Hydrocarbon	20.25	TIC	270	J		
Unknown Acid	20.35	TIC	310	J		
Unknown Alcohol	20.48	TIC	130	J		
Unknown Hydrocarbon	21.48	TIC	110	J		
Unknown Hydrocarbon	22.43	TIC	100	J		
Unknown Hydrocarbon	28.33	TIC	520	BJ		
Benzene, methyl-	3.49	TIC			110	JB
Unknown	3.86	TIC			83	BJ
Unknown Ketone or Ester	4.31	TIC			1100	J
4-Hydroxy-4-methyl-2-pentano	4.94	TIC			30000	JB
Unknown Ketone or Ester	5.80	TIC			830	BJ
C9H20 Hydrocarbon	6.00	TIC			350	J
3-Hexene-2, 5-dione	6.23	TIC			310	JB
Unknown Ketone or Ester	8.14	TIC			380	J

LEGEND
VOA – Volatile Organic Analysis
ABN – Acid/Base Neutral (semi-volatiles)
PEST – Pesticides/PCB Analysis
Q – Analytical results' Qualifier (listed below).
B – Analyte was detected above the CRDL but below 10X Blank Concentration.
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may b

CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per kilogram (µg/kg)
Compiled by: Fluor Daniel

		Organic Traffic No.				
		Sample ID	FZ913		FZ914	
		Matrix	SOIL		SOIL	
		Percent Solids	91		78	
		Location: and or Sample Description:	SD-08		SS-09	
COMPOUND NAME	RT/SCAN #	CLASS	Concentration	Q	Concentration	Q
3-Pentene-2-one, 4-methyl-	5.38	TIC	820	J		
Unknown Ketone or Ester	5.88	TIC	910	J		
C9H20 Hydrocarbon	6.02	TIC	1100	J		
4-Hydroxy-4-methyl-2-pentanone	6.65	TIC	40000	JB		
Unknown Ketone or Ester	7.78	TIC	1400	J		
C9H20 Hydrocarbon	8.07	TIC	3000	J		
3-Hexene-2,5-dione	8.39	TIC	650	JB		
Unknown Ketone or Ester	9.35	TIC	840	J		
Unknown Ketone or Ester	10.82	TIC	2400	J		
Hexadecanoic Acid	25.58	TIC	560	J		
Unknown	29.93	TIC	460	J		
Unknown	33.10	TIC	390	J		
Unknown Hydrocarbon	37.36	TIC	420	J		
Unknown	38.03	TIC	670	J		
C15H24 Hydrocarbon	38.40	TIC	650	J		
Unknown	39.59	TIC	680	J		
Unknown	39.96	TIC	650	J		
Unknown	40.01	TIC	630	J		
Unknown	40.49	TIC	380	J		
Unknown	40.69	TIC	1200	J		
Unknown	41.71	TIC	390	J		
Unknown Hydrocarbon	41.95	TIC	470	J		
Unknown	42.60	TIC	350	J		
4-Hydroxy-4-methyl-2-pentanone	4.91	TIC			650000	JB
C8H10 Hydrocarbon	5.12	TIC			170000	J
C9H20 Hydrocarbon & C8H10	5.51	TIC			130000	J
C10H22 Hydrocarbon	5.88	TIC			31000	J
C9H18 Hydrocarbon	6.04	TIC			50000	J
3-Hexene-2,5-dione	6.39	TIC			38000	JB
C10H22 Hydrocarbon & C9H1	6.51	TIC			54000	J
Unknown Hydrocarbon	6.59	TIC			97000	J
C10H22 Hydrocarbon	6.69	TIC			53000	J
C10H22 Hydrocarbon	7.24	TIC			210000	J
C9H12 Alkyl Benzene	7.68	TIC			57000	J
C10H20 Hydrocarbon	7.84	TIC			31000	J
C10H14 Alkyl Benzene & C11	8.17	TIC			68000	J
C11H24 Hydrocarbon & C10H	8.29	TIC			130000	J
C11H24 Hydrocarbon & C10H	8.41	TIC			58000	J
C10H14 Alkyl Benzene	8.76	TIC			63000	J
C11H24 Hydrocarbon	8.94	TIC			180000	J
C10H14 Alkyl Benzene & C12	9.31	TIC			31000	J
C11H16 Alkyl Benzene & C12	9.56	TIC			35000	J
C12H26 Hydrocarbon	9.76	TIC			31000	J
C10H12 Hydrocarbon	9.85	TIC			38000	J
C13H28 Hydrocarbon	9.93	TIC			38000	J
C13H28 Hydrocarbon	10.03	TIC			32000	J

LEGEND
VOA – Volatile Organic Analysis
ABN – Acid/Base Neutral (semi-volatiles)
PEST – Pesticides/PCB Analysis
Q – Analytical results' Qualifier (listed below).
B – Analyte was detected above the CRDL but below 10X Blank Concentration.
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate

CHEMICAL DATA SUMMARY

Site Name and Code: Olin Pasco Chemical
Case Number: 20054
Concentrations: In micrograms per kilogram (ug/kg)
Compiled by: Fluor Daniel

		Organic Traffic No.						
		Sample I.D.	FZ818		FZ817		FZ816	
		Matrix	SOIL		SOIL		SOIL	
		Percent Solids	80		80		80	
		Location: and/or Sample Description:	88-10		88-11		88-12	
COMPOUND NAME	RT/SCAN#	CLASS	Concentration	Q	Concentration	Q	Concentration	Q
4-Hydroxy-4-methyl-2-pentanone	6.29	TIC	37000	JB				
C9H20 Hydrocarbon	6.54	TIC	7500	J				
C8H10 Hydrocarbon	6.74	TIC	34000	J				
C8H20 Hydrocarbon	7.22	TIC	12000	J				
C8H20 Hydrocarbon	7.26	TIC	10000	J				
C10H22 Hydrocarbon	7.96	TIC	8600	J				
C10H22 Hydrocarbon	8.07	TIC	13000	J				
C10H22 Hydrocarbon	8.08	TIC	13000	J				
C9H12 Alkyl Benzene	8.86	TIC	15000	J				
C10H22 Hydrocarbon	8.90	TIC	11000	J				
C9H16 Hydrocarbon	9.11	TIC	10000	J				
C10H22 Hydrocarbon	9.46	TIC	49000	J				
C11H24 Hydrocarbon	9.91	TIC	9700	J				
C9H12 Hydrocarbon	10.04	TIC	19000	J				
C10H20 Hydrocarbon & Unknown	10.16	TIC	7400	J				
C10H24 Hydrocarbon	10.58	TIC	12000	J				
C11H24 Hydrocarbon & C10H8	10.70	TIC	8100	J				
C11H24 Hydrocarbon & C10H8	10.77	TIC	11000	J				
C11H24 Hydrocarbon	10.81	TIC	8400	J				
C11H24 Hydrocarbon	11.53	TIC	15000	J				
C14H24 Hydrocarbon	19.04	TIC	23000	J				
C16H28 Hydrocarbon	21.59	TIC	11000	J				
C16H28 Hydrocarbon	22.09	TIC	7700	J				
1-Pentanone, 4-Hydroxy-4-meth	6.3	TIC			23000	JB		
Ethyl Benzene or Xylene	6.8	TIC			32000	J		
Ethyl Benzene or Xylene	7.27	TIC			18000	J		
C10H22 Hydrocarbon	8.03	TIC			17000	J		
C9H12 Alkyl Benzene & C10H	8.71	TIC			17000	J		
C9H12 Hydrocarbon	8.74	TIC			20000	J		
C10H22 Hydrocarbon	8.86	TIC			15000	J		
C9H12 Hydrocarbon	9.12	TIC			12000	J		
C11H24 Hydrocarbon	9.48	TIC			32000	J		
C11H24 Hydrocarbon	9.94	TIC			11000	J		
C9H12 Hydrocarbon	10.07	TIC			23000	J		
C10H22 Hydrocarbon	10.17	TIC			18000	J		
C10H24 Hydrocarbon	10.58	TIC			25000	J		
C10H8 Hydrocarbon	10.78	TIC			13000	J		
C11H24 Hydrocarbon	11.55	TIC			18000	J		
C14H24 Hydrocarbon	19.10	TIC			33000	J		
C16H28 Hydrocarbon	21.65	TIC			22000	J		
C16H28 Hydrocarbon	22.14	TIC			14000	J		
C17H36 Hydrocarbon	22.92	TIC			15000	J		
C16H28 Hydrocarbon	23.44	TIC			27000	J		
C18H32 Hydrocarbon	23.79	TIC			31000	J		
C18H32 Hydrocarbon	24.31	TIC			41000	J		
C10H8O Hydrocarbon	24.8	TIC			29000	J		
Benzene, methyl-	3.62	TIC					320	JB
Unknown Ketone or Ester	4.45	TIC					1300	J
4-Hydroxy-4-methyl-2-pentano	6.07	TIC					49000	JB
C8H20 Hydrocarbon	6.13	TIC					1200	J
C8H20 Hydrocarbon	6.47	TIC					690	J
Unknown Ketone or Ester	5.92	TIC					1000	J
3-Hexene-2,5-dione	6.39	TIC					1200	JB
C9H12 Hydrocarbon	6.48	TIC					300	J
C9H12 Alkyl Benzene	6.6	TIC					400	J
C10H22 Hydrocarbon	6.66	TIC					300	J
C9H12 Alkyl Benzene	6.74	TIC					250	J
C10H14 Alkyl Benzene	6.87	TIC					320	J
C10H14 Alkyl Benzene	6.23	TIC					270	J
Unknown Hydrocarbon	14.82	TIC					420	J
Unknown	17.38	TIC					300	J
C16H27 Hydrocarbon	18.65	TIC					1200	J
Unknown	18.04	TIC					250	J
C16H22 Hydrocarbon	18.12	TIC					870	J
Unknown Hydrocarbon	19.57	TIC					1000	J
Unknown	19.98	TIC					200	J
Unknown Hydrocarbon	20.62	TIC					200	J
Unknown Hydrocarbon	21.62	TIC					220	J
Unknown Hydrocarbon	23.22	TIC					200	J

LEGEND
VOA - Volatile Organic Analysis
ABN - Acid/Base Neutral (semi-volatile)
PEST - Pesticides/PCB Analysis
Q - Analytical results' Qualifier (listed below).
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CHEMICAL DATA SUMMARY

Site Name and Code: Dixie Petro Chemical
Case Number: 20054
Concentrations: In micrograms per liter (µg/l)
Compiled by: Fluor Daniel

		Organic Traffic No.										
		Sample I.D.	FZ908		FZ909		FZ915		FZ919		FZ908	
		Matrix	WATER		WATER		WATER		WATER		WATER	
		Percent Solids										
		Location: and or Sample Description:	SW-15		SW-02		RB-21		FB-17		SW-01	
COMPOUND NAME	RT/SCAN#	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q
Unknown	4.87	TIC	2	BJ								
Dichlorolodomethane	4.45	TIC			4	J						
Unknown	4.86	TIC			9	BJ						
2-Cyclohexen-1-ol	5.41	TIC			5	J						
2-Cyclohexen-1-one	6.19	TIC			5	J						
Unknown	11.03	TIC			6	J						
Unknown	22.52	TIC			58	BJ						
C17H36 Hydrocarbon	22.63	TIC			11	BJ						
1-Hexadecanol	22.71	TIC			13	J						
C23H48 Hydrocarbon	23.54	TIC			14	BJ						
Octadecanoic Acid, butyl est	24.32	TIC			38	JB						
C24H50 Hydrocarbon	24.42	TIC			17	BJ						
C20H40 Hydrocarbon	24.50	TIC			5	BJ						
Unknown	24.92	TIC			6	BJ						
Unknown	25.02	TIC			3	BJ						
C25H52 Hydrocarbon	25.27	TIC			15	BJ						
C26H54 Hydrocarbon	26.07	TIC			13	BJ						
C27H56 Hydrocarbon	26.88	TIC			11	BJ						
C28H58 Hydrocarbon	27.66	TIC			17	BJ						
C29H60 Hydrocarbon	28.54	TIC			16	BJ						
C30H62 Hydrocarbon	29.60	TIC			10	BJ						
C31H64 Hydrocarbon	30.83	TIC			8	BJ						
C32H66 Hydrocarbon	32.29	TIC			5	BJ						
C33H68 Hydrocarbon	34.06	TIC			4	J						
Unknown	18.24	TIC					2	J				
Unknown	19.85	TIC					8	J				
Unknown Oxygenated Compound	24.23	TIC					2	J				
Unknown	27.67	TIC					2	J				
Unknown	12.93	TIC							2	J		
Unknown	18.24	TIC							2	J		
Unknown	19.86	TIC							7	J		
Unknown	28.38	TIC							4	J		
Dichlorolodomethane	4.46	TIC									3	J
Unknown	4.85	TIC									3	BJ
2-Cyclohexen-1ol	5.4	TIC									4	J
2-Cyclohexen-one	6.17	TIC									4	J
Unknown	11.03	TIC									5	J
Benzothiazole	11.22	TIC									2	JB

LEGEND
VOA – Volatile Organic Analysis
ABN – Acid/Base Neutral (semi-volatiles)
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ATTACHMENT D

DRINKING WATER SAMPLE DATA REPORT

H:\06635335\Z30\DDGTE.REP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

DATE: July 1, 1993

SUBJECT: Notice of Intent to Dispose of Samples

FROM: Diana G. Ayers, Chief, Houston Branch; 6E-H

TO: Ragan Broyles, Chief,
Surveillance Branch; 6E-S

The Houston Laboratory is required to dispose of all hazardous wastes we generate in a manner consistent with RCRA regulations. This includes all samples received for analysis provided we find them to contain contaminants which classify them as RCRA hazardous wastes. In addition, any samples found to contain PCBs must be disposed of according to TCSA regulations.

I have included this memorandum in the final analytical report to serve as notice to the program that we have completed all analysis. If we have any of the original sample remaining after analysis is complete we will dispose of it within 90 days. Please note that even though original sample may be left over, it does not mean that a reanalysis of the sample may be requested since the sample has most likely exceeded its holding time and any subsequent analysis may not be valid.

If you have a need to hold these samples in custody longer than 90 days, please sign below and return this memorandum to me within the next 30 days. Also, state briefly your need to hold these samples in custody.

Thank you for your cooperation in this request.

Dixie (TEI) Petro-Chemical

_____
Facility Name

_____
Program Manager Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

DATE: July 2, 1993

SUBJECT: Laboratory Results for Dixie (TEI) Petro-Chemical

FROM: Diana G. Ayers, Chief, Houston Branch; 6E-H Dan L. Payne for

TO: Ragan Broyles, Chief, Surveillance Branch; 6E-S

ATTN: Stacey Bennett; 6E-SH

Attached are the analytical results for the subject site. Three (3) samples were received on May 26, 1993 to be analyzed for ABNs, VOAs, pesticides, PCBs, metals, and cyanide.

This is a final report.

Attachments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM:

Date: June 30, 1993

Subject: Laboratory Results for Dixie (TEI) Petro-Chemical

From: David C. Stockton, ~~Chief,~~ Inorganic Lab Section, (6E-HI)

To: Diana G. Ayers, Chief, Houston Branch, (6E-H)

Attached are laboratory results for the subject site. Three (3) water samples were received on May 26, 1993 to be analyzed for metals and Cyanide.

The laboratory numbers assigned were 3TFADW2701 through 3TFADW2703.

This is a final report.

Attachments (3)

4-87

Recycled/Recyclable

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

DATE: July 1, 1993

SUBJECT: Organic Laboratory Results for Dixie (TEI) Petro-Chemical

FROM: Michael Daggett, Chief, Organic Section, 6E-HO

TO: Diana G. Ayers, Chief, Houston Branch, 6E-H

Attached are the Organic Laboratory results for the subject site. Three (3) water samples were received for organic analysis on May 26, 1993. These samples were analyzed for VOA's, ABN's, and Pesticide/PCB's. There were no organic compounds detected in these samples.

The laboratory numbers assigned were 3TFADW27-01 through 3TFADW27-03.

This is a final report.

Attachments

June 24, 1993

U.S. Environmental Protection Agency

Houston Branch Management System

Report for Sample Number 3TFADW2701

Source: DIXIE (TEI) PETRO-CHEMICAL

Site Description: STA # DW-18

Date/Time Received: 5/26/93 10:25

Date/Time Collected: 5/25/93 16:00

Sample Type: DW

Date Completed: 6/30/93

Comments:

Parameter	Description	Section	Status	Report Date
ABN	ACID/BASE NEUTRALS	ORGANIC	COMPLETE	6/30/93
CN	CYANIDE	INORGANIC	COMPLETE	6/30/93
HSL	HAZARDOUS SUBSTANCE LIST	METALS	COMPLETE	6/30/93
PCB	POLYCHLORINATED BIPHENYLS	ORGANIC	COMPLETE	6/30/93
PES	PESTICIDES	ORGANIC	COMPLETE	6/30/93
VOA	VOLATILE ORGANIC ANALYSIS	ORGANIC	COMPLETE	6/30/93

US EPA HOUSTON BRANCH

SAMPLE #:	3TFADW27-01	DATE RECEIVED:	26-May-93
SOURCE:	DIXIE (TEI) PETRO-CHEMICAL		
TYPE:	AQUEOUS	DATE REPORTED:	30-Jun-93
ANALYSTS:	RC, LC, JL		

PARAMETER	CONCENTRATION	DETECTION LIMIT <=	UNITS
ALUMINUM	ND	100	UG/L
ANTIMONY	ND	60	UG/L
ARSENIC	ND	5.8	UG/L
BARIUM	27	10	UG/L
BERYLLIUM	ND	5	UG/L
CADMIUM	ND	5	UG/L
CALCIUM	24800	150	UG/L
CHROMIUM	ND	10	UG/L
COBALT	ND	20	UG/L
COPPER	ND	20	UG/L
IRON	320	25	UG/L
LEAD	ND	3.3	UG/L
MAGNESIUM	12000	150	UG/L
MANGANESE	10	5	UG/L
MERCURY	ND	0.2	UG/L
NICKEL	ND	20	UG/L
POTASSIUM	10600	1000	UG/L
SELENIUM	5.8	2.9	UG/L
SILVER	ND	10	UG/L
SODIUM	122000	500	UG/L
THALLIUM	ND	5.0	UG/L
VANADIUM	ND	30	UG/L
ZINC	99	20	UG/L
CYANIDE	ND	0.02	MG/L

ND: LESS THAN DETECTION LIMIT

 Attachment: 1

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW27-01 DATE REPORTED: 14-Jun-93

ANALYST: Richard McMillin SAMPLE TYPE: water

VOLATILE COMPOUNDS BY METHOD 624 units: ug/L

CAS#	Compound Name	Results*	Det Limits
67-64-1	acetone	ND	5
107-02-8	acrolein	ND	100
107-13-1	acrylonitrile	ND	100
71-43-2	benzene	ND	2
75-27-4	bromodichloromethane	ND	2
75-25-2	bromoform	ND	2
74-83-9	bromomethane	ND	5
78-93-3	2-butanone	ND	5
75-15-0	carbon disulfide	ND	5
56-23-5	carbon tetrachloride	ND	2
108-90-7	chlorobenzene	ND	2
75-00-3	chloroethane	ND	5
67-66-3	chloroform	ND	2
74-87-3	chloromethane	ND	5
124-48-1	dibromochloromethane	ND	2
75-34-3	1,1-dichloroethane	ND	2
107-06-2	1,2-dichloroethane	ND	2
75-35-4	1,1-dichloroethene	ND	2
156-59-2	cis-1,2-dichloroethene	ND	2
156-60-5	trans-1,2-dichloroethene	ND	2
78-87-5	1,2-dichloropropane	ND	2
10061-01-5	cis-1,3-dichloropropene	ND	2
10061-02-6	trans-1,3-dichloropropene	ND	2
100-41-4	ethylbenzene	ND	5
519-78-6	2-hexanone	ND	5
75-09-2	methylene chloride	ND	5
108-10-1	4-methyl-2-pentanone	ND	5
100-42-5	styrene	ND	5
79-34-5	1,1,2,2-tetrachloroethane	ND	2
127-18-4	tetrachloroethene	ND	2
108-88-3	toluene	ND	5
71-55-6	1,1,1-trichloroethane	ND	2
79-00-5	1,1,2-trichloroethane	ND	2
79-01-6	trichloroethene	ND	2
75-01-4	vinyl chloride	ND	5
108-38-3	m- and/or (CAS# 106-42-3)p-xylene	ND	5
95-47-6	o-xylene	ND	5

(*) ND = Not detected above the listed detection limit.

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 Attachment: 1

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW27-01 DATE REPORTED: 14-Jun-93

ANALYST: Richard McMillin SAMPLE TYPE: water

TENTATIVELY IDENTIFIED VOLATILE COMPOUNDS BY METHOD 624

(min) RT	CAS#	COMPOUND NAME *	(ug/L) ** EST. CONC.
		No VOA TIC's detected in this sample.	

* ANALYSTS NOTE - THE COMPOUNDS LISTED ARE TENTATIVELY IDENTIFIED BY THE BEST MATCH WITH THE NIH/EPA/WILEY MASS SPECTRAL DATA BASE OR BY MANUAL INTERPRETATION. STANDARDS WERE NOT AVAILABLE FOR CONFIRMATION OR QUANTITATION.

**Estimated concentration is based on a RF of 1.0 to internal standard

Attachment: 1

ORGANIC ANALYSIS DATA

6E-HL Sample NO: 3TFADW27-01

Date Reported: 22-Jun-93

Analyst: M. HUMPHREY

Sample Type: WATER

SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

Compound Name	Results*	Det Limits
Acenaphthene	ND	2
Acenaphthylene	ND	2
Anthracene	ND	2
Benzidine	ND	20
Benzoic Acid	ND	10
Benzo(a)Anthracene	ND	8
Benzo(a)Pyrene	ND	8
Benzo(b)Fluoranthene	ND	8
Benzo(g,h,i)Perylene	ND	8
Benzo(k)Fluoranthene	ND	8
Benzyl Alcohol	ND	4
bis(2-Chloroethoxy)Methane	ND	2
bis(2-Chloroethyl) Ether	ND	2
bis(2-chloroisopropyl)Ether	ND	2
bis-(2-Ethylhexyl)Phthalate	ND	4
4-Bromophenylphenyl Ether	ND	8
Butylbenzylphthalate	ND	4
Carbazole	ND	10
4-Chloroaniline	ND	4
2-Chloronaphthalene	ND	2
2-Chlorophenol	ND	4
4-Chlorophenylphenyl Ether	ND	8
4-Chloro-3-Methylphenol	ND	8
Chrysene	ND	8
Dibenzofuran	ND	2
Dibenzo(a,h)Anthracene	ND	8
1,2-Dichlorobenzene	ND	3
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	3
3,3'-Dichlorobenzidine	ND	10
2,4-Dichlorophenol	ND	6
Diethylphthalate	ND	2
2,4-Dimethylphenol	ND	6
DimethylPhthalate	ND	2

(*) ND = Not detected above the listed detection limit.

units: ug/L

Compound Name	Results*	Det Limits
2,4-Dinitrophenol	ND	30
2,4-Dinitrotoluene	ND	6
2,6-Dinitrotoluene	ND	6
4,6-Dinitro-2-Methylphenol	ND	20
Di-n-Butylphthalate	ND	2
Di-n-Octyl Phthalate	ND	4
Fluoranthene	ND	2
Fluorene	ND	2
Hexachlorobenzene	ND	2
Hexachlorobutadiene	ND	5
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	3
Indeno(1,2,3-cd) Pyrene	ND	8
Isophorone	ND	4
2-Methylnaphthalene	ND	2
2-Methylphenol	ND	6
4-Methylphenol	ND	6
Naphthalene	ND	2
2-Nitroaniline	ND	8
3-Nitroaniline	ND	8
4-Nitroaniline	ND	8
Nitrobenzene	ND	2
2-Nitrophenol	ND	10
4-Nitrophenol	ND	13
N-Nitrosodiphenylamine	ND	4
N-Nitroso-Di-n-Propylamine	ND	6
Pentachlorophenol	ND	15
Phenanthrene	ND	2
Phenol	ND	4
Pyrene	ND	2
1,2,4-Trichlorobenzene	ND	3
2,4,5-Trichlorophenol	ND	6
2,4,6-Trichlorophenol	ND	6

(*) ND = Not detected above the listed detection limit.

Analyst Notes: _____

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Attachment: 1

ORGANIC ANALYSIS DATA

6E-HL Sample NO:3TFADW27-01

Date Reported: 22-Jun-93

Analyst: M. HUMPHREY

Matrix: WATER

TENTATIVELY IDENTIFIED SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

RT (min)	CAS #	COMPOUND NAME (*)	Estimated Concentration (**)
		No ABN TIC's detected in this sample.	

(*) ANALYSTS NOTE: The compounds listed are tentatively identified by the best match with the NIH/EPA/Wiley mass spectral data base or by manual interpretation. Standards were not available for confirmation or quantitation.

(**) Estimated concentration is based on a Response Factor of 1.0 to the nearest internal standard.

Attachment 1

PESTICIDE/PCB ANALYSIS

6EG-HL SAMPLE NO.:3TFADW27-01 DATE REPORTED: 6 /20/1995

SAMPLE TYPE: WATER

ANALYST: L.C.MINER,JR.

CAS#		UG/L (PPB)
319-84-6	alpha-BHC	ND DL=< 0.05
319-85-7	beta-BHC	ND DL=< 0.05
319-86-8	delta-BHC	ND DL=< 0.05
58-89-9	gamma-BHC (Lindane)	ND DL=< 0.05
76-44-8	Heptachlor	ND DL=< 0.05
309-00-2	Aldrin	ND DL=< 0.05
1024-57-3	Heptachlor epoxide	ND DL=< 0.05
959-98-8	Endosulfan I	ND DL=< 0.05
60-57-1	Dieldrin	ND DL=< 0.10
72-55-9	4,4'-DDE	ND DL=< 0.10
72-20-8	Endrin	ND DL=< 0.10
33213-65-9	Endosulfan II	ND DL=< 0.10
72-54-8	4,4'-DDD	ND DL=< 0.10
7421-93-4	Endrin aldehyde	ND DL=< 0.10
53494-70-5	Endrin ketone	ND DL=< 0.10
1031-07-8	Endosulfan sulfate	ND DL=< 0.10
50-29-3	4,4'-DDT	ND DL=< 0.10
72-43-5	Methoxychlor	ND DL=< 0.50
5103-71-9	alpha-Chlordane	ND DL=< 0.05
5103-74-2	gamma-Chlordane	ND DL=< 0.05
8001-35-2	Toxaphene	ND DL=< 5.00
12674-11-2	Aroclor-1016	ND DL=< 1.00
11104-28-2	Aroclor-1221	ND DL=< 2.00
11141-16-5	Aroclor-1232	ND DL=< 1.00
53469-21-9	Aroclor-1242	ND DL=< 1.00
12672-29-6	Aroclor-1248	ND DL=< 1.00
11097-69-1	Aroclor-1254	ND DL=< 1.00
11096-82-5	Aroclor-1260	ND DL=< 1.00

ND DL = NOT DETECTED, DETECTION LIMIT

June 24, 1993

U.S. Environmental Protection Agency

Houston Branch Management System

Report for Sample Number 3TFADW2702

Source: DIXIE (TEI) PETRO-CHEMICAL

Site Description: STA # DW-19

Date/Time Received: 5/26/93 10:25

Date/Time Collected: 5/25/93 16:00

Sample Type: DW

Date Completed: 6/30/93

Comments:

Parameter	Description	Section	Status	Report Date
ABN	ACID/BASE NEUTRALS	ORGANIC	COMPLETE	6/30/93
CN	CYANIDE	INORGANIC	COMPLETE	6/30/93
HSL	HAZARDOUS SUBSTANCE LIST	METALS	COMPLETE	6/30/93
PCB	POLYCHLORINATED BIPHENYLS	ORGANIC	COMPLETE	6/30/93
PES	PESTICIDES	ORGANIC	COMPLETE	6/30/93
VOA	VOLATILE ORGANIC ANALYSIS	ORGANIC	COMPLETE	6/30/93

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US EPA HOUSTON BRANCH

SAMPLE #:	3TFADW27-02	DATE RECEIVED:	26-May-93
SOURCE:	DIXIE (TEI) PETRO-CHEMICAL		
TYPE:	AQUEOUS	DATE REPORTED:	30-Jun-93
ANALYSTS:	RC, LC, JL		

PARAMETER	CONCENTRATION	DETECTION LIMIT <=	UNITS
ALUMINUM	ND	100	UG/L
ANTIMONY	ND	60	UG/L
ARSENIC	ND	5.8	UG/L
BARIUM	27	10	UG/L
BERYLLIUM	ND	5	UG/L
CADMIUM	ND	5	UG/L
CALCIUM	24900	150	UG/L
CHROMIUM	ND	10	UG/L
COBALT	ND	20	UG/L
COPPER	ND	20	UG/L
IRON	347	25	UG/L
LEAD	ND	3.3	UG/L
MAGNESIUM	12200	150	UG/L
MANGANESE	10	5	UG/L
MERCURY	ND	0.2	UG/L
NICKEL	ND	20	UG/L
POTASSIUM	10600	1000	UG/L
SELENIUM	ND	2.9	UG/L
SILVER	ND	10	UG/L
SODIUM	123000	500	UG/L
THALLIUM	ND	5.0	UG/L
VANADIUM	ND	30	UG/L
ZINC	108	20	UG/L
CYANIDE	ND	0.02	MG/L

ND: LESS THAN DETECTION LIMIT

 Attachment: 2

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW27-02 DATE REPORTED: 14-Jun-93

ANALYST: Richard McMillin SAMPLE TYPE: water

VOLATILE COMPOUNDS BY METHOD 624 units: ug/L

CAS#	Compound Name	Results*	Det Limits
67-64-1	acetone	ND	5
107-02-8	acrolein	ND	100
107-13-1	acrylonitrile	ND	100
71-43-2	benzene	ND	2
75-27-4	bromodichloromethane	ND	2
75-25-2	bromoform	ND	2
74-83-9	bromomethane	ND	5
78-93-3	2-butanone	ND	5
75-15-0	carbon disulfide	ND	5
56-23-5	carbon tetrachloride	ND	2
108-90-7	chlorobenzene	ND	2
75-00-3	chloroethane	ND	5
67-66-3	chloroform	ND	2
74-87-3	chloromethane	ND	5
124-48-1	dibromochloromethane	ND	2
75-34-3	1,1-dichloroethane	ND	2
107-06-2	1,2-dichloroethane	ND	2
75-35-4	1,1-dichloroethene	ND	2
156-59-2	cis-1,2-dichloroethene	ND	2
156-60-5	trans-1,2-dichloroethene	ND	2
78-87-5	1,2-dichloropropane	ND	2
10061-01-5	cis-1,3-dichloropropene	ND	2
10061-02-6	trans-1,3-dichloropropene	ND	2
100-41-4	ethylbenzene	ND	5
519-78-6	2-hexanone	ND	5
75-09-2	methylene chloride	ND	5
108-10-1	4-methyl-2-pentanone	ND	5
100-42-5	styrene	ND	5
79-34-5	1,1,2,2-tetrachloroethane	ND	2
127-18-4	tetrachloroethene	ND	2
108-88-3	toluene	ND	5
71-55-6	1,1,1-trichloroethane	ND	2
79-00-5	1,1,2-trichloroethane	ND	2
79-01-6	trichloroethene	ND	2
75-01-4	vinyl chloride	ND	5
108-38-3	m- and/or (CAS# 106-42-3)p-xylene	ND	5
95-47-6	o-xylene	ND	5

(*) ND = Not detected above the listed detection limit.

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 Attachment: 2

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW27-02 DATE REPORTED: 14-Jun-93

ANALYST: Richard McMillin SAMPLE TYPE: water

TENTATIVELY IDENTIFIED VOLATILE COMPOUNDS BY METHOD 624

(min) RT	CAS#	COMPOUND NAME *	(ug/L) ** EST. CONC.
		No VOA TIC's detected in this sample.	

* ANALYSTS NOTE - THE COMPOUNDS LISTED ARE TENTATIVELY IDENTIFIED BY THE BEST MATCH WITH THE NIH/EPA/WILEY MASS SPECTRAL DATA BASE OR BY MANUAL INTERPRETATION. STANDARDS WERE NOT AVAILABLE FOR CONFIRMATION OR QUANTITATION.

**Estimated concentration is based on a RF of 1.0 to internal standard

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Attachment: 2

ORGANIC ANALYSIS DATA

6E-HL Sample NO: 3TFADW27-02

Date Reported: 22-Jun-93

Analyst: M. HUMPHREY

Sample Type: WATER

SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

Compound Name	Results*	Det Limits
Acenaphthene	ND	2
Acenaphthylene	ND	2
Anthracene	ND	2
Benzidine	ND	20
Benzoic Acid	ND	10
Benzo(a)Anthracene	ND	8
Benzo(a)Pyrene	ND	8
Benzo(b)Fluoranthene	ND	8
Benzo(g,h,i)Perylene	ND	8
Benzo(k)Fluoranthene	ND	8
Benzyl Alcohol	ND	4
bis(2-Chloroethoxy)Methane	ND	2
bis(2-Chloroethyl) Ether	ND	2
bis(2-chloroisopropyl)Ether	ND	2
bis-(2-Ethylhexyl)Phthalate	ND	4
4-Bromophenylphenyl Ether	ND	8
Butylbenzylphthalate	ND	4
Carbazole	ND	10
4-Chloroaniline	ND	4
2-Chloronaphthalene	ND	2
2-Chlorophenol	ND	4
4-Chlorophenylphenyl Ether	ND	8
4-Chloro-3-Methylphenol	ND	8
Chrysene	ND	8
Dibenzofuran	ND	2
Dibenzo(a,h)Anthracene	ND	8
1,2-Dichlorobenzene	ND	3
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	3
3,3'-Dichlorobenzidine	ND	10
2,4-Dichlorophenol	ND	6
Diethylphthalate	ND	2
2,4-Dimethylphenol	ND	6
DimethylPhthalate	ND	2

units: ug/L

Compound Name	Results*	Det Limits
2,4-Dinitrophenol	ND	30
2,4-Dinitrotoluene	ND	6
2,6-Dinitrotoluene	ND	6
4,6-Dinitro-2-Methylphenol	ND	20
Di-n-Butylphthalate	ND	2
Di-n-Octyl Phthalate	ND	4
Fluoranthene	ND	2
Fluorene	ND	2
Hexachlorobenzene	ND	2
Hexachlorobutadiene	ND	5
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	3
Indeno(1,2,3-cd) Pyrene	ND	8
Isophorone	ND	4
2-Methylnaphthalene	ND	2
2-Methylphenol	ND	6
4-Methylphenol	ND	6
Naphthalene	ND	2
2-Nitroaniline	ND	8
3-Nitroaniline	ND	8
4-Nitroaniline	ND	8
Nitrobenzene	ND	2
2-Nitrophenol	ND	10
4-Nitrophenol	ND	13
N-Nitrosodiphenylamine	ND	4
N-Nitroso-Di-n-Propylamine	ND	6
Pentachlorophenol	ND	15
Phenanthrene	ND	2
Phenol	ND	4
Pyrene	ND	2
1,2,4-Trichlorobenzene	ND	3
2,4,5-Trichlorophenol	ND	6
2,4,6-Trichlorophenol	ND	6

(*) ND = Not detected above the listed detection limit.

(*) ND = Not detected above the listed detection limit.

Analyst Notes: _____

Attachment: 2

ORGANIC ANALYSIS DATA

6E-HL Sample NO:3TFADW27-02

Date Reported: 22-Jun-93

Analyst: M. HUMPHREY

Matrix: WATER

TENTATIVELY IDENTIFIED SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

RT (min)	CAS #	COMPOUND NAME (*)	Estimated Concentration (**)
		No ABN TIC's detected in this sample.	

(*) ANALYSTS NOTE: The compounds listed are tentatively identified by the best match with the NIH/EPA/Wiley mass spectral data base or by manual interpretation. Standards were not available for confirmation or quantitation.

(**) Estimated concentration is based on a Response Factor of 1.0 to the nearest internal standard.

Attachment 2

PESTICIDE/PCB ANALYSIS

6E3-HL SAMPLE NO.:5TFADW27-02 DATE REPORTED: 6 /23/1995

SAMPLE TYPE: WATER

ANALYST: L.C.MINER,JR.

CAS#		UG/L (PPB)
319-84-6	alpha-BHC	ND DL=< 0.05
319-85-7	beta-BHC	ND DL=< 0.05
319-86-8	delta-BHC	ND DL=< 0.05
58-89-9	gamma-BHC (Lindane)	ND DL=< 0.05
76-44-8	Heptachlor	ND DL=< 0.05
309-00-2	Aldrin	ND DL=< 0.05
1024-57-3	Heptachlor epoxide	ND DL=< 0.05
959-98-8	Endosulfan I	ND DL=< 0.05
60-57-1	Dieldrin	ND DL=< 0.10
72-55-9	4,4'-DDE	ND DL=< 0.10
72-20-8	Endrin	ND DL=< 0.10
33213-65-9	Endosulfan II	ND DL=< 0.10
72-54-8	4,4'-DDD	ND DL=< 0.10
7421-93-4	Endrin aldehyde	ND DL=< 0.10
53494-70-5	Endrin ketone	ND DL=< 0.10
1031-07-8	Endosulfan sulfate	ND DL=< 0.10
50-29-3	4,4'-DDT	ND DL=< 0.10
72-43-5	Methoxychlor	ND DL=< 0.50
5103-71-9	alpha-Chlordane	ND DL=< 0.05
5103-74-2	gamma-Chlordane	ND DL=< 0.05
8001-35-2	Toxaphene	ND DL=< 5.00
12674-11-2	Aroclor-1016	ND DL=< 1.00
11104-28-2	Aroclor-1221	ND DL=< 2.00
11141-16-5	Aroclor-1232	ND DL=< 1.00
53469-21-9	Aroclor-1242	ND DL=< 1.00
12672-29-6	Aroclor-1248	ND DL=< 1.00
11097-69-1	Aroclor-1254	ND DL=< 1.00
11096-82-5	Aroclor-1260	ND DL=< 1.00

ND DL = NOT DETECTED, DETECTION LIMIT

June 24, 1993

U.S. Environmental Protection Agency

Houston Branch Management System

Report for Sample Number 3TFADW2703

Source: DIXIE (TEI) PETRO-CHEMICAL

Site Description: STA # DW-20

Date/Time Received: 5/26/93 10:25

Date/Time Collected: 5/25/93 16:15

Sample Type: DW

Date Completed: 6/30/93

Comments:

Parameter	Description	Section	Status	Report Date
ABN	ACID/BASE NEUTRALS	ORGANIC	COMPLETE	6/30/93
CN	CYANIDE	INORGANIC	COMPLETE	6/30/93
HSL	HAZARDOUS SUBSTANCE LIST	METALS	COMPLETE	6/30/93
PCB	POLYCHLORINATED BIPHENYLS	ORGANIC	COMPLETE	6/30/93
PES	PESTICIDES	ORGANIC	COMPLETE	6/30/93
VOA	VOLATILE ORGANIC ANALYSIS	ORGANIC	COMPLETE	6/30/93

US EPA HOUSTON BRANCH

SAMPLE #:	3TFADW27-03	DATE RECEIVED:	26-May-93
SOURCE:	DIXIE (TEI) PETRO-CHEMICAL		
TYPE:	AQUEOUS	DATE REPORTED:	30-Jun-93
ANALYSTS:	RC, LC, JL		

PARAMETER	CONCENTRATION	DETECTION LIMIT <=	UNITS
ALUMINUM	135	100	UG/L
ANTIMONY	ND	60	UG/L
ARSENIC	ND	5.8	UG/L
BARIUM	79	10	UG/L
BERYLLIUM	ND	5	UG/L
CADMIUM	ND	5	UG/L
CALCIUM	461	150	UG/L
CHROMIUM	ND	10	UG/L
COBALT	ND	20	UG/L
COPPER	703	20	UG/L
IRON	4700	25	UG/L
LEAD	5.7	3.3	UG/L
MAGNESIUM	1020	150	UG/L
MANGANESE	40	5	UG/L
MERCURY	ND	0.2	UG/L
NICKEL	ND	20	UG/L
POTASSIUM	ND	1000	UG/L
SELENIUM	ND	2.9	UG/L
SILVER	ND	10	UG/L
SODIUM	6210	500	UG/L
THALLIUM	ND	5.0	UG/L
VANADIUM	ND	30	UG/L
ZINC	273	20	UG/L
CYANIDE	ND	0.02	MG/L

ND: LESS THAN DETECTION LIMIT

 Attachment: 3

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW27-03 DATE REPORTED: 14-Jun-93

ANALYST: Richard McMillin SAMPLE TYPE: water

VOLATILE COMPOUNDS BY METHOD 624 units: ug/L

CAS#	Compound Name	Results*	Det Limits
67-64-1	acetone	ND	5
107-02-8	acrolein	ND	100
107-13-1	acrylonitrile	ND	100
71-43-2	benzene	ND	2
75-27-4	bromodichloromethane	ND	2
75-25-2	bromoform	ND	2
74-83-9	bromomethane	ND	5
78-93-3	2-butanone	ND	5
75-15-0	carbon disulfide	ND	5
56-23-5	carbon tetrachloride	ND	2
108-90-7	chlorobenzene	ND	2
75-00-3	chloroethane	ND	5
67-66-3	chloroform	ND	2
74-87-3	chloromethane	ND	5
124-48-1	dibromochloromethane	ND	2
75-34-3	1,1-dichloroethane	ND	2
107-06-2	1,2-dichloroethane	ND	2
75-35-4	1,1-dichloroethene	ND	2
156-59-2	cis-1,2-dichloroethene	ND	2
156-60-5	trans-1,2-dichloroethene	ND	2
78-87-5	1,2-dichloropropane	ND	2
10061-01-5	cis-1,3-dichloropropene	ND	2
10061-02-6	trans-1,3-dichloropropene	ND	2
100-41-4	ethylbenzene	ND	5
519-78-6	2-hexanone	ND	5
75-09-2	methylene chloride	ND	5
108-10-1	4-methyl-2-pentanone	ND	5
100-42-5	styrene	ND	5
79-34-5	1,1,2,2-tetrachloroethane	ND	2
127-18-4	tetrachloroethene	ND	2
108-88-3	toluene	ND	5
71-55-6	1,1,1-trichloroethane	ND	2
79-00-5	1,1,2-trichloroethane	ND	2
79-01-6	trichloroethene	ND	2
75-01-4	vinyl chloride	ND	5
108-38-3	m- and/or (CAS# 106-42-3)p-xylene	ND	5
95-47-6	o-xylene	ND	5

(*) ND = Not detected above the listed detection limit.

 Attachment: 3

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW27-03 DATE REPORTED: 14-Jun-93

ANALYST: Richard McMillin SAMPLE TYPE: water

TENTATIVELY IDENTIFIED VOLATILE COMPOUNDS BY METHOD 624

(min) RT	CAS#	COMPOUND NAME *	(ug/L) ** EST. CONC.
		No VOA TIC's detected in this sample.	

* ANALYSTS NOTE - THE COMPOUNDS LISTED ARE TENTATIVELY IDENTIFIED BY THE BEST MATCH WITH THE NIH/EPA/WILEY MASS SPECTRAL DATA BASE OR BY MANUAL INTERPRETATION. STANDARDS WERE NOT AVAILABLE FOR CONFIRMATION OR QUANTITATION.

**Estimated concentration is based on a RF of 1.0 to internal standard

Attachment: 3

ORGANIC ANALYSIS DATA

6E-HL Sample NO: 3TFADW27-03

Date Reported: 22-Jun-93

Analyst: M. HUMPHREY

Sample Type: WATER

SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

units: ug/L

Compound Name	Results*	Det Limits	Compound Name	Results*	Det Limits
Acenaphthene	ND	2	2,4-Dinitrophenol	ND	30
Acenaphthylene	ND	2	2,4-Dinitrotoluene	ND	6
Anthracene	ND	2	2,6-Dinitrotoluene	ND	6
Benzidine	ND	20	4,6-Dinitro-2-Methylphenol	ND	20
Benzoic Acid	ND	10	Di-n-Butylphthalate	ND	2
Benzo(a)Anthracene	ND	8	Di-n-Octyl Phthalate	ND	4
Benzo(a)Pyrene	ND	8	Fluoranthene	ND	2
Benzo(b)Fluoranthene	ND	8	Fluorene	ND	2
Benzo(g,h,i)Perylene	ND	8	Hexachlorobenzene	ND	2
Benzo(k)Fluoranthene	ND	8	Hexachlorobutadiene	ND	5
Benzyl Alcohol	ND	4	Hexachlorocyclopentadiene	ND	10
bis(2-Chloroethoxy)Methane	ND	2	Hexachloroethane	ND	3
bis(2-Chloroethyl) Ether	ND	2	Indeno(1,2,3-cd) Pyrene	ND	8
bis(2-chloroisopropyl)Ether	ND	2	Isophorone	ND	4
bis-(2-Ethylhexyl)Phthalate	ND	4	2-Methylnaphthalene	ND	2
4-Bromophenylphenyl Ether	ND	8	2-Methylphenol	ND	6
Butylbenzylphthalate	ND	4	4-Methylphenol	ND	6
Carbazole	ND	10	Naphthalene	ND	2
4-Chloroaniline	ND	4	2-Nitroaniline	ND	8
2-Chloronaphthalene	ND	2	3-Nitroaniline	ND	8
2-Chlorophenol	ND	4	4-Nitroaniline	ND	8
4-Chlorophenylphenyl Ether	ND	8	Nitrobenzene	ND	2
4-Chloro-3-Methylphenol	ND	8	2-Nitrophenol	ND	10
Chrysene	ND	8	4-Nitrophenol	ND	13
Dibenzofuran	ND	2	N-Nitrosodiphenylamine	ND	4
Dibenzo(a,h)Anthracene	ND	8	N-Nitroso-Di-n-Propylamine	ND	6
1,2-Dichlorobenzene	ND	3	Pentachlorophenol	ND	15
1,3-Dichlorobenzene	ND	3	Phenanthrene	ND	2
1,4-Dichlorobenzene	ND	3	Phenol	ND	4
3,3'-Dichlorobenzidine	ND	10	Pyrene	ND	2
2,4-Dichlorophenol	ND	6	1,2,4-Trichlorobenzene	ND	3
Diethylphthalate	ND	2	2,4,5-Trichlorophenol	ND	6
2,4-Dimethylphenol	ND	6	2,4,6-Trichlorophenol	ND	6
DimethylPhthalate	ND	2			

(*) ND = Not detected above the listed detection limit.

(*) ND = Not detected above the listed detection limit.

Analyst Notes: _____

Attachment: 3

ORGANIC ANALYSIS DATA

6E-HL Sample NO:3TFADW27-03

Date Reported: 22-Jun-93

Analyst: M. HUMPHREY

Matrix: WATER

TENTATIVELY IDENTIFIED SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

RT (min)	CAS #	COMPOUND NAME (*)	Estimated Concentration (**)
		No ABN TIC's detected in this sample.	

(*) ANALYSTS NOTE: The compounds listed are tentatively identified by the best match with the NIH/EPA/Wiley mass spectral data base or by manual interpretation. Standards were not available for confirmation or quantitation.

(**) Estimated concentration is based on a Response Factor of 1.0 to the nearest internal standard.

PESTICIDE/PCB ANALYSIS

GES-HL SAMPLE NO.:3TFACW27-03 DATE REPORTED: 6 /28/1995

SAMPLE TYPE: WATER

ANALYST: L.C.MINER,JR.

CAS#		UG/L (PPB)
319-84-6	alpha-BHC	ND DL=< 0.05
319-85-7	beta-BHC	ND DL=< 0.05
319-86-8	delta-BHC	ND DL=< 0.05
58-89-9	gamma-BHC (Lindane)	ND DL=< 0.05
76-44-8	Heptachlor	ND DL=< 0.05
309-00-2	Aldrin	ND DL=< 0.05
1024-37-3	Heptachlor epoxide	ND DL=< 0.05
959-98-8	Endosulfan I	ND DL=< 0.05
60-57-1	Dieldrin	ND DL=< 0.10
72-55-9	4,4'-DDE	ND DL=< 0.10
72-20-8	Endrin	ND DL=< 0.10
33213-65-9	Endosulfan II	ND DL=< 0.10
72-54-8	4,4'-DDD	ND DL=< 0.10
7421-93-4	Endrin aldehyde	ND DL=< 0.10
53494-70-5	Endrin ketone	ND DL=< 0.10
1031-07-8	Endosulfan sulfate	ND DL=< 0.10
50-29-3	4,4'-DDT	ND DL=< 0.10
72-43-5	Methoxychlor	ND DL=< 0.50
5103-71-9	alpha-Chlordane	ND DL=< 0.05
5103-74-2	gamma-Chlordane	ND DL=< 0.05
8001-35-2	Toxaphene	ND DL=< 5.00
12674-11-2	Aroclor-1016	ND DL=< 1.00
11104-28-2	Aroclor-1221	ND DL=< 2.00
11141-16-5	Aroclor-1232	ND DL=< 1.00
53469-21-9	Aroclor-1242	ND DL=< 1.00
12672-29-6	Aroclor-1248	ND DL=< 1.00
11097-69-1	Aroclor-1254	ND DL=< 1.00
11096-82-5	Aroclor-1260	ND DL=< 1.00

ND DL = NOT DETECTED, DETECTION LIMIT

REFERENCE 5

"SITE INSPECTION LOGBOOK FOR DIXIE (TEI) PETRO-CHEMICAL", FLUOR DANIEL, INC., LAST ENTRY MAY 25, 1993.

DIXIE PETRO-CHEMICAL

SITE INSPECTION

5-01

FLUOR DANIEL, INC.
12790 MERIT DR.
SUITE 200, LB-169
DALLAS, TX. 75251

Phone #'s

- LONGVIEW WATER QUALITY (SCOTT THOMPSON) (903) 753-4670
- TWC - Tyler (DIST. No. 5) NOEL LUPER, P.E. (903) 595-3466
- MALCOLM BENDER (EPA Region VI) (214) 655-8378 -
- JIM WOOLBRIDGE DELTA SOLVENTS (903) 759-7151
- HARRY ALLEN - CITY OF LONGVIEW (903) 237-1250 - WOOD
- MIKE FRANKS - DIXIE PETRO-CHEMICAL (903) 643-7362

BOORUM & PEASE
B&P

Composition Book • 9¾ in. x 7½ in.

Available As:

Item No.	Sheets	Ruling
09-9130	60	College Ruled & Margin
09-9132	60	College Ruled & Margin & Paged
09-9134	100	College Ruled & Margin

ESSELTE

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Esselte Pendaflex Corporation.

5-02

Dixie (TEI) Petro-Chemical - Site Inspection
TXD 079836743

4/13/93 Things to Note During Reconnaissance

1). The # of Workers on site 4

2) What facilities are adjacent to the site?

3) What is site accessibility ~~like~~ to the public like?

4). Where is the nearest school or daycare and their populations? (Workers, Teachers, + Students)

5) Are There any Monitoring Wells?

6) Are There any SWater intakes nearby or municipal wells nearby? If so how far?

7) What is water Quality like in City of Longview? (Background Water Quality)

(8) What is the direction of Ground Water Flow throughout Longview?

(9) What is the direction of nearby and on-site surface water ~~flow~~ drainage? What is the extent of the 15-mile target limit distance?

(10) What are the nearby sensitive environments?

(11) Are there any agricultural resources nearby?

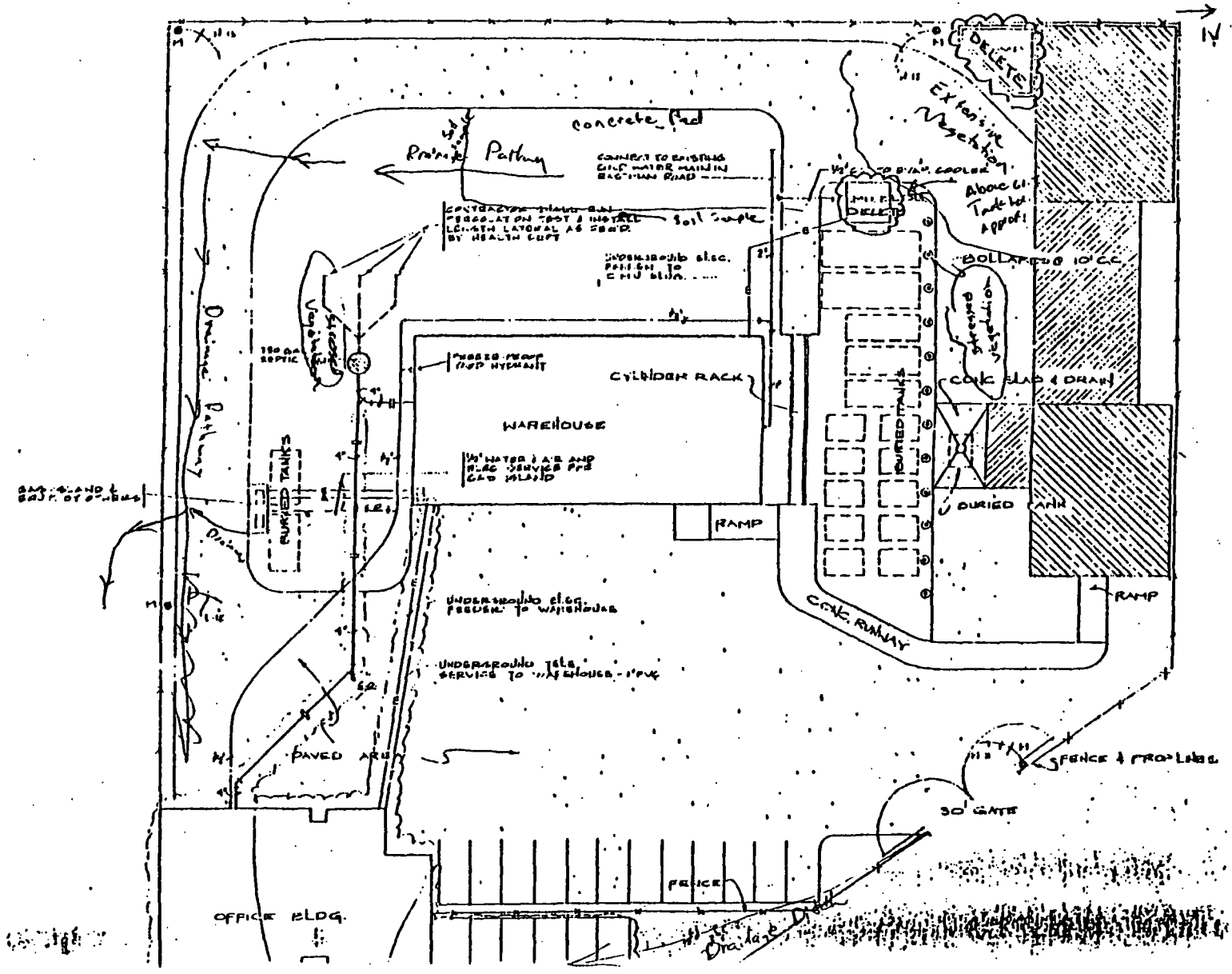
(12) Identify Source areas

Things to Note Con't.

13) Locate the sweater PPE

14) What are some background sampling locations?

SITE SKETCH



T.E.I. PETRO-CHEM, INC.

T.E.I. RAY THOMAS

SITE RECONNAISSANCE INSPECTION 7/19/93

KEITH WESTBERRY / STEVE DICKSON - FDI

ARRIVED AT 9:25 AM ON SITE - HNU was prepared for use.

- MET w/ DIXIE Representative Wayne Penick at 9:40
- He explained a little about the site map and told us that all of the UST's had been removed

Photo #1 - View facing SE of the front of the Warehouse Building.

HEALTH & SAFETY NOTE: FIRE ANTS!

Photo #2 - VIEW SE of former UST locations just ~~on~~ north of the warehouse. / TAKEN from area where the sump was located.

- Area of stressed vegetation was noted just north of the old UST locations / north of warehouse.

- The site is completely fenced, w/ gates in operation

- All tanks were removed and taken from location

Adjacent properties: Business to North / Trailer Park to the South and SW of site

Photo #3 View facing N of business adjacent to site.

Mr. Penick wants a copy of photo's taken

- Vegetation behind Warehouse (NW) is somewhat stressed but could be due to lack of top soil.

- Photo #4 - Facing S - Picture of some type of GW water spring or SW drainage
  - Water had a sheen on it.

- Photo #5 - Facing SE of Back of Warehouse
  - Picture taken from back of Property.

- Drainage Path from back of site is along back fence (west side) running south until it just reaches the south fence & from there it enters into a small concrete lined drainage ditch which flows East along the south fence

Photo #6 - View facing East of the drainage path along South fence.

photo #7 - View facing North of drainage path into the ~~da~~ concrete drainage ditch.
  - Extensive Vegetation in both pic's.

Photo #8 - View facing South from SW corner of site / Pic of Adjacent Trailer Park

- There does not appear to be any public accessibility to the site / There are 2 fences

- 3-4 homes in trailer park w/in 200 ft of site

Photo #9 - View facing SW of Directly adjacent homes

- Septic Tank in Back of Warehouse is uncovered

- Black Tar From Back of Building - Coming from underneath the walls - Photo #10

- Mr. Noel LUPER (TWC-Dist.5) AND EARL A. ZAPP - McConway & Torley arrived on site at 10:00 a.m.

- Mr. Zapp informed me of contam. trouble on site and gave us a card identify

- Photo #11 - View facing South of drainage going off site.
Photo #12 - View facing SW of drainage flowing off-site from a pad due south of warehouse.

- Pad south of site could possibly have UST's under it. There is extensive cratering around the pad

Drainage off site is flowing mostly south.

- Samples 2 should be taken directly south of fence along drainage pathway.

- The office building in the SE corner of the site is not there.

Photo #13 - View facing West of the front of the warehouse w/ all of the rail car parts in front

Photo # 14 - View facing NW - Drainage Ditch running South of site - Taken from Gum Springs Road.

- Photo #15 - View of tainted surface water coming from site - Water had multi-colored sheen on it. - Take soil/sediment and water samples here.

- TIE MILL (SAW MILL) located NE of site across RR Tracks

Photo # 16 - Photo of McCormay Railroad sign on front lawn

Photo # 17 - View from front gate facing NE of SAW MILL

1105 Left site

4/19/93

Dan Bogue 237-1065

Engineering Services - City of Longview

- Mike Brown - Water Treatment Plant - Plant Manager

David Harkless - Systems Engineer

4-18-93 - Daily Log of Water Quality

, Sabine Water Treatment

Raw Chloride - 40 ppm

Raw pH: 7.11 ppm

NH_3: 171 ppm

Fluoride = 7 ppm.

Calender Year Avg. Flow - 610-600,000 cfs

Trena Nelson.

Photo #18 - View Facing West of a possible landfill that was unauthorized

Photo #19 - View Facing SW of same as above.

5/23/93 - 4:00 p.m. - Steve Dickson / Keith Westbrey

Spoke w/ Dorothy Hawes at 121 Russell Dr.
Water Well is 110 feet deep. Gave permission
to sample.

Marked Sample locations 14, 15, & 16

#14 & 15
300' E. of the int. of RR tracks and Gum Springs Road
on South side of Gum Spring.

#16
600' S of intersection of Gum Springs Road and RR tracks

An attempt is being made to ~~sample~~ locate 1 more well
to sample.

R.B Thomas - Country Club. R#7 Box 457
Longview Tx. 75602

Finished Site Work at 5:45 and left.

5/24/93 -

Health and Safety Meeting - 7:30 a.m. - MacDonald's

Present: Steve Dickson, Keith Westberry, Doug Cheek, George Farm

- All parties acknowledged reading the Health and Safety Plan and signed the compliance agreement from.

Further discussion over site will occur at the site. All site procedures, and history was discussed. - All health topics were discussed and noted. All health and safety credentials (i.e. OSHA training certificates, physical exam approval) were presented by all employees.

Arrived on-site at 9:00 a.m.

Representative from DPC Industries - Wayne Penick
from McConway & Torley - Kurt D. Ritch, PG
Conlan Engineering Co.

"

Mr. Ritch is representing McConway & Torley and has okayed the dumping of decon water onto the property per Bryan Deschamps -

0930 Hall model P1 101 calibrated
HAZCO model #1718

Camera is on picture # 17 14

Picture # 17 4 — Sample SS-13
Time: 09:50

Picture # 13 5 - Sample SS-04 5
Time: 10:22 - Taken 25 ft East of the trailer on Lot 38

Picture # 16 - Sample SS-0 8 4
Time: 10:29 Taken between Lot 41 + 43 - Approx 5 ft East of Lot 41.

* Permission granted to sample trailer park by Mike McGuire Trailer owned by Eastman Villa (EVS) investments

photo #17 Sd-#14 in Creek 300' SD East of int. of R.R. Track + Gum springs Rd., on South side of Road

SD ~~photo #16~~ SW-#15 also is photo #17 same location as Above (sd-14) in Creek (ms/msD)

Samples 14 & 15 taken in Long Creek. Creek had extencive oily sheen staining on surface of water and on creek Banks. Odor was present.

Sample - SD-16 photo #18
Time: 11:43
Pic taken of creek where sample was
- taken at confluence of Long Creek and intermittent
Creek had noticeable sheen on surface water and
creek bank

Sample SW - #15 Hydac Calibration
pH = 7.04 pH 4.0 Test = 3.99
Conductivity 288 µs/cm 10.0 Test = 9.93
Temp 74.1°F

Sample - photo # 21 or 22 - SW-1 & 2
SW-1 Time: 13:45 pH = 7.26
SW-2 Time: 13:50 Cond. = 7.71
SD-3 Time: 13:55 Temp. = 3.61

Photo # 23 - Asphalt-like material under surface soil at depth 4-5 inch
SS-06
Time: 2:30

Photo #24 - Soil was very clean - It was all sand and obvious fill
SS-07 material
Time: 2:40

Samples 6 & 7 were split with the two different representatives - The samples were custody sealed and handed over to the representatives at 15:08.g.

We completed all sampling activities and left the site by 16:30 hours.

A total of 11 samples were collected

4-5 inches

ovs fill

5/25/93 - Sampling Continued

Arrived at the site @07:20 a.m.
Persons on site for Health & Safety meeting
Keith Westberry, Doug Check, Steve Dickson, George Farmer
EPA Representative - Malcolm Bender
was present and read and signed the Health and Safety Addendum.

Site Safety meeting was held at 7:25
Site History and safety procedures were discussed at this time.

HNU calibrated.
Beginning w/ Camera #2 Today

- Dicon Station was set up and began sampling at 8:00 a.m.

Sample - SD-08
Photo #1
Time: 8:25 a.m - Sample was all Gravel - Sample was taken in area where oily sheen was very apparent on standing water
- Splits were also collected at this location

Sample SD-09
photo #2 Augen to 4' + Started
Time: 910 Sampling Clayey soil to ~4'
then Black silty soil, heavily stained, sewage type odor (Air monitoring kicks on HNU to 10-15 units, Sustained at 2-3 units, BZ = 0, Bkgd = 0 ~~with HNU~~.)

5-20

SS-09 (cont) - was split sampled
Black material continues down to TD of 6.5'
Hit. water table at ~5.5' x Gravel zone at ~3.0'.
there is a septic tank ~20' to the southeast of the sample location, according to M.E.+T personnel.

9:40 Sampling completed, begin decon for Rinsate blank. over augers

time

RB-21-
Time: 10:05

SS-10 & SS-11 - split samples were taken
photo #3
Time: 12:00

11:23 change to work plan, approved by Malcolm Bender:
at SS-10 + SS-11, work plan said sample 4-6'
Based on significant readings on H_2S
(peaked to 150 units, sustained at 20 inside to Hole.
BZ = 3 units

aken
parent
ation

~~Pe~~ SD PPE upgrade to Level D with Respirators

Sample will be collected from ~~2-6~~ KW 0-3'
Now

Sample was taken from 4 different Auger holes drilled 0-3' in depth. Greater depth could not be attained due to subsurface obstructions. The VOA samples were collected while drilling holes. The semi-volatiles and inorganics were taken as composites from the remainder of the material.

- During the sampling ranges on the HNU. between 20 to 400 units in the hole
- The Breathing zone was sustained at levels between 0 and 20 units

Lunch Break = 1:00

Back on site at 2:00 p.m

Sample SS-12
photo # 4
Time: 14:45
Samples were split w/ Facility Representatives
- Samples taken between 4-5 feet for VOA's
- Samples are composites 4-6'
No detects on the HNU were recorded.

This sample concluded the on-site samples

REFERENCE 6

FEDERAL EMERGENCY MANAGEMENT AGENCY, "FLOOD INSURANCE RATE MAP", CITY.

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
LONGVIEW, TEXAS
GREGG AND HARRISON
COUNTIES

PANEL 15 OF 25
(SEE MAP INDEX FOR PANELS NOT PRINTED)

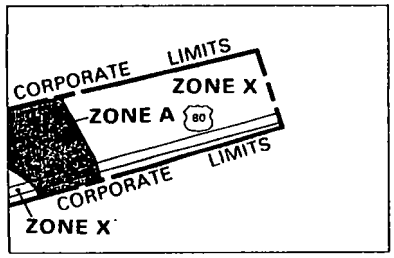
PANEL LOCATION

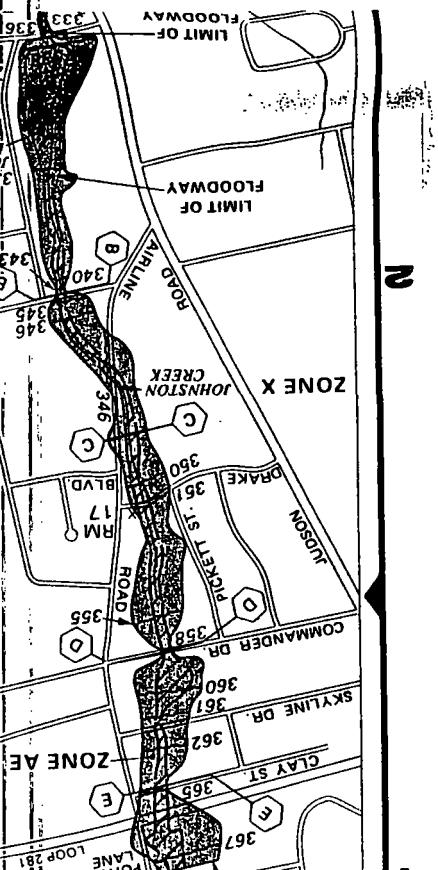
COMMUNITY-PANEL NUMBER
480264 0015 D

MAP REVISED:
JANUARY 17, 1990

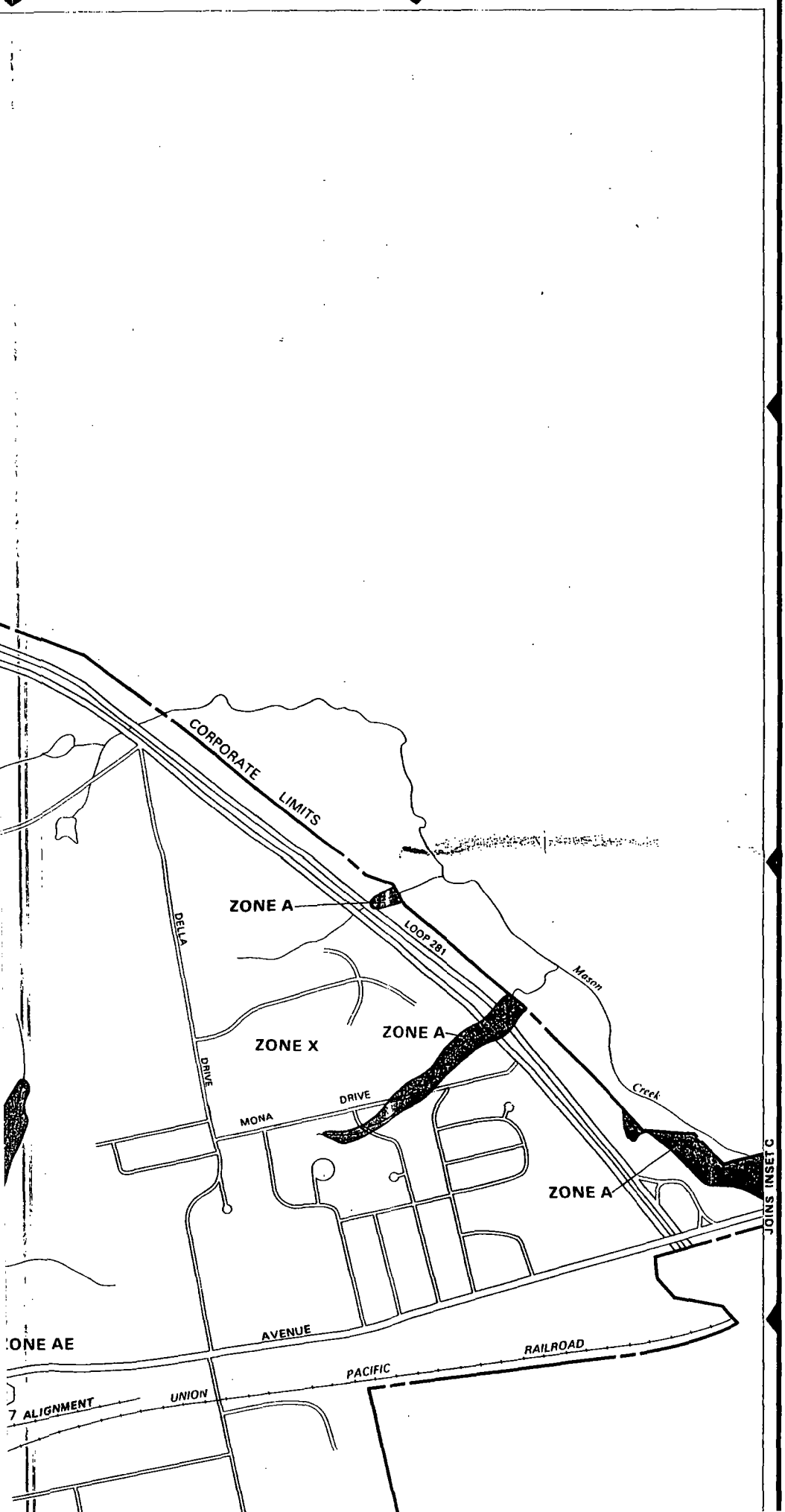
Federal Emergency Management Agency

INSET C





6-01



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A	No base flood elevations determined.
ZONE AE	Base flood elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding; velocities also determined.
ZONE A99	To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
ZONE V	Coastal flood with velocity hazard (wave action); no base flood elevations determined.
ZONE VE	Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X	Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X	Areas determined to be outside 500-year floodplain.
ZONE D	Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

	Floodplain Boundary
	Floodway Boundary
	Zone D Boundary
	Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.
513	Base Flood Elevation Line; Elevation in Feet*
D — D	Cross Section Line
(EL 987)	Base Flood Elevation in Feet Where Uniform Within Zone*
RM 7x	Elevation Reference Mark
•M1.5	River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Elevation reference marks are described in the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.

MAP REPOSITORY

Public Works Department, City Hall, 300 West Cotton Street, Longview, Texas 75606 (Maps available for reference only, not for distribution).

INITIAL IDENTIFICATION:
AUGUST 9, 1974
OCTOBER 10, 1975

FLOOD HAZARD BOUNDARY MAP REVISIONS:
NONE

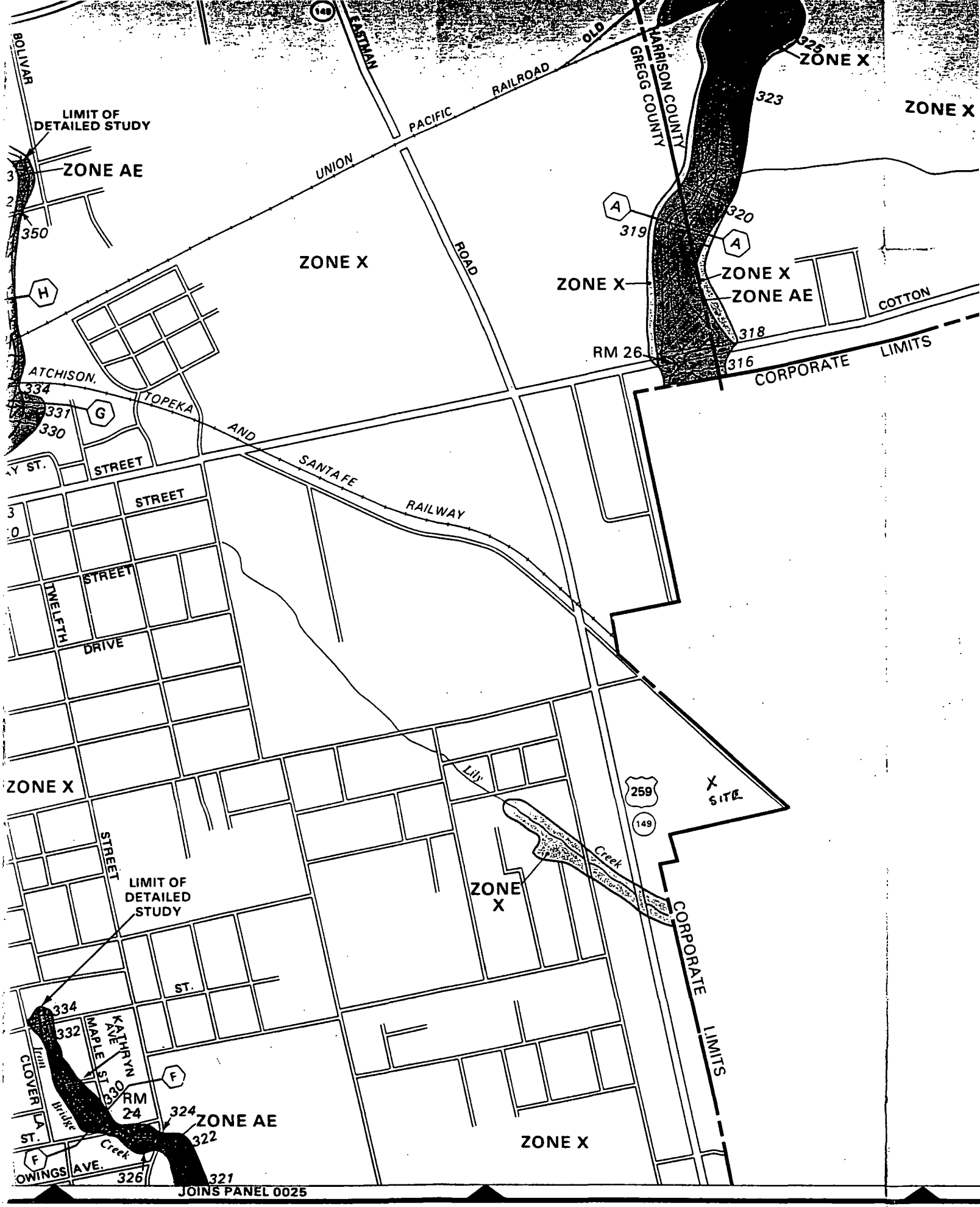
FLOOD INSURANCE RATE MAP EFFECTIVE:
DECEMBER 15, 1977

FLOOD INSURANCE RATE MAP REVISIONS:

June 3, 1986 - to change zone designations.

January 17, 1990 - to update corporate limits, to add base flood elevations, to add special flood hazard areas, to change special flood hazard areas, to change zone designations, to update map format, to add roads and road names, and to incorporate previously issued letters of map revision.

6-02


BOLIVAR
LIMIT OF DETAILED STUDY
ZONE AE
350
UNION PACIFIC RAILROAD
EASTMAN
OLD
HARRISON COUNTY
GREGG COUNTY
325
ZONE X
323
ZONE X
ZONE X
ROAD
A
319
320
A
ZONE X
ZONE X
ZONE AE
COTTON
318
RM 26
316
CORPORATE LIMITS
H
ATCHISON,
334
331
330
G
TOPEKA AND SANTA FE RAILWAY
STREET
STREET
STREET
TWELFTH
DRIVE
ZONE X
STREET
Lily
Creek
259
149
X SITE
ZONE X
CORPORATE LIMITS
LIMIT OF DETAILED STUDY
ST.
334
332
KATHRYN AVE
MAPLE ST
330
F
RM 24
324
ZONE AE
322
CLOVER LA
ST.
Trail
Bridge
Creek
F
OWINGS AVE.
326
321
ZONE X
JOINS PANEL 0025

REFERENCE 7

KEITH WESTBERRY, FLUOR DANIEL, INC., DIMENSIONS OF SOURCE AREAS WORKSHEET, OCTOBER 14, 1993.

DIMENSIONS OF SOURCE AREAS

1)	UST Area #1	=	1.35" X 3.30"
			Conversion: 45' X 110'
			Area = 4950 Ft.^{2}
	UST Area #2	=	0.25" X 1.00"
			Conversion: 8.3' X 33'
			Area = 273.9 Ft.^{2}
	Shallow Ground Water	=	0.40" X 0.40"
			Conversion: 13.33' X 13.33'
			Area = 177.69 Ft.^{2}

Scale: 1.5 Map Inches = 50'

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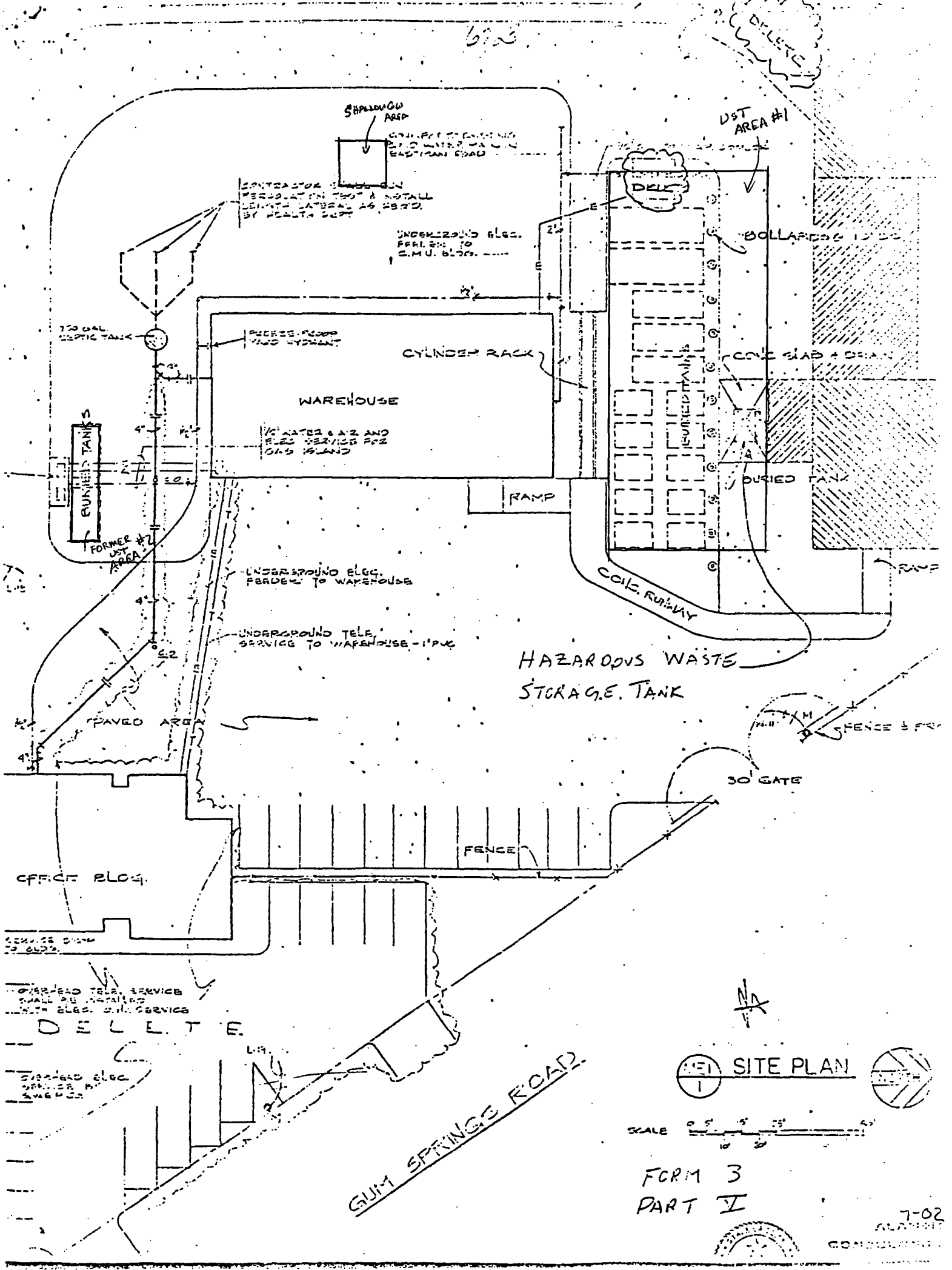
SHALLOW GW AREA
UST AREA #1
DELETE
BOLLARDS
UNDERGROUND ELEC. FEED TO C.M.U. BLDG.
750 GAL SEPTIC TANK
CYLINDER RACK
WAREHOUSE
CONC. SLAB & DRAIN
BURIED TANK
RAMP
BURIED TANK
FORMER #2 UST AREA
UNDERGROUND ELEC. FEEDER TO WAREHOUSE
UNDERGROUND TELE. SERVICE TO WAREHOUSE - 1" PVC
CONC. RUNWAY
HAZARDOUS WASTE STORAGE TANK
PAVED AREA
FENCE & GATE
30' GATE
FENCE
OFFICE BLDG.
DELETE
GUM SPRINGS ROAD
SITE PLAN
SCALE
FORM 3
PART V
7-02

REFERENCE 8

TEXAS WATER DEVELOPMENT BOARD, "RECORDS OF WELLS, SPRINGS AND TEST HOLES", "WATER LEVEL PUBLICATION PUBLICATION REPORT", "WATER QUALITY SAMPLES REPORT", GREGG COUNTY, JUNE, 1993.

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Gregg

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 19 701	(b) (6) Well 1-B	323845	944345	5	NOT-APPL	3650	1959			N	N
35 25 601	(b) (6) Well 33	323345	945345	5	NOT-APPL	3775	1948			N	N
35 25 602	Warren Petroleum Corp.	323324	945348		124QCWX	536	05201943	W	U	H	Y
35 25 801	City of Gladewater Well 5	323115	945615	5	124CZWX	279	1940	W	U	M	Y
35 25 802	City of Gladewater Well 6	323115	945615	5	124CZWX	390	1943		U	M	Y
35 25 803	(b) (6) Well A-2	323115	945615	5	NOT-APPL	3600	1950			N	N
35 25 901	Warren Petroleum	323110	945426		124CZWX	616	1947		N	M	Y
35 25 902	East Texas Water Co.	323115	945345	5	124CZWX	478	1959		U	M	N
35 25 903	(b) (6) Well 14	323115	945345	5	NOT-APPL	3700	1946			N	N
35 25 904	(b) (6) Well 15	323115	945345	5	NOT-APPL	3640	1947			N	N
35 26 201	East Texas Water Co.	323615	944845	5	124QNCT	201	1959		U	M	N
35 26 202	East Texas Water Co. Well 2	323526	944751		124CZWX	390	1957		P	M	Y
35 26 203	East Texas Water Co.	323615	944845	5	124QNCT	210	1959		U	N	N
35 26 204	East Texas Water Co.	323615	944845	5	124CZWX	364	1959		P	M	Y
35 26 205	(b) (6) Well 11	323615	944845	5	NOT-APPL	3800	1948			N	N
35 26 301	(b) (6) Well 11-A	323615	944615	5	NOT-APPL	3695	1955			N	N
35 26 302		323615	944615	5	124CZWX					N	N
35 26 401		323332	945131		124QNCT	26			H	C	Y
35 26 501	East Texas Water Co.	323345	944845	5	124CZWX	478	1959		P	M	N
35 26 502	Warren Petroleum Corp.	323439	944930		124QNCT	161	1941		U	M	Y
35 26 601		323345	944615	5	124QNCT					N	N
35 26 701	Sinclair Oil Co.	323023	945204		124CZWX	547	1961		N	M	Y
35 26 702	Sinclair Oil Co.	323018	945158		124CZWX	533	1947		N	N	Y
35 26 703	Sinclair Oil Co.	323115	945115	5	124CZWX	446	1934		U	N	Y

W=Withdrawal D=[illegible] H=Domestic S=Stock P=Public I=Irrigation N=Industrial T=Institution

8-01

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Gregg

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 26 704	Sinclair Oil Co.	323115	945115	5	124CZWX	455	1935		U	N	Y
35 26 705	East Texas Water Co.	323013	945108		124CZWX	458	1938		U	M	Y
35 26 706	City of White Oak	323013	945113		124CZWX	430	04061964	W	U	C	Y
35 26 707	Amerada Petroleum Corp.	323115	945115	5	124CZWX	404	1934		H	N	Y
35 26 708	Cities Service Oil Co.	323203	945003		124CZWX	540	1956		N	M	Y
35 26 709	White Oak School	323151	945134		124CZWX	470	1940	W	P	M	Y
35 26 710	(b) (6) Well 12	323115	945115	5	NOT-APPL	3663	1947			N	N
35 26 711	(b) (6) Well 14	323115	945115	5	NOT-APPL	3500	1947			N	N
35 26 712		323115	945115	5	124CZWX					N	N
35 26 713		323115	945115	5	124CZWX					N	N
35 26 801	Premier Oil & Refining Co.	323115	944845	5	124CZWX	299	1937		U	N	Y
35 26 802	(b) (6) Well 9	323115	944845	5	NOT-APPL	3530	1948			N	N
35 27 101	Gregg County Precinct #1	323708	944423		124QNCT	49			U	C	Y
35 27 102	(b) (6)	323615	944345	5	124CZWX	500			H S	N	Y
35 27 401	Tryon Road Water Supply Corp.	323315	944246		124CZWX	505	1965	W	P	H	Y
35 27 402		323400	944443		124QNCT	45			H	C	Y
35 27 403	Tryon Road WSC	323442	944359		124CZWX	325			U	N	Y
35 27 404	Tryon Road WSC	323418	944325		124CZWX	296			P	N	Y
35 27 405	Tryon Road WSC	323431	944237		124CZWX	245			P	N	Y
35 33 201	Sinclair Oil Co.	322845	945615	5	124CZWX	1008	1931		U	N	Y
35 33 202	Sinclair Oil Co.	322845	945615	5	124CZWX	390	1932		U	M	N
35 33 203	(b) (6) Well 7	322845	945615	5	NOT-APPL	3708	1949			N	N
35 33 204		322913	945602		124QNCT	47			U	H	N
35 33 301	(b) (6) Well 98	322845	945345	5	NOT-APPL	3600	1949			N	N
35 33 501	Sabine School	322650	945705		124CZWX	762	1951	W	P	C	Y
35 33 502	Liberty City WSC	322640	945715	1	124CZWX	622	1964	W	P	M	Y

8·02

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Gregg

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 33 504		322620	945600		124CZWX	538			I	N	Y
35 33 506	Liberty City WSC	322714	945656		124CZWX	515			U	N	Y
35 33 601	North Chapel School	322615	945345	5	124CZWX	854	1951		P	M	N
35 33 602	(b) (6) Well 17	322615	945345	5	NOT-APPL	3740	1948			N	N
35 33 801	Texas Water Corp.	322345	945615	5	124CZWX	507	1954		P	M	Y
35 33 802	Texas Water Corp.	322354	945505		124CZWX	438	1933		P	H	Y
35 33 803	(b) (6)	322345	945615	5	124CZWX	388	1966		H	M	Y
35 33 804	(b) (6) Well 4	322345	945615	5	NOT-APPL	3854	1955			N	N
35 33 901	City of Kilgore Well 1	322254	945241		124CZWX	875	1931	W	P	M	Y
35 33 902	City of Kilgore Well 3	322254	945241		124CZWX	906	1934	W	P	M	Y
35 33 903	(b) (6)	322345	945345	5	124CZWX	446	1938		H	N	Y
35 33 904	Ellerd Truckline	322317	945340		124CZWX	528	1931		P	M	Y
35 33 905	Warren Petroleum Corp.	322345	945345	5	124CZWX	505	1947		U	N	Y
35 33 906	Tex-Water Corp.	322345	945345	5	124CZWX	950	1931		U	M	N
35 33 907	Tex-Water Corp.	322322	945420		124CZWX	650	1931		P	M	Y
35 33 908	Tex-Water Corp.	322306	945400		124CZWX	527	1951		P	N	Y
35 33 909	Tex-Water Corp.	322305	945242		124CZWX	501	1956		P	N	Y
35 33 910	Lacy Water Dept.	322345	945345	5	124CZWX	512	1948		P	M	Y
35 33 911	Tex-Water Corp.	322347	945458		124CZWX	915	1931		P	M	Y
35 33 912	(b) (6) Well 30	322345	945345	5	NOT-APPL	3605	1946			N	N
35 33 913	(b) (6)	322345	945345	5	124CZWX				H	N	Y
35 33 914		322345	945345	5	124CZWX	528			H	N	Y
35 33 915	J&J PROPERTIES	322432	945427	1	124CZWX	615	08191988	W	C	M	N
* 35 34 101	Longview Country Club	322934	945051	1	124CZWX	412	1960	W	P I	M	Y
* 35 34 102	Amoco Pipeline	322843	945105		124CZWX	379	1965	W	U	C	Y
35 34 103	Rembert	322845	945115	5	NOT-APPL	3480	1948			N	N

8-03

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Gregg

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 34 105	(b) (6) [redacted]	322845	945153	1	124CZWX	346	09061988	W	S	N	N
35 34 201	Lone Star Production Co.	322740	944743		124CZWX	430	1937		U	M	Y
35 34 202	Premier Oil & Refining Co.	322845	944845	5	124CZWX	281	1937		U	M	Y
35 34 203		322845	944845	5	124CRRZ					N	N
35 34 204		322845	944845	5	124CZWX					N	N
35 34 206		322845	944845	5	124CZWX					N	N
35 34 301	(b) (6) [redacted] Well 1	322845	944615	5	NOT-APPL	7398	1941			N	N
35 34 302	Wickham Packing Co.	322845	944615	5	NOT-APPL	6850	1952			N	N
35 34 303		322845	944615	5	110TRRC	30			H	N	Y
35 34 401	Gregg Home for the Aged	322616	945146		124CZWX	190	1935		P	N	Y
35 34 402	Gregg Home for the Aged	322615	945115	5	124CZWX	455	1960		P	M	Y
35 34 403	(b) (6) [redacted]	322622	945228		124CZWX	800	1931		U	C	N
35 34 404	[redacted]	322615	945115	5	124CZWX	911	1956		I	N	Y
35 34 405	Delta Drilling Co.	322615	945115	5	124CZWX	604	1955		U	N	Y
35 34 406	(b) (6) [redacted] Well 11	322615	945115	5	NOT-APPL	3589	1949			N	N
35 34 501	Atlantic Pipeline Co.	322642	944841		124CZWX	681	1949		H	M	Y
35 34 502	Atlantic Pipeline Co.	322615	944845	5	124CZWX	29	1964		H	M	N
35 34 503	Mobil Pipeline Co.	322615	944845	5	124CZWX	218	1931		U	N	Y
35 34 504	Texaco, Inc.	322615	944845	5	124CZWX					N	N
35 34 601	Pine Meadows Campground	322558	944718		124CZWX	299			P	N	Y
35 34 602		322615	944615	5	124QNCT					N	N
35 34 701	City of Kilgore Well 6	322345	945115	5	124CZWX	827	1947	W	P	M	Y
35 34 702	City of Kilgore Well 4	322302	945216		124CZWX	771	1934	W	P	M	Y
35 34 703	(b) (6) [redacted]	322345	945115	5	124CZWX	582	1938		H	M	Y
35 34 801	Fredonia School	322407	944802		124CZWX	450	1948		P	M	Y
35 34 802	Danville School	322408	944858		124CZWX	300	1964		P	N	Y

8-041

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Gregg

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 34 803	(b) (6) [redacted]	322450	944835		124CZWX	390	1964		P	N	Y
35 34 804		322345	944845	5	124CZWX					N	N
35 34 901	(b) (6) [redacted]	322415	944549		124CZWX	300	1963		I H S	M	Y
35 35 401	United Gas Pipeline Co.	322723	944333		124CZWX	378	1931		U	M	Y
35 35 402	United Gas Pipeline Co.	322723	944339		124CZWX	320	1955		N	C	Y
35 35 403	(b) (6) [redacted]	322615	944345	5	124CZWX					N	N
35 35 701	Gregg County Airport	322333	944313		124CZWX	464	1941		P	M	Y
35 35 901	Southwestern Gas and Electric Co.	322234	943835		124CZWX	183	1950		H	N	Y
35 35 902	Southwestern Gas and Electric Co.	322234	943835		124CZWX	183	1950		H	M	Y
35 35 903	(b) (6) [redacted]	322305	943814		124CZWX	448	1963		H	M	Y
35 35 904		322345	943845	5	124CZWX					N	N
35 35 905		322345	943845	5	124CZWX					N	N
35 36 701	(b) (6) [redacted]	322307	943535		124CZWX	39	1959		U	H	Y
35 36 702	[redacted] Well 1	322345	943615	5	NOT-APPL	7160	1955			N	N
35 36 703		322345	943615	5	124CZWX	39			H	N	Y
35 41 301	Bareco Wax Corp.	322115	945345	5	124CZWX	625			U	M	N
35 41 302	Bareco Wax Corp.	322221	945326		124CZWX	425	1946		N	M	Y
35 41 303	Humble Oil & Refining Co.	322218	945300		124CZWX	908	1931		U	M	Y
35 42 201	(b) (6) [redacted] Well 1	322115	944845	5	NOT-APPL	7630	1959			N	N

8-05

May 5 1993

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

GROUND WATER QUALITY SAMPLES
COUNTY - Gregg

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SIO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 25 602	124QCWX	536	05/28/1961					6.8	24	18	11	26		0	108	30	18	0.2	0.0	180	298	90
	124QCWX	536	12/09/1966				22	6.9	25	18	10	26	4	0	118	27	19	0.1	0.2	187	310	88
35 25 801	124CZWX	279	01/22/1942 U							11		267		0	451	34	150	0.4		687		
	124CZWX	279	05/00/1951 U					8.3	14	9	8	255		0	370	32	146	0.4		646		55
35 25 802	124CZWX	390	05/00/1951 U					8.4	17	9	7	282			290	23	249	0.2		729		52
35 25 901	124CZWX	616	05/28/1961					8.0	12	1	0	317		0	524	17	174	0.9	0.0	779	1370	8
	124CZWX	616	12/09/1966 U				24	8.3	13	2	0	319	2		516	17	180	0.8	0.2	787	1400	7
35 26 202	124CZWX	390	08/21/1957 U					8.5	12	2	0	127			229	28	33			314	542	
	124CZWX	390	04/08/1958 U					8.5		4	1	170			253	31	101	0.4		431	705	14
	124CZWX	390	05/30/1958 U					8.3		10	1	239			261	27	243	0.4		648	1300	23
	124CZWX	390	06/16/1958 U					8.0		7	1	249		0	253	27	270	0.4		678	1260	24
	124CZWX	390	05/30/1961					7.4	12	9	2	335		0	240	23	382	0.3	4.8	886	1670	35
35 26 204	124CZWX	364	01/05/1967 U					7.2						0	180		13				373	
35 26 401	124QNCT	26	08/03/1976					7.2	60	20	1	7		0	51	14	8	0.1	1.1	136	144	53
	124QNCT	26	11/10/1981				17	6.8	57	9	1	9		0	18	10	14	0.1	1.2	110	109	26
35 26 502	124QNCT	161	01/22/1942 U							14	8	37		0	122	20	21	0.1		160		70
35 26 701	124CZWX	547	12/09/1966				23	8.2	14	2	0	292	2	0	552	17	128	0.9	2.8	730	1250	8
35 26 702	124CZWX	533	12/09/1966				22	7.9	16	2	1	207	2	0	424	18	73	0.8	3.0	528	897	11
35 26 703	124CZWX	446	08/27/1941 U							8	3	267		0	592	14	83			666		37
35 26 704	124CZWX	455	08/27/1941 U									279		0	604	14	74	0.9				
35 26 705	124CZWX	458	08/28/1941 U							6		213		0	506	31	34			534		
35 26 706	124CZWX	430	04/10/1964					8.5	17	2	0	211		12	463	26	28			523	849	8
	124CZWX	430	04/11/1964					8.6	19	1	0	258		24	514	19	58			631	1043	5
	124CZWX	430	04/24/1964					8.5	15	1	0	218		20	468	22	34			539	875	5
	124CZWX	430	12/21/1966 U					8.1						0	510		34				892	

* Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
U after date of collection signifies unbalanced or partial chemical analysis

GROUND WATER QUALITY SAMPLES
COUNTY - Gregg

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 26 707	124CZWX	404	12/09/1966 U					8.3	11	4	1	274	2		510	19	121	0.8	0.2	683	1190	14
35 26 708	124CZWX	540	11/03/1958 U					8.4	11	2	0	393			568	2	256			843		
	124CZWX	540	12/09/1966				23	7.7	12	4	0	497	2	0	540	5	470	0.6	0.2	1258	2300	14
	124CZWX	540	05/28/1975				23	7.7	12	7	1	498		0	520	6	480	0.9	0.2	1260	2150	20
	124CZWX	540	10/15/1987				22	8.5	8	4	1	505	2	7	511	7	473	0.8	0.0	1259	2516	14
35 26 709	124CZWX	470	08/24/1941 U								3	291		0	580	12	113	0.7				
35 26 801	124CZWX	299	12/09/1966				22	8.0	11	6	1	458	3	0	360	24	500	0.5	0.5	1180	2160	22
35 27 101	124QNCT	49	12/12/1966					6.1	24	11	2	7	3	0	14	40	7	0.0	0.0	100	152	38
35 27 102	124CZWX	500	12/12/1966				25	8.0	12	9	2	386	3	0	292	7	455	0.2	0.2	1018	1930	32
	124CZWX	500	05/28/1975					7.6	12	10	2	381		0	282	6	415	0.3	4.5	949	1890	31
35 27 401	124CZWX	505	03/06/1965					8.2	7	3	1	113		0	246	24	22			290	470	11
	124CZWX	505	03/09/1965					8.5	8	6	1	380		0	295	7	422			989	1840	19
	124CZWX	505	03/25/1965					8.4	10	5	2	387		0	295	6	435			990	1820	19
	124CZWX	505	12/16/1966				23	7.1	11	5	1	379	3	0	276	9	435	0.3	0.2	976	1810	18
	124CZWX	505	02/25/1973	02	01			7.9		5	12	389		0	270	8	435	0.2	4.0	985	1958	22
	124CZWX	505	05/28/1975					7.7	10	5	1	381		0	271	6	434	0.3	4.8	975	1750	18
35 27 402	124QNCT	45	08/02/1976				21	6.1	48	2	1	2	1	0	5	5	3	0.1	0.4	64	30	6
	124QNCT	45	11/10/1981				23	6.7	46	3	1	5		0	6	4	6	0.1	0.6	66	49	9
35 27 403	124CZWX	325	03/04/1969					8.5	10	8	2	514		11	270	7	637	0.5	0.1	1322	2400	30
	124CZWX	325	03/07/1969 U					8.9									30				430	
	124CZWX	325	03/10/1969					8.5	9	7	3	78		0	166	25	25	0.2	0.9	229	407	28
	124CZWX	325	03/25/1969					7.7	8	7	3	81		0	171	32	22	0.2	0.2	237	383	29
	124CZWX	325	03/25/1969					7.5	9	7	3	77		0	171	25	22	0.2	0.2	227	388	29
	124CZWX	325	02/25/1973	02	01			8.0		9	4	70		0	155	38	18	0.2	1.5	216	399	38
35 27 404	124CZWX	298	05/30/1969					8.0	7	5	2	83		0	177	28	19	0.4	0.3	231	374	21
	124CZWX	298	08/11/1969 U	02	01																	
	124CZWX	296	01/15/1986	02	01			8.0		4	1	79		0	172	25	16	0.2	0.0	209	380	15
35 27 405	124CZWX	245	01/15/1986	02	01			8.3		15	6	62		0	181	34	14	0.3	0.5	220	410	64
	124CZWX	245	10/13/1987				20	8.2	7	17	4	63	5	0	179	34	13	0.3	1.3	232	410	61
35 33 201	124CZWX	1008	04/29/1936 U								4	800		0	751	8	800					
	124CZWX	1008	05/28/1961					7.7	12	3	0	887		0	742	0	630	2.0	0.0	1698	3050	10
	124CZWX	1008	09/23/1966 U				25	7.9	12	3	0	726	2	0	740	0	680		2.6	1789	3220	12

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U after date of collection signifies unbalanced or partial chemical analysis

GROUND WATER QUALITY SAMPLES
COUNTY - Gregg

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 33 501	124CZWX	762	09/07/1951 U					8.4	14	2	0	327			639	0	94			751		11
	124CZWX	762	07/08/1961					8.2	14	1	0	319		0	690	0	95			768	1268	7
	124CZWX	762	03/15/1968 U	02	01			8.7		2	1	317			612	1	86			707		
	124CZWX	762	05/28/1975				24	8.6	14	2	1	316		7	670	4	92	1.4	3.3	770	1170	6
	124CZWX	762	09/16/1981 U	02	01																	
	124CZWX	762	09/19/1981	02	01			8.6		2	<1	314		12	664	4	91	1.3	1.5	753	1350	5
	124CZWX	762	11/10/1981				26	8.7	13	2	1	315		18	648	5	84	1.3	0.1	758	1368	5
	124CZWX	762	11/18/1988				26	8.3	12	1	1	314	1	0	644	5	114	1.3	0.2	766	1390	5
35 33 502	124CZWX	622	08/04/1964					8.7	8	1	0	186		12	447	11	23			470	785	4
	124CZWX	622	12/08/1966 U					8.4	13	1	0	183	1		406	18	22	0.5	0.2	438	761	4
	124CZWX	622	07/16/1970	02	01			8.8		2	<1	170		14	390	14	19	0.4	<.4	412	735	8
	124CZWX	622	07/16/1971	02	01			8.6		2	1	170		6	399	15	19	0.4	<.4	409	725	10
	124CZWX	622	09/25/1972	02	01			8.8		1	1	178		14	389	14	23	0.4	<.4	423	750	7
	124CZWX	622	09/17/1974	02	01			8.8		1	1	229		14	369	17	94	0.6	0.6	548		9
	124CZWX	622	08/20/1975	02	01			8.6		4	2	166		13	389	16	21	0.3	1.0	414	750	
	124CZWX	622	07/19/1976 U	02	01																	
	124CZWX	622	05/13/1980	02	01			8.8		1	<1	177		14	394	18	21	0.4	<.1	426	760	2
	124CZWX	622	10/18/1983	02	01			8.4		<1	<1	177		3	414	15	20	0.4	<.1	421	770	3
	124CZWX	622	10/22/1987				23	8.8	9	1	1	179	1	14	394	15	20	0.4	0.0	434	765	4
	124CZWX	622	03/25/1993 U	01	01	10			13					14	393	17	21	0.4				
35 33 504	124CZWX	538	10/21/1987				21	7.6	40	1	1	46	1	0	99	8	8	0.2	3.0	156	207	2
35 33 506	124CZWX	515	08/08/1987					8.6		1	1	186		22	384	30	21	0.4	0.0	450	700	6
35 33 801	124CZWX	507	02/23/1971					8.6	15	1	1	165		9	407	12	10	0.3	2.0	415	700	9
	124CZWX	507	12/15/1977				23	8.6	14	3	4	172		10	407	14	10	0.4	0.4	427	725	8
35 33 802	124CZWX	438	12/05/1966					8.2	13	1	0	172	1	0	426	15	8	0.4	1.0	420	695	4
35 33 803	124CZWX	388	12/06/1966 U					8.4	12	<1	<1	155	1		362	16	8	0.3	0.2	371	630	2
	124CZWX	388	05/27/1975					8.5	12	2	1	153		5	372	13	9	0.4	2.1	360	610	6
35 33 901	124CZWX	875	04/14/1936 U							6	4	674		0	720		645			1683		32
	124CZWX	875	04/12/1951 U						41	12	6	672		0	580	23	699			1738		55
35 33 902	124CZWX	906	04/14/1936 U							6	8	626		0	743		680			2086		52
	124CZWX	906	10/03/1941							6	5	728		0	586	23	760	0.6		1832		40
35 33 903	124CZWX	446	09/25/1941 U									207		0	506	35	15					
	124CZWX	446	12/05/1966					8.2	11	1	0	206	1	0	500	21	13	0.6	2.5	502	826	4

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GROUND WATER QUALITY SAMPLES
COUNTY - Gregg

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 33 904	124CZWX	528	04/13/1938 U								4	184		0	457	21	14					
	124CZWX	528	05/29/1961				21	8.2	13	<1	<1	171		0	412	22	8	0.4	0.0	417	682	1
	124CZWX	528	02/19/1964				22	8.6	13	1	<1	188		17	428	24	8	0.5	0.4	463	776	6
	124CZWX	528	12/08/1966				23	8.3	13	<1	<1	184	1	0	446	23	8	0.4	0.2	449	746	3
	124CZWX	528	05/27/1975					8.5	13	1	1	167		4	404	23	9	0.3	1.4	418	685	3
35 33 905	124CZWX	505	12/06/1966				23	8.3	13	1	0	190	1	0	428	50	12	0.4	0.2	478	793	2
35 33 907	124CZWX	650	05/29/1936 U											0	506	31	13					
	124CZWX	650	02/19/1964				22	8.6	13	2	<1	208		18	473	25	8	0.7	0.4	508	845	9
	124CZWX	650	12/05/1966					8.4	12	1	0	210	1	0	522	22	8	0.4	0.2	510	838	2
35 33 908	124CZWX	527	05/26/1961					8.3	13	<1	<1	186		0	439	23	9	0.4	0.8	449	739	3
	124CZWX	527	02/19/1964				22	8.8	12	2	<1	201		18	458	24	9	0.6	0.4	493	822	9
	124CZWX	527	12/05/1966					8.4	12	1	0	181	1	0	442	23	7	0.3	0.8	443	735	2
	124CZWX	527	05/27/1975				23	8.5	13	1	1	185		8	433	21	8	0.4	1.3	451	720	3
35 33 909	124CZWX	501	02/19/1964				22	8.6	14	2	<1	211		18	473	22	11	0.7	0.4	512	904	9
	124CZWX	501	12/05/1966 U					8.5	12	1	0	210	1		522	23	9	0.4	0.2	513	850	4
35 33 910	124CZWX	512	12/08/1966				24	8.3	13	<1	<1	214	1	0	504	30	11	0.2	2.2	520	870	3
35 33 911	124CZWX	915	05/26/1961					8.2	14	<1	<1	172		0	422	15	8	0.5	0.0	417	690	2
35 33 913	124CZWX		02/19/1964				16	8.6	13	1	1	170		12	387	18	9	0.5	0.4	415	732	3
	124CZWX		10/21/1987				19	8.8	8	1	1	170	1	13	387	16	8	0.3	0.1	408	710	2
35 33 914	124CZWX	528	02/19/1964				22	8.9	14	1	1	194		19	443	26	8	0.4	0.4	481	858	4
35 34 101	124CZWX	412	12/02/1966					8.3	11	2	0	281	1	0	552	17	90	0.7	1.2	675	1140	4
	124CZWX	412	10/15/1987				22	8.8	8	2	1	299	1	20	538	20	116	0.6	0.0	731	1341	8
	124CZWX	412	03/26/1993 U	01	01	10			13					4	558	28	108	0.6				
35 34 102	124CZWX	379	12/02/1966					8.4	11	1	0	316	1	0	624	0	107	1.1	0.2	744	1290	2
	124CZWX	379	05/29/1975					8.5	12	2	1	311		4	650	4	104	1.3	2.6	761	1200	5
35 34 201	124CZWX	430	09/08/1941 U								3	287		0	616	5	110	1.2				
35 34 202	124CZWX	281	05/29/1961				21	7.7	11	6	1	416		0	374	24	422	0.4	0.2	1064	1970	23
35 34 303	110TRRC	30	11/09/1976					8.3	72	142	10	171		0	316	295	149	0.2	8.0	1003	1727	397

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60-8-8

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 34 401	124CZWX	190	09/11/1941 U									185		0	415	46	16	1.0				
35 34 401	124CZWX	190	12/02/1966				21	8.0	11	5	1	219	2	0	536	31	16	0.7	0.2	548	904	20
35 34 402	124CZWX	455	12/02/1966				22	8.2	11	1	0	239	1	0	559	35	15	0.7	5.0	582	952	5
35 34 404	124CZWX	811	12/08/1966 U				26	8.6	12	4	1	860	3		604	66	960		0.6	2244	3960	15
35 34 405	124CZWX	604	12/08/1966 U				22	8.6	12	1	0	261	1		580	34	15	0.6	0.5	610	1040	4
35 34 501	124CZWX	681	05/26/1961					8.0	12	2	0	521		0	618	30	425	0.6	0.0	1294	2310	6
35 34 503	124CZWX	218	04/24/1936							2	4	217		0	525	37	18			538		21
	124CZWX	218	12/02/1966					8.2	10	1	0	206	1	0	486	36	11	0.5	3.0	507	833	5
35 34 601	124CZWX	299	10/19/1967				21	8.6	7	1	1	201	1	8	376	94	12	0.4	0.0	510	888	3
35 34 701	124CZWX	827	05/00/1951 U					8.5	23	26	15	589			505	36	628	0.5		1576		127
35 34 702	124CZWX	771	04/14/1936							6	2	678		0	720	8	640			1688		23
	124CZWX	771	10/08/1941 U									636		0	604	23	630	0.5		1586		
	124CZWX	771	05/00/1951					8.4	25	19	13	602		0	505	38	614	0.5		1559		100
35 34 703	124CZWX	582	09/05/1941							7	<1	231		0	573	31	13	0.4		565		21
	124CZWX	582	12/05/1966					8.4	13	<1	<1	265	1	0	584	33	34	0.6	0.6	635	1080	3
35 34 801	124CZWX	450	12/02/1966					8.0	13	1	0	159	1	0	273	104	13	0.3	0.0	425	695	6
35 34 802	124CZWX	300	12/02/1966					7.7	10	12	5	168	3	0	278	150	27	0.3	2.0	514	833	51
35 34 803	124CZWX	390	12/09/1966					8.2	12	1	0	276	1	0	658	42	10	0.7	2.0	668	1100	3
35 34 901	124CZWX	300	12/02/1966					7.5	13	3	0	138	3	0	244	97	12	0.2	3.0	388	633	12
35 35 401	124CZWX	378	06/24/1936 U							7	6	439		0	665	42	290			1110		44
35 35 402	124CZWX	320	05/30/1961					7.7	11	2	0	442		0	414	0	445	0.7	0.0	1104	2060	9
	124CZWX	320	12/01/1966				22	7.6	10	2	0	440	2	0	420	2	450	0.7	0.5	1113	2040	10
35 35 701	124CZWX	464	09/02/1941 U								5	272		0	549	38	66	0.5				
	124CZWX	464	12/01/1966				22	8.2	11	1	0	256	1	0	510	47	68	0.6	0.2	635	1070	6
	124CZWX	464	10/02/1974	02	01			8.1		1	1	237		0	500	45	53	0.6	1.3	584	1080	7
	124CZWX	464	05/27/1975				23	8.6	13	2	1	276		19	560	32	65	0.6	0.4	684	1104	5

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GROUND WATER QUALITY SAMPLES
COUNTY - Gregg

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 35 901	124CZWX	183	05/30/1981					7.9	14	5	1	157		0	387	9	23	0.7	0.5	400	668	20
35 35 902	124CZWX	183	12/01/1966				21	8.0	11	5	1	160	2	0	398	15	23	0.7	0.2	413	692	18
35 35 903	124CZWX	446	12/01/1968					8.2	12	2	0	518	2	0	720	0	392	1.6	0.2	1281	2250	7
35 36 701	124CZWX	39	01/27/1942 U							17	13	44		0	16	10	91		50.0	233		98
35 36 703	124CZWX	39	12/01/1966					7.1	46	44	1	57	2	0	144	14	72	0.2	14.0	321	523	115
	124CZWX	39	07/24/1970					7.2	47	65	2	22		0	216	11	20	0.1	3.0	276	404	173
35 41 302	124CZWX	425	05/28/1981				21	8.1	13	1	0	185		0	404	55	11	0.2	0.0	463	755	3
	124CZWX	425	12/06/1966					8.1	12	1	0	185	1	0	412	58	12	0.3	0.2	472	779	4
	124CZWX	425	10/22/1987					8.6	8	1	1	196	1	8	418	57	11	0.3	0.0	488	864	6
35 41 303	124CZWX	908	04/15/1938 U							6	3	295		0	604	29	102			731		27

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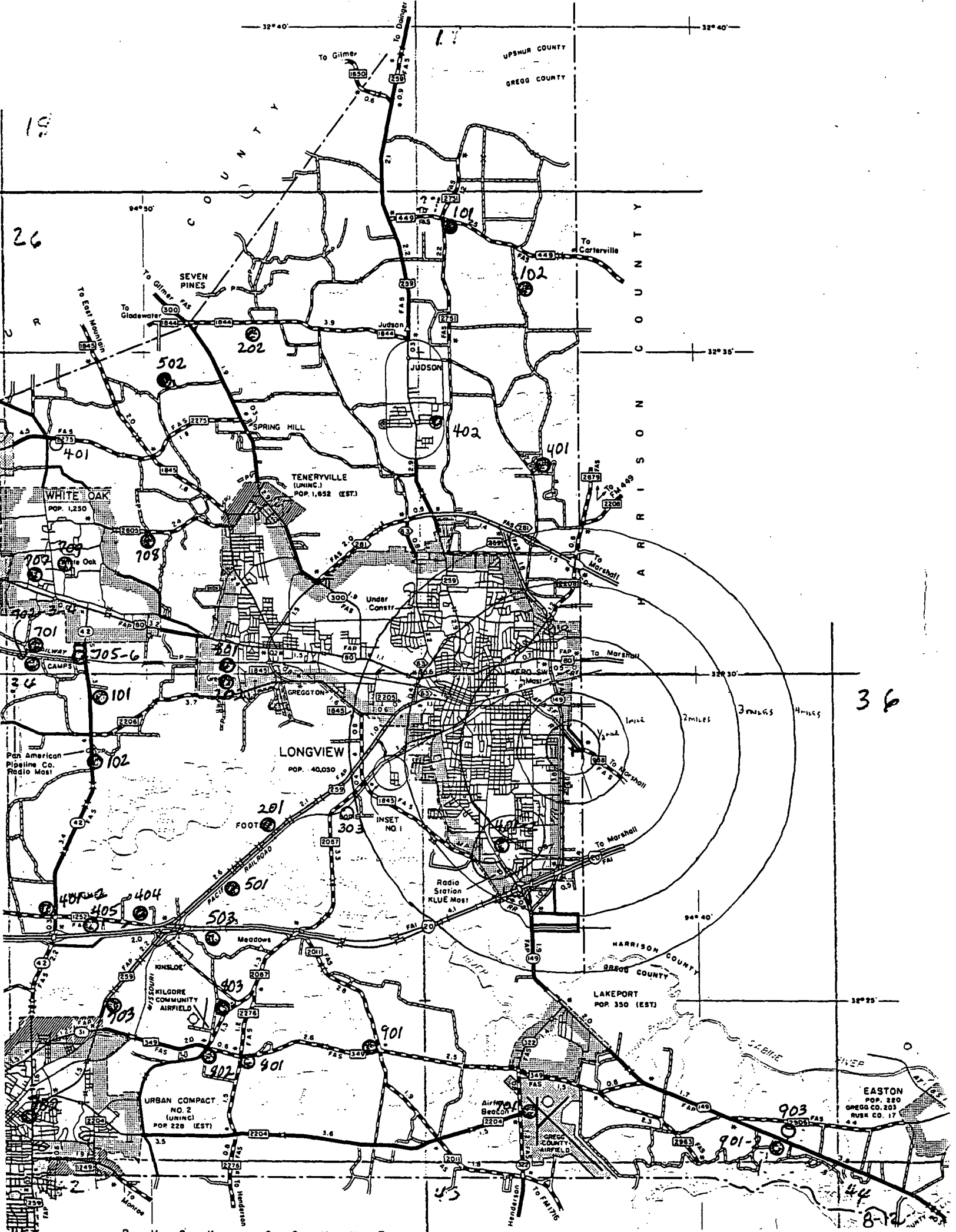
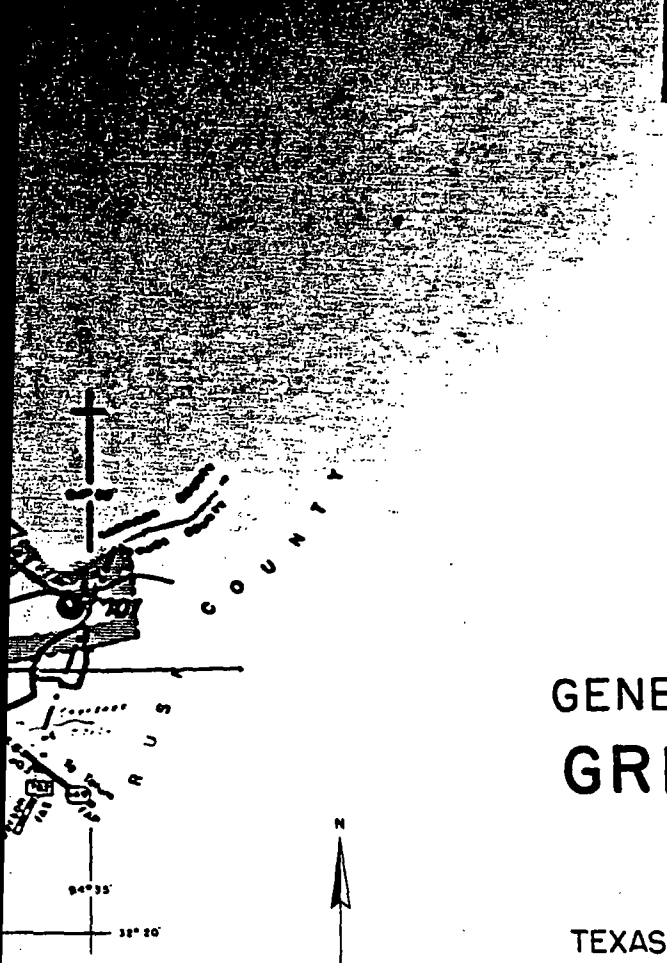
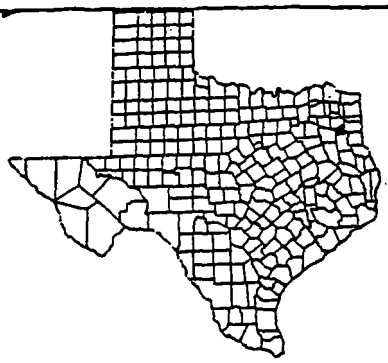


UPSHUR COUNTY
GREGG COUNTY
HARRISON COUNTY
To Gilmer
To Daingerfield
To Carterville
SEVEN PINES
To Gladewater
To East Mountain
Judson
JUDSON
SPRING HILL
TENERYVILLE (UNINC.) POP. 1,652 (EST.)
WHITE OAK POP. 1,250
White Oak
Under Constr.
To Marshall
KERO SW Mast
GREGGTON
CAMPS
Pan American Pipeline Co. Radio Mast
LONGVIEW POP. 40,050
FOOT
INSET NO. 1
Radio Station KLUE Mast
Meadows
KINSLOE
KILGORE COMMUNITY AIRFIELD
MISSOURI
PACIFIC RAILROAD
LAKEPORT POP. 350 (EST)
URBAN COMPACT NO. 2 (UNINC) POP. 228 (EST)
Airfield Beacon
GREGG COUNTY AIRFIELD
EASTON POP. 220 GREGG CO. 203 RUSK CO. 17
To Monroe
To Henderson
To FM 1716
To FM 449
1 mile
2 miles
3 miles
4 miles
32° 40'
32° 35'
32° 30'
32° 25'
94° 50'
94° 40'





KEY TO COUNTIES

GENERAL HIGHWAY MAP
GREGG COUNTY
TEXAS

PREPARED BY THE

TEXAS STATE HIGHWAY DEPARTMENT
PLANNING SURVEY DIVISION

IN COOPERATION WITH THE

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS

SCALES

1965

1960 CENSUS FIGURES

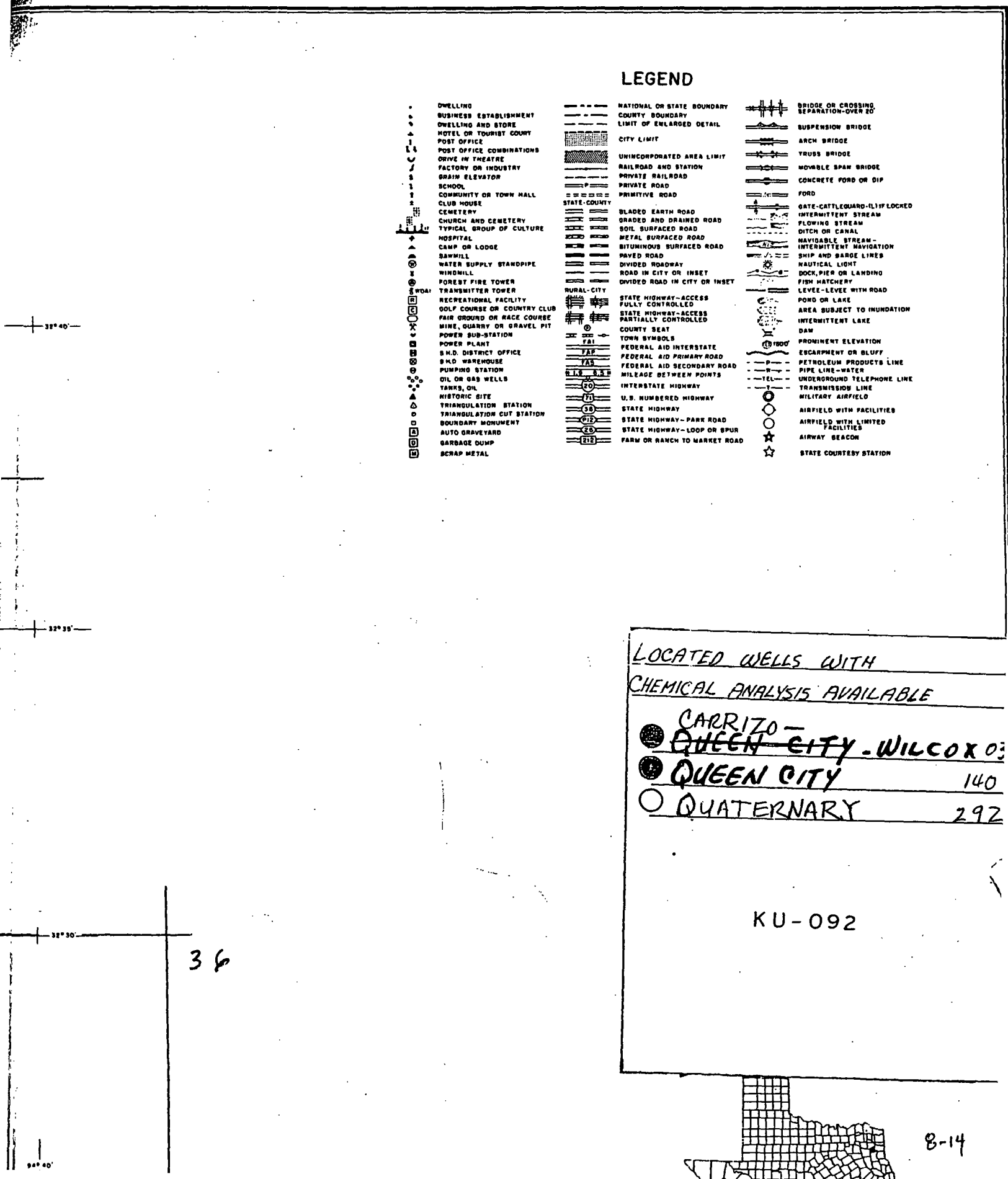
POLYCONIC PROJECTION NORTH AMERICAN DATUM

Control: U. S. Coast and Geodetic Survey and U. S. Geological Survey supplemented by U. S. Engineer's Surveys, Railroad Alignments, State Highway Alignments, and Planning Survey Division's Road Inventory. Lateral roads and drainage plotted from aerial photographs. Compiled: 1956 Map field checked: 1965 Photographs: 1963

HIGHWAYS REVISED TO MARCH 1, 1970

sheet 1 of 1 base sheet and 1 supplementary sheet

8-13


LEGEND
DWELLING
BUSINESS ESTABLISHMENT
DWELLING AND STORE
HOTEL OR TOURIST COURT
POST OFFICE
POST OFFICE COMBINATIONS
DRIVE IN THEATRE
FACTORY OR INDUSTRY
GRAIN ELEVATOR
SCHOOL
COMMUNITY OR TOWN HALL
CLUB HOUSE
CEMETERY
CHURCH AND CEMETERY
TYPICAL GROUP OF CULTURE
HOSPITAL
CAMP OR LODGE
SAWMILL
WATER SUPPLY STANDPIPE
WINDMILL
FOREST FIRE TOWER
TRANSMITTER TOWER
RECREATIONAL FACILITY
GOLF COURSE OR COUNTRY CLUB
FAIR GROUND OR RACE COURSE
MINE, QUARRY OR GRAVEL PIT
POWER SUB-STATION
POWER PLANT
S.H.D. DISTRICT OFFICE
S.H.D. WAREHOUSE
PUMPING STATION
OIL OR GAS WELLS
TANKS, OIL
HISTORIC SITE
TRIANGULATION STATION
TRIANGULATION CUT STATION
BOUNDARY MONUMENT
AUTO GRAVEYARD
GARBAGE DUMP
SCRAP METAL
NATIONAL OR STATE BOUNDARY
COUNTY BOUNDARY
LIMIT OF ENLARGED DETAIL
CITY LIMIT
UNINCORPORATED AREA LIMIT
RAILROAD AND STATION
PRIVATE RAILROAD
PRIVATE ROAD
PRIMITIVE ROAD
STATE-COUNTY
BLADED EARTH ROAD
GRADED AND DRAINED ROAD
SOIL SURFACED ROAD
METAL SURFACED ROAD
BITUMINOUS SURFACED ROAD
PAVED ROAD
DIVIDED ROADWAY
ROAD IN CITY OR INSET
DIVIDED ROAD IN CITY OR INSET
RURAL-CITY
STATE HIGHWAY-ACCESS FULLY CONTROLLED
STATE HIGHWAY-ACCESS PARTIALLY CONTROLLED
COUNTY SEAT
TOWN SYMBOLS
FAI
FEDERAL AID INTERSTATE
FAP
FEDERAL AID PRIMARY ROAD
FAS
FEDERAL AID SECONDARY ROAD
MILEAGE BETWEEN POINTS
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAY
STATE HIGHWAY
STATE HIGHWAY-PARK ROAD
STATE HIGHWAY-LOOP OR SPUR
FARM OR RANCH TO MARKET ROAD
BRIDGE OR CROSSING, SEPARATION-OVER 20'
SUSPENSION BRIDGE
ARCH BRIDGE
TRUSS BRIDGE
MOVABLE SPAN BRIDGE
CONCRETE FORD OR DIP
FORD
GATE-CATTLEGUARD-(L) IF LOCKED
INTERMITTENT STREAM
FLOWING STREAM
DITCH OR CANAL
NAVIGABLE STREAM-INTERMITTENT NAVIGATION
SHIP AND BARGE LINES
NAUTICAL LIGHT
DOCK, PIER OR LANDING
FISH HATCHERY
LEVEE-LEVEE WITH ROAD
POND OR LAKE
AREA SUBJECT TO INUNDATION
INTERMITTENT LAKE
DAM
PROMINENT ELEVATION
ESCARPMENT OR BLUFF
PETROLEUM PRODUCTS LINE
PIPE LINE-WATER
UNDERGROUND TELEPHONE LINE
TRANSMISSION LINE
MILITARY AIRFIELD
AIRFIELD WITH FACILITIES
AIRFIELD WITH LIMITED FACILITIES
AIRWAY BEACON
STATE COURTESY STATION
32° 40'
32° 35'
32° 30'
94° 40'
LOCATED WELLS WITH
CHEMICAL ANALYSIS AVAILABLE
CARRIZO-
~~QUEEN CITY~~ - WILCOX 03
QUEEN CITY 140
QUATERNARY 292
KU-092
36
8-14

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

WATER LEVEL PUBLICATION REPORT
COUNTY - Gregg

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
35 25 602	124QCWX	536	380	05/08/1961	-91.10		289
				09/13/1966	-85.30	5.80	295
				06/24/1970	-105.05	-19.75	275
				02/23/1971	-102.80	2.25	277
				02/17/1972	-103.22	-0.42	277
				02/14/1973	-109.58	-6.36	270
				02/13/1975	-104.48	5.10	276
				12/01/1975	-104.58	-0.10	275
				12/10/1976	-104.90	-0.32	275
				12/08/1978	-111.55	-6.65	268
				11/10/1981	-110.85	0.70	269
				11/01/1982	-120.00	-9.15	260
				10/29/1984	-119.45	0.55	261
				12/05/1985	-112.37	7.08	268
				11/18/1986	-114.40	-2.03	266
				02/11/1988	-113.55	0.85	266
35 25 801	124CZWX	279	295	07/12/1940	-83.20		212
				05/08/1961	-44.30	38.90	251
				09/13/1966	-43.80	0.50	251
35 25 802	124CZWX	390	375	08/ /1943	-182.00		193
				05/08/1961	-131.60	50.40	243
				09/13/1966	-122.90	8.70	252
35 25 901	124CZWX	616	325	02/ /1947	-116.00		209
35 25 902	124CZWX	478	305	09/13/1966	-95.80		209
35 26 201	124QNCT	201	420	09/26/1966	-105.80		314
35 26 202	124CZWX	390	420	09/26/1966	-175.10		245
35 26 204	124CZWX	364	405	09/26/1966	-154.90		250
35 26 401	124QNCT	26	380	02/22/1967	-15.00		365
				08/03/1976	-8.76	6.24	371
				12/10/1976	-9.40	-0.64	371
				12/15/1977	-9.53	-0.13	370

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				12/08/1978	-10.33	-0.80	370
35 26 401	124QNCT	26	380	03/16/1981	-10.54	-0.21	369
				11/10/1981	-10.09	0.45	370
				11/18/1982	-10.74	-0.65	369
				11/16/1983	-11.99	-1.25	368
				10/29/1984	-11.40	0.59	369
				11/18/1986	-10.81	0.59	369
				02/11/1988	-8.61	2.20	371
				11/10/1988	-12.60	-3.99	367
				10/18/1989	-11.60	1.00	368
				11/12/1990	-7.64	3.96	372
				12/10/1991	-6.27	1.37	374
				11/16/1992	-10.07	-3.80	370
35 26 501	124CZWX	478	398	05/ /1959	-110.00		288
				09/26/1966	-147.60	-37.60	250
35 26 502	124QNCT	161	395	09/29/1966	-75.50		320
35 26 701	124CZWX	547	340	05/ /1961	-209.00		131
35 26 705	124CZWX	458	345	06/ /1938	-146.00		199
				12/21/1966	-143.00	3.00	202
35 26 706	124CZWX	430	345	04/23/1964	-164.00		181
				12/21/1966	-143.01	20.99	202
				08/03/1976	-132.00	11.01	213
				12/10/1976	-124.21	7.79	221
				12/15/1977	-124.00	0.21	221
				12/05/1978	-124.74	-0.74	220
				03/16/1981	-122.84	1.90	222
				11/10/1981	-123.46	-0.62	222
				10/29/1984	-124.66	-1.20	220
				01/13/1986	-116.08	8.58	229
				11/18/1986	-122.35	-6.27	223
				09/23/1987	-113.14	9.21	232
				02/11/1988	-112.33	0.81	233
				10/19/1989	-117.98	-5.65	227
				11/12/1990	-111.56	6.42	233
				12/10/1991	-112.72	-1.16	232
				11/16/1992	-112.38	0.34	233

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

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WATER LEVEL PUBLICATION REPORT
COUNTY - Gregg

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
35 26 708	124CZWX	540	365	11/ /1956	-185.00		180
35 26 708	124CZWX	540	365	12/21/1966	-193.20	-8.20	172
35 26 709	124CZWX	470	380	08/29/1941	-171.60		208
				05/15/1961	-177.80	-6.20	202
				09/28/1966	-180.50	-2.70	200
35 27 101	124QNCT	49	375	12/12/1966	-39.40		336
				06/24/1970	-34.20	5.20	341
				02/23/1971	-36.46	-2.26	339
				02/17/1972	-36.96	-0.50	338
				02/14/1973	-37.30	-0.34	338
				02/13/1975	-27.10	10.20	348
				12/01/1975	-27.27	-0.17	348
				12/10/1976	-28.20	-0.93	347
				12/15/1977	-30.29	-2.09	345
				12/08/1978	-32.71	-2.42	342
				11/10/1981	-32.41	0.30	343
				11/18/1982	-32.89	-0.48	342
				11/16/1983	-33.97	-1.08	341
				10/30/1984	-34.92	-0.95	340
				11/17/1986	-30.53	4.39	344
				02/11/1988	-28.14	2.39	347
				11/09/1988	-30.92	-2.78	344
				10/18/1989	-30.31	0.61	345
				11/12/1990	-27.34	2.97	348
				12/10/1991	-24.35	2.99	351
				11/17/1992	-25.55	-1.20	349
35 27 401	124CZWX	505	445	03/24/1965	-190.00		255
				08/03/1976	-218.00	-28.00	227
				12/10/1976	-208.90	9.10	236
				12/15/1977	-204.80	4.10	240
				11/10/1981	-215.75	-10.95	229
				11/16/1983	-219.73	-3.98	225
				10/30/1984	-212.45	7.28	233
				11/17/1986	-216.58	-4.13	228
35 27 402	124QNCT	45	390	08/09/1974	-16.00		374
				08/02/1976	-12.12	3.88	378
				12/10/1976	-17.02	-4.90	373
				12/15/1977	-13.85	3.17	376

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				12/08/1978	-14.22	-0.37	376
35 27 402	124QNCT	45	390	11/10/1981	-14.32	-0.10	376
				11/18/1982	-15.31	-0.99	375
				11/16/1983	-15.20	0.11	375
				10/30/1984	-14.15	1.05	376
				11/17/1986	-12.62	1.53	377
				02/11/1988	-9.10	3.52	381
				11/09/1988	-12.24	-3.14	378
				10/18/1989	-15.63	-3.39	374
				11/12/1990	-7.20	8.43	383
				12/10/1991	-6.95	0.25	383
				11/17/1992	-12.65	-5.70	377
35 33 202	124CZWX	390	360	09/23/1966	-130.50		230
35 33 204	124QNCT	47	360	06/24/1970	-45.45		315
				02/23/1971	-45.48	-0.03	315
				02/14/1973	-44.56	0.92	315
				02/07/1974	-37.20	7.36	323
				02/13/1975	-43.07	-5.87	317
				12/01/1975	-38.67	4.40	321
				12/10/1976	-41.36	-2.69	319
				12/15/1977	-42.14	-0.78	318
				12/08/1978	-44.32	-2.18	316
				03/16/1981	-42.95	1.37	317
				11/10/1981	-44.68	-1.73	315
				11/18/1982	-46.56	-1.88	313
				11/16/1983	-47.04	-0.48	313
35 33 501	124CZWX	762	400	07/ /1961	-177.00		223
				06/22/1970	-183.90	-6.90	216
				02/23/1971	-166.75	17.15	233
				02/17/1972	-170.44	-3.69	230
				02/07/1974	-170.33	0.11	230
				02/13/1975	-170.30	0.03	230
				12/01/1975	-172.69	-2.39	227
				12/10/1976	-181.10P		219
				11/10/1981	-194.53	-21.84	205
				11/18/1982	-197.11	-2.58	203
				11/10/1988	-229.76	-32.65	170
				10/19/1989	-225.68P		174
				11/12/1990	-230.60	-0.84	169

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL PUBLICATION REPORT
COUNTY - Gregg

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				12/10/1991	-233.10	-2.50	167
35 33 501	124CZWX	762	400	11/16/1992	-229.60P		170
35 33 502	124CZWX	622	400	12/08/1966	-170.70		229
35 33 601	124CZWX	854	410	09/22/1966	-168.80		241
35 33 801	124CZWX	507	380	12/05/1966	-159.60		220
35 33 802	124CZWX	438	382	06/23/1970	-146.65		235
				02/23/1971	-137.30	9.35	245
				02/17/1972	-136.91	0.39	245
				02/14/1973	-153.21	-16.30	229
				02/07/1974	-151.10	2.11	231
				02/13/1975	-150.73	0.37	231
				12/01/1975	-153.24	-2.51	229
				12/10/1976	-154.32	-1.08	228
35 33 803	124CZWX	388	375	02/ /1966	-151.00		224
35 33 901	124CZWX	875	370	05/ /1931	-87.00		283
				12/11/1939	-155.00	-68.00	215
				09/03/1941	-161.80	-6.80	208
				09/21/1966	-133.10	28.70	237
35 33 902	124CZWX	906	370	12/11/1939	-150.10		220
				11/26/1940	-153.20	-3.10	217
				09/03/1941	-157.10	-3.90	213
				09/21/1966	-124.40	32.70	246
35 33 904	124CZWX	528	345	04/ /1936	-70.00		275
				05/09/1961	-165.60	-95.60	179
				02/19/1964	-154.80	10.80	190
				09/08/1966	-156.00	-1.20	189
35 33 906	124CZWX	950	290	02/20/1964	-46.20		244
35 33 907	124CZWX	650	320	05/29/1936	-86.10		234
35 33 910	124CZWX	512	350	09/07/1966	-171.10		179
35 33 911	124CZWX	915	370	12/05/1966	-70.70		299

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
35 33 915	124CZWX	615	385	11/11/1988	-85.43		300
35 34 101	124CZWX	412	320	12/02/1966	-100.70		219
35 34 102	124CZWX	379	290	10/13/1966	-69.50		221
				10/15/1987	-65.27	4.23	225
				02/11/1988	-64.30	0.97	226
				11/10/1988	-71.70	-7.40	218
				10/19/1989	-67.69	4.01	222
				11/12/1990	-67.04	0.65	223
				12/10/1991	-68.40	-1.36	222
				11/16/1992	-68.40	0.00	222
35 34 201	124CZWX	430	260	09/02/1966	-25.60		234
35 34 202	124CZWX	281	368	09/28/1966	-152.30		216
35 34 402	124CZWX	455	340	10/ /1960	-102.00		238
35 34 403	124CZWX	800	340	09/24/1941	-114.50		226
				10/13/1966	-102.80	11.70	237
				06/24/1970	-97.30	5.50	243
				02/23/1971	-85.00	12.30	255
				02/17/1972	-85.95	-0.95	254
				02/14/1973	-88.73	-2.78	251
				02/07/1974	-68.04	20.69	272
				02/13/1975	-53.70	14.34	286
				12/01/1975	-51.02	2.68	289
				12/10/1976	-50.02	1.00	290
				12/15/1977	-49.44	0.58	291
				12/08/1978	-54.50	-5.06	286
				03/17/1981	-88.16	-33.66	252
				11/10/1981	-91.09	-2.93	249
				11/18/1982	-92.60	-1.51	247
				11/16/1983	-104.56	-11.96	235
				10/29/1984	-106.78	-2.22	233
				12/05/1985	-123.99	-17.21	216
				11/18/1986	-120.56	3.43	219
				02/11/1988	-115.25	5.31	225
				11/10/1988	-115.89	-0.64	224
				10/19/1989	-83.44	32.45	257

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				11/12/1990	-113.50	-30.06	227
35 34 403	124CZWX	800	340	12/10/1991	-118.47	-4.97	222
				11/16/1992	-118.67	-0.20	221
35 34 501	124CZWX	681	265	05/17/1961	-46.90		218
				09/02/1966	-32.80	14.10	232
35 34 502	124CZWX	29	265	09/02/1966	-16.80		248
35 34 701	124CZWX	827	230	09/21/1966	-96.00		134
35 34 702	124CZWX	771	230	09/ /1934	-111.00		119
35 34 703	124CZWX	582	330	07/ /1938	-117.00		213
35 34 801	124CZWX	450	360	12/02/1966	-106.60		253
35 34 901	124CZWX	300	340	11/ /1963	-80.00		260
35 35 401	124CZWX	378	320	09/02/1966	-70.90		249
35 35 402	124CZWX	320	320	10/ /1955	-84.00		236
				06/24/1970	-65.20	18.80	255
				02/23/1971	-65.70	-0.50	254
				02/17/1972	-65.44	0.26	255
				02/14/1973	-66.19	-0.75	254
				02/13/1975	-64.29	1.90	256
				12/01/1975	-65.70	-1.41	254
				12/10/1976	-65.87	-0.17	254
				12/15/1977	-66.35	-0.48	254
				12/08/1978	-68.04	-1.69	252
				03/17/1981	-67.99	0.05	252
				11/10/1981	-68.12	-0.13	252
				11/18/1982	-68.62	-0.50	251
				11/16/1983	-68.99	-0.37	251
				10/30/1984	-69.24	-0.25	251
				11/18/1986	-68.73	0.51	251
				02/11/1988	-67.98	0.75	252
				11/11/1988	-70.80	-2.82	249
				10/19/1989	-69.87	0.93	250
				11/12/1990	-70.06	-0.19	250
				12/10/1991	-70.95	-0.89	249

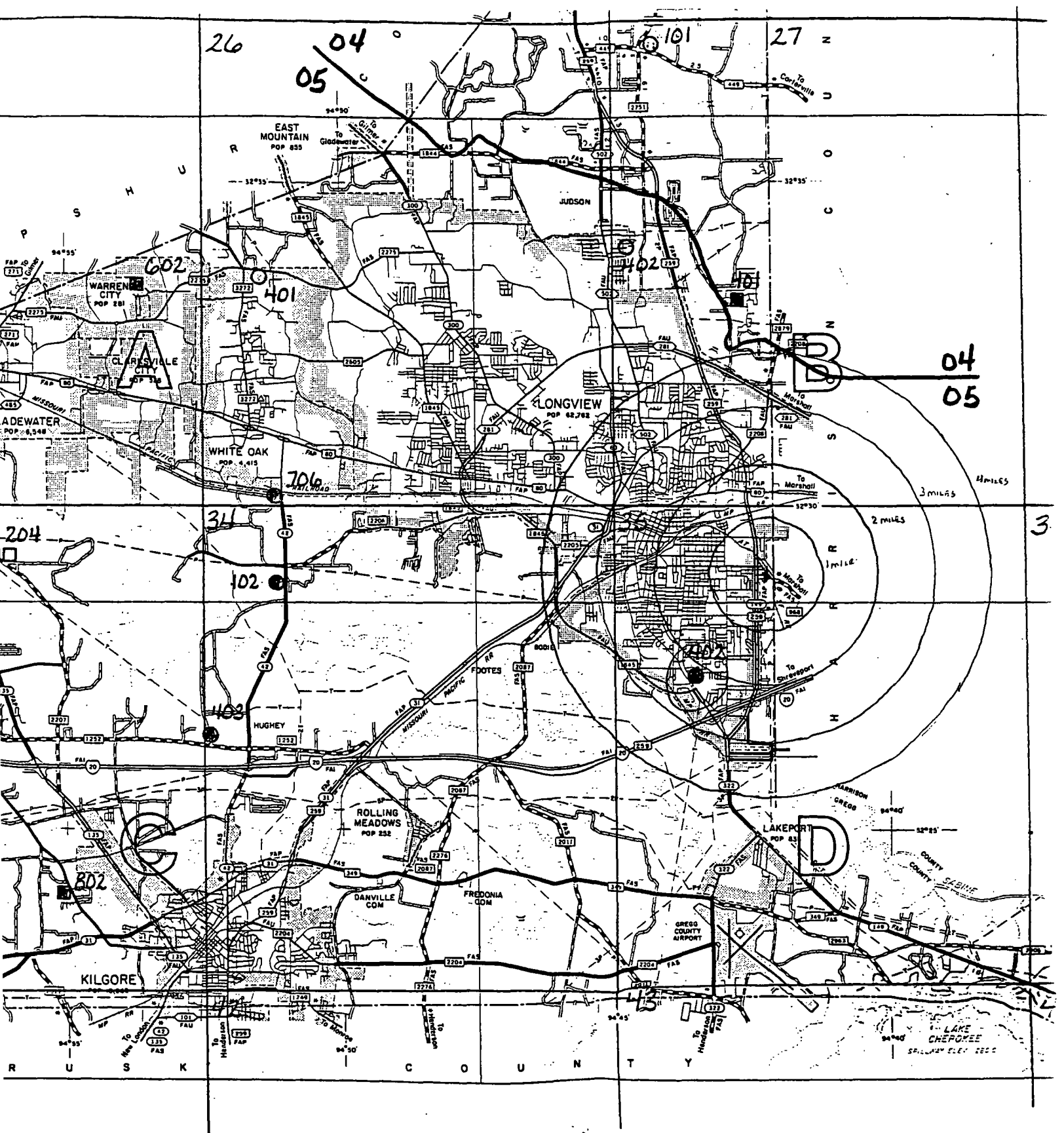
P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

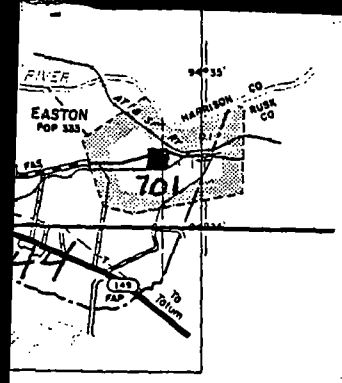
STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				11/17/1992	-69.90	1.05	250
35 35 701	124CZWX	464	357	08/29/1941	-93.90		263
				09/08/1966	-100.60	-6.70	256
35 35 902	124CZWX	183	291	08/31/1966	-44.70		246
35 35 903	124CZWX	448	350	09/ /1963	-96.00		254
35 36 701	124CZWX	39	265	08/31/1966	-25.40		240
				06/18/1970	-5.99	19.41	259
				06/24/1970	-24.20	-18.21	241
				02/23/1971	-24.80	-0.60	240
				03/02/1971	-5.00	19.80	260
				02/11/1972	-3.48	1.52	262
				02/13/1973	-1.11	2.37	264
				02/14/1973	-24.14	-23.03	241
				02/08/1974	-2.80	21.34	262
35 41 301	124CZWX	625	380	05/ /1957	-195.00		185
35 41 302	124CZWX	425	380	05/ /1957	-198.00		182
35 41 303	124CZWX	908	365	04/ /1931	-76.00		289
				12/06/1966	-156.00	-80.00	209

TOTAL WELLS: 57

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE



26
27
04
05
101
EAST MOUNTAIN
POP 855
To Gladewater
To Gilmer
JUDSON
WARREN CITY
POP 281
602
401
402
CLARESVILLE CITY
LONGVIEW
POP 62,762
WHITE OAK
POP 4,415
706
34
204
102
403
HUGHEY
FOOTES
BODIE
ROLLING MEADOWS
POP 252
DANVILLE COM
FREDONIA COM
802
KILGORE
LAKEPORT
POP 83
GREGG COUNTY AIRPORT
To Marshall
To Shreveport
To Carterville
To Henderson
To Monroe
To New London
MISSOURI PACIFIC RR
HARRISON
GREGG
COUNTY
SABINE
LAKE CHEROKEE
1 MILE
2 MILES
3 MILES
4 MILES
R U S K C O U N T Y



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GENERAL HIGHWAY MAP
GREGG COUNTY
TEXAS

PREPARED BY THE
STATE DEPARTMENT OF HIGHWAYS
AND PUBLIC TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE IN MILES
0 1 2 3 4
MAP

1980

1980 CENSUS FIGURES

HIGHWAYS REVISED TO MAY 1, 1989

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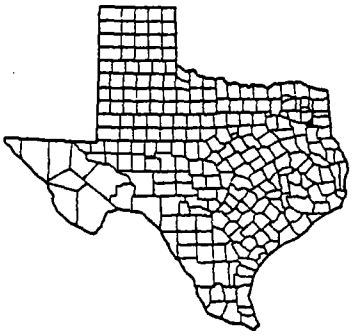
POLYCONIC PROJECTION NORTH AMERICAN DATUM
CONTROL: U.S. COAST AND GEODETIC SURVEY AND U.S. GEOLOGICAL SURVEY

Sheet 1 of 1 Base Sheet and 4 Supplementary Sheets

N



KEY TO COUNTIES

8-24

POST OFFICE AND BUSINESS
GRAIN ELEVATOR
DRIVE IN THEATRE
SCHOOL
COMMUNITY OR TOWN HALL
CLUB HOUSE
CHURCH
DWELLING
CEMETERY
CHURCH AND CEMETERY
HOSPITAL
CAMP OR LODGE
SAWMILL
WATER TANK
PUMPING STATION
TRANSMITTER TOWER
MINE, QUARRY OR GRAVEL PIT
S D H & P T DISTRICT OFFICE
S D H & P T WAREHOUSE
POWER SUB STATION
POWER PLANT
AUTO JUNKYARD
GARBAGE AND RUBBISH DUMP
SCRAP METAL
FEED LOT
SEWAGE TREATMENT PLANT
TRAILER PARK
RECREATIONAL FACILITY
GOLF COURSE OR COUNTRY CLUB
FAIR GROUND OR RODEO ARENA

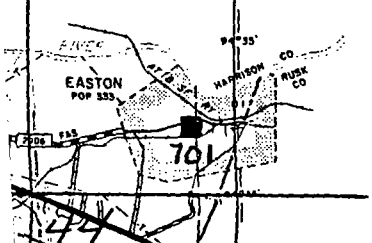
CITY LIMIT
RAILROAD AND STATION
PRIVATE ROAD
STATE - OTHER
BLADED EARTH ROAD
GRADED AND DRAINED ROAD
SOIL SURFACED ROAD
GRAVEL SURFACED ROAD
PAVED ROAD LOW TYPE
PAVED ROAD HIGH TYPE
DIVIDED ROADWAY
ROAD IN CITY OR INset
DIVIDED ROADWAY WITH FRONTAGE ROADS
FEDERAL AID INTERSTATE ROUTE
FEDERAL AID PRIMARY ROUTE
FEDERAL AID SECONDARY ROUTE
FEDERAL AID URBAN ROUTE
MILEAGE BETWEEN POINTS
INTERSTATE HIGHWAY
U S NUMBERED HIGHWAY
STATE HIGHWAY
STATE HIGHWAY LOOP OR SPUR
STATE HIGHWAY PARK ROAD
FARM OR RANCH TO MARKET ROAD
RECREATIONAL ROAD
MULTIPLE U S HIGHWAY ROUTE

BRIDGE OR CROSSING SEPARATION OVER 20
CONCRETE FORD
NATURAL FORD
GATE CATTLEGUARD
INTERMITTENT STREAM
FLOWING STREAM
SHIP AND BARGE CHANNEL
FISH HATCHERY
LEVEE LEVEE WITH ROAD
LAKE WITH DAM
AREA SUBJECT TO INUNDATION
INTERMITTENT LAKE
PROMINENT ELEVATION
ESCARPMENT OR BLUFF
TRANSMISSION LINE
PETROLEUM PRODUCTS PIPE LINE
WATER PIPE LINE
MILITARY AIRBASE
AIRPORT WITH FACILITIES
HISTORIC SITE
TRIANGULATION STATION
TRIANGULATION CUT STATION
BOUNDARY MONUMENT
U S CUSTOMS PORT OF ENTRY
S D H & P T TOURIST BUREAU

Water Level Observation Wells

- ○ Current Well
- □ Historical Well
- ● 124 - Carrizo Sand - Wilcox Grp
- ○ 124 - Queen City Sand
- ● 124 - Queen City Sand - Wilcox Grp.

36



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GENERAL HIGHWAY

8-25

REFERENCE 9

TEXAS WATER DEVELOPMENT BOARD, "RECORDS OF WELLS, SPRINGS AND TEST HOLES", "WATER LEVEL PUBLICATION PUBLICATION REPORT", "WATER QUALITY SAMPLES REPORT", HARRISON COUNTY, JUNE, 1993.

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Harrison

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 11 901		324530	943950		124QNCT	16			H	H	Y
35 11 902		324615	943845	5	124WLCX	101				N	Y
35 19 301		324345	943845	5	124CPRS	39				N	Y
35 19 501		324115	944115	5	124CPRS	35			H	N	Y
35 19 601		324115	943845	5	124CPRS	32			H	N	Y
35 20 401		324115	943615	5	124CPRS	18			H	N	Y
35 20 402		324115	943615	5	124CPRS	850			N	N	Y
35 20 403		324030	943532		124WLCX	583			N	H	Y
35 20 501		324115	943345	5	124CPRS	36			P	N	Y
35 20 502		324115	943345	5	124CPRS	310			H	N	Y
35 20 801		323845	943345	5	124CPRS	61			H S	N	Y
35 20 901		323845	943115	5	124CPRS	34			H S	N	Y
35 20 903		323904	943220		124QNCT	90			H	C	Y
35 21 401	Morris Reel Co.	324045	942950	1	124QNCT	60			U	C	N
35 21 801		323845	942615	5	124CPRS				P	N	Y
35 21 901		323845	942345	5	124CPRS					N	Y
35 22 401		324118	942018		124WLCX	25			U	C	N
35 22 403		324115	942115	5	124CPRS	260			P	N	Y
35 22 501		324115	941845	5	124CPRS	30				N	Y
35 22 504		324115	941845	5	124CPRS	365			H S	N	Y
35 22 505		324115	941845	5	124CPRS	45			S	N	Y
35 22 601		324115	941615	5	124CPRS	17			H	N	Y
35 22 704		323845	942115	5	124CPRS	215			H	N	Y
35 22 705		323845	942115	5	124CPRS	215			H	N	Y

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 22 706		323845	942115	5	124CPRS	316			N	N	Y
35 22 707		323845	942115	5	124CPRS	200			H	N	Y
35 22 708		323855	942033		124WLCX	400			P	C	Y
35 23 101	Corps of Engineers	324344	941358	1	124CPRS	31	07151991	O	U	M	Y
35 23 301	Corps of Engineers	324417	940752	1	124CPRS	31	07091991	O	U	M	Y
35 23 502		324115	941115	5	124CPRS	315			P	N	Y
35 23 505	Corps of Engineers	324215	941004	1	124CPRS	21	06251991	O	U	M	Y
35 23 506	Corps of Engineers	324144	941113	1	124CPRS	36	06241991	O	U	M	Y
35 23 602		324006	940959		124WLCX	133			U	H	Y
35 23 603	Corps of Engineers	324220	940811	1	124CPRS	51	06261991	O	U	M	Y
35 23 701		323845	941345	5	124CPRS				S	N	Y
35 23 801		323845	941115	5	124CPRS	430			P	N	Y
35 23 802		323926	941150		124WLCX	265			U	H	N
35 23 902		323845	940845	5	124CPRS	105			P	N	Y
35 24 101		324345	940615	5	124CPRS	103			H	N	Y
35 24 401		324115	940615	5	124CPRS	103			H	N	Y
35 24 701		323845	940615	5	124CPRS	36			H	N	Y
35 27 301		323615	943845	5	124CPRS	16			P	N	Y
35 27 302		323615	943845	5	124CPRS	424			S	N	Y
35 27 901		323115	943845	5	124CPRS	274			N	N	Y
35 28 101	Cartersville Church	323556	943542	1	124QNCT	25	1941	W	H	H	Y
35 28 102		323615	943615	5	124CPRS	200			S	N	Y
35 28 402		323345	943615	5	124CPRS	30			H S	N	Y
35 28 802		323115	943345	5	124CPRS	242			P	N	Y
35 28 803		323115	943345	5	124CPRS	201			P	N	Y
35 28 804		323115	943345	5	124CPRS	245			P	N	Y

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Harrison

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 28 902		323115	943115	5	124CPRS	250				N	Y
35 28 903		323050	943120		124CZWX	240			H S	H	Y
35 29 101		323636	942959		124QNCT	34			U	C	N
35 29 102		323615	942845	5	124CPRS	240			H S	N	Y
35 29 103		323615	942845	5	124CPRS	590			N	N	Y
35 29 201		323615	942615	5	124CPRS	600			N	N	Y
35 29 301		323615	942345	5	124CPRS	37			H	N	Y
35 29 401		323345	942845	5	124CPRS	23			H	N	Y
35 29 501		323345	942615	5	124CPRS	30			H	N	Y
35 29 701		323115	942845	5	124CPRS	25			H	N	Y
35 29 703		323115	942845	5	124CPRS	220			H	N	Y
35 29 802		323115	942615	5	124CPRS	30			H	N	Y
35 29 902		323115	942345	5	124CPRS	444			H	N	Y
35 29 903		323115	942345	5	124CPRS	315			P	N	Y
35 29 904		323115	942345	5	124CPRS	410			H	N	Y
35 29 906		323115	942345	5	124CPRS	248				N	Y
35 29 907		323115	942345	5	124CPRS	192				N	Y
35 29 908		323115	942345	5	124CPRS	201				N	Y
35 29 909		323115	942345	5	124CPRS	111				N	Y
35 29 910		323115	942345	5	124CPRS	50				N	Y
35 29 911		323115	942345	5	124CPRS	128				N	Y
35 29 912		323115	942345	5	124CPRS	125				N	Y
35 30 401		323345	942115	5	124CPRS	610				N	Y
35 30 402		323345	942115	5	124CPRS	300				N	Y
35 30 403		323345	942115	5	124CPRS	300				N	Y
35 30 405		323345	942115	5	124CPRS	300				N	Y

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Harrison

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 30 406		323345	942115	5	124CPRS	240				N	Y
35 30 408		323345	942115	5	124CPRS	479				N	Y
35 30 701		323115	942115	5	124CPRS	323			N	N	Y
35 30 702		323212	942219		124WLCX	351			P	H	Y
35 30 703		323220	942137		124WLCX	375			U	H	Y
35 30 704		323115	942115	5	124CPRS	473				N	Y
35 30 705		323034	942040		124WLCX	225			H	C	Y
35 30 803		323115	941845	5	124CPRS	24			H	N	Y
35 30 804		323115	941845	5	124CPRS	364			H	N	Y
35 30 805		323115	941845	5	124CPRS	24				N	Y
35 30 806		323115	941845	5	124CPRS	45			H	N	Y
35 30 901		323115	941615	5	124CPRS	31			H	N	Y
35 30 903		323115	941615	5	124CPRS	40			H	N	Y
35 31 301		323610	940739		124WLCX	16			U	H	N
35 31 302		323615	940845	5	124CPRS	205			H S	N	Y
35 31 601		323345	940845	5	124CPRS	17				N	Y
35 31 602		323324	940829		124WLCX	185			H	C	Y
35 31 701		323115	941345	5	124CPRS	28			H	N	Y
35 31 702		323115	941345	5	124CPRS	411			I	N	Y
35 31 703		323115	941345	5	124CPRS	792			I	N	Y
35 31 708		323115	941345	5	124CPRS	27			H	N	Y
35 31 709		323115	941345	5	124CPRS	415			H	N	Y
35 31 801		323115	941115	5	124CPRS	19			H	N	Y
35 31 901		323115	940845	5	124CPRS	220			N	N	Y
35 32 501		323345	940345	5	124CPRS	18			H	N	Y
35 35 201		322845	944115	5	124CPRS	304			H S	N	Y

9-04

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Harrison

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 35 501		322650	944023		124QCRK	50			H	C	Y
35 35 601		322615	943845	5	124CPRS	450			S	N	Y
35 35 603		322603	943958		124QCRK	40			U	H	N
35 35 604		322615	943845	5	124CPRS	500			S	N	Y
35 36 101		322845	943615	5	124CPRS	35			S	N	Y
35 36 201		322845	943345	5	124QNCT	32				N	Y
35 36 202		322845	943345	5	124QNCT	26				N	Y
35 36 206		322738	943450		124CZWX	300			H	H	Y
35 36 301		322845	943115	5	124RKLW	20				N	Y
35 36 401		322615	943615	5	124RKLW	27				N	Y
35 36 501		322626	943255		124CRRZ	28			U	H	Y
35 36 601		323623	943148		124WLCX	220			H	H	Y
35 36 901		322345	943115	5	124WLCX	200				N	Y
35 37 101		322845	942845	5	124CZWX	465				N	Y
35 37 201		322805	942514		124WLCX	300			H	C	Y
35 37 401		322615	942845	5	124CRRZ	22				N	Y
35 37 402		322615	942845	5	124WLCX	370				N	Y
35 37 601		322615	942345	5	124WLCX	6				N	Y
35 37 701		322345	942845	5	124WLCX	25				N	Y
35 37 801		322416	942624		110AVWX	200			N	C	Y
35 37 802		322345	942615	5	124WLCX	429				N	Y
35 37 803		322345	942615	5	124WLCX	420				N	Y
35 38 101		322812	942118		124WLCX	43			H	H	Y
35 38 402		322708	942117		124WLCX	250			H	H	Y
35 38 602		322615	941615	5	124WLCX	150				N	Y
35 38 603		322615	941615	5	124CPRS				S	N	Y

9-05

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Harrison

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 38 701		322345	942115	5	124WLCX	105				N	Y
35 38 801		322345	941845	5	124WLCX	73				N	Y
35 38 802		322345	941845	5	124CPRS	91				N	Y
35 38 803		322345	941845	5	124WLCX					N	Y
35 38 804		322345	941845	5	124CPRS				S	N	Y
35 39 201		322845	941115	5	124CPRS	33			H	N	Y
35 39 301		322845	940845	5	124WLCX	190			H	N	Y
35 39 304		322845	940845	5	124CPRS	247			N	N	Y
35 39 401		322645	941434		124WLCX	35			H	H	Y
35 39 402		322658	941433		124WLCX	190			H	H	Y
35 39 404		322625	941353		124WLCX	194			H	H	Y
35 39 605		322615	940845	5	124CPRS	245			N	N	Y
35 39 801		322345	941115	5	124CPRS	259			H	N	Y
35 39 902		322345	940845	5	124CPRS	280			P	N	Y
35 40 101		322845	940615	5	124CPRS	205			N	N	Y
35 40 102		322845	940615	5	124CPRS	208			N	N	Y
35 40 201		322845	940345	5	124CPRS	135			N	N	Y
35 40 204		322845	940345	5	124CPRS	151			P	N	Y
35 40 206		322845	940345	5	124CPRS	150			P	N	Y
35 40 207		322845	940345	5	124CPRS	170			H	N	Y
35 40 401		322615	940615	5	124CPRS	40			H S	N	Y
35 40 402		322658	940654		124WLCX	190			N	H	Y
35 40 501		322615	940345	5	124CPRS	22			H	N	Y
35 40 502		322615	940345	5	124CPRS	158			N	N	Y
35 40 507		322643	940406		124WLCX	145			H S	C	Y
35 40 704		322345	940615	5	124CPRS	25			S	N	Y

9-06

RECORDS OF WELLS, SPRINGS, AND TEST HOLES
COUNTY - Harrison

WELL	OWNER	LAT.	LONG.	SOURCE OF COORDS.	WATER BEARING UNIT	DEPTH OF WELL (FT.)	DATE COM-PLETED	WELL TYPE	USE OF WATER	WATER LEVEL AVAIL.	WATER QUAL. AVAIL.
35 46 202	Sabine Farm Education Society	322128	941808	1	124WLCX	147			H	C	Y
35 47 201		322115	941115	5	124CPRS	310			H	N	Y

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

WATER LEVEL PUBLICATION REPORT
COUNTY - Harrison

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
35 11 901	124QNCT	16	315	01/29/1942	-8.60		306
				09/28/1960	-10.20	-1.60	305
				07/01/1964	-13.30	-3.10	302
				06/18/1970	-12.10	1.20	303
				03/03/1971	-9.06	3.04	306
				02/14/1972	-6.97	2.09	308
				02/14/1973	-3.55	3.42	311
				02/08/1974	-5.10	-1.55	310
				02/14/1975	-4.78	0.32	310
				12/09/1975	-13.68	-8.90	301
				12/15/1976	-6.79	6.89	308
35 20 403	124WLCX	583	315	06/18/1970	-76.74		238
				03/03/1971	-77.00	-0.26	238
				02/14/1972	-76.90	0.10	238
				02/14/1973	-78.20	-1.30	237
				02/08/1974	-76.53	1.67	238
				02/14/1975	-73.84	2.69	241
35 20 903	124QNCT	90	355	06/18/1970	-76.30		279
				03/03/1971	-77.50	-1.20	278
				02/14/1972	-77.96	-0.46	277
				02/14/1973	-78.65P		276
				02/08/1974	-75.98	1.98	279
				02/14/1975	-73.10	2.88	282
				12/04/1975	-72.27	0.83	283
				12/15/1976	-74.25	-1.98	281
				12/09/1977	-76.86	-2.61	278
				11/28/1978	-78.22	-1.36	277
				03/20/1981	-77.32	0.90	278
				11/11/1981	-77.63	-0.31	277
				11/16/1982	-78.11	-0.48	277
				11/16/1983	-80.18	-2.07	275
				10/30/1984	-79.90	0.28	275
				11/17/1986	-78.22	1.68	277
				02/04/1988	-77.85	0.37	277
				10/17/1988	-77.62	0.23	277
				10/17/1989	-76.59	1.03	278
				11/13/1990	-75.69	0.90	279

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL PUBLICATION REPORT
COUNTY - Harrison

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				11/05/1991	-74.08	1.61	281
35 20 903	124QNCT	90	355	11/11/1992	-74.10	-0.02	281
35 21 401	124QNCT	60	320	09/29/1960	-33.24		287
				06/18/1970	-32.11	1.13	288
				03/03/1971	-35.10	-2.99	285
				02/14/1972	-34.37	0.73	286
				02/14/1973	-32.57	1.80	287
				02/14/1975	-29.05	3.52	291
				12/04/1975	-30.76	-1.71	289
				12/15/1976	-33.55	-2.79	286
				11/28/1978	-35.18	-1.63	285
				11/12/1981	-34.26	0.92	286
				11/16/1982	-34.33	-0.07	286
				11/16/1983	-33.93	0.40	286
				10/30/1984	-33.30	0.63	287
				12/05/1985	-32.45	0.85	288
				11/17/1986	-32.76	-0.31	287
				02/04/1988	-31.90	0.86	288
				10/17/1988	-32.87	-0.97	287
				10/17/1989	-30.03	2.84	290
				11/13/1990	-32.07	-2.04	288
				11/05/1991	-30.60	1.47	289
				11/11/1992	-32.93	-2.33	287
35 22 401	124WLCX	25	250	10/03/1960	-16.80		233
				08/07/1964	-18.70	-1.90	231
				06/22/1970	-15.72	2.98	234
				03/03/1971	-16.35	-0.63	234
				02/14/1972	-15.29	1.06	235
				02/12/1973	-12.78	2.51	237
				02/14/1975	-10.63	2.15	239
				12/04/1975	-15.60	-4.97	234
				12/15/1976	-16.00	-0.40	234
				11/28/1978	-16.66	-0.66	233
				03/18/1981	-16.00	0.66	234
				11/11/1981	-16.20	-0.20	234
				11/16/1982	-16.32	-0.12	234
				11/16/1983	-15.47	0.85	235
				11/15/1986	-16.23	-0.76	234
				02/04/1988	-14.02	2.21	236
				10/15/1988	-16.65	-2.63	233

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				10/16/1989	-14.57	2.08	235
35 22 401	124WLCX	25	250	11/14/1990	-15.38	-0.81	235
				11/05/1991	-14.98	0.40	235
				11/11/1992	-15.30	-0.32	235
35 22 708	124WLCX	400	300	08/ /1966	-84.00		216
				07/28/1976	-145.33P		155
				12/15/1976	-121.80	-37.80	178
				12/09/1977	-124.58	-2.78	175
				11/11/1981	-124.46	0.12	176
				11/16/1983	-143.04P		157
				10/30/1984	-134.89	-10.43	165
				11/15/1986	-140.27	-5.38	160
				10/15/1988	-155.74P		144
				10/17/1989	-130.08	10.19	170
				11/14/1990	-109.57	20.51	190
				11/05/1991	-151.94P		148
				11/11/1992	-137.12	-27.55	163
35 23 101	124CPRS	31	181	07/15/1991	-9.86		171
				08/22/1991	-10.01	-0.15	171
35 23 301	124CPRS	31	176	07/15/1991	-6.64		169
				08/22/1991	-6.80	-0.16	169
35 23 505	124CPRS	21	175	06/25/1991	-3.28		172
				08/22/1991	-5.33	-2.05	170
35 23 506	124CPRS	36	173	06/25/1991	-1.88		171
				08/21/1991	-4.17	-2.29	169
35 23 602	124WLCX	133	233	05/05/1958	-22.50		211
				06/04/1958	-26.90	-4.40	206
				10/06/1960	-27.90	-1.00	205
				06/17/1964	-28.50	-0.60	205
				06/16/1970	-31.00	-2.50	202
				03/02/1971	-31.26	-0.26	202
				02/14/1972	-31.75	-0.49	201
				02/13/1973	-32.26	-0.51	201
				02/14/1975	-29.40	2.86	204
				12/04/1975	-27.45	1.95	206

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL PUBLICATION REPORT
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WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
35 23 603	124CPRS	51	189	06/27/1991	-16.52		172
35 23 603	124CPRS	51	189	08/22/1991	-19.66	-3.14	169
35 23 802	124WLCX	265	285	03/31/1958	-64.00		221
				07/17/1964	-65.60	-1.60	219
				06/16/1970	-65.00	0.60	220
				03/02/1971	-65.88	-0.88	219
				02/14/1972	-66.68	-0.80	218
				02/13/1973	-66.82	-0.14	218
				02/08/1974	-65.59	1.23	219
				02/14/1975	-64.75	0.84	220
				12/04/1975	-65.53	-0.78	219
				12/16/1976	-65.96	-0.43	219
				11/28/1978	-66.44	-0.48	219
				11/11/1981	-69.10	-2.66	216
				11/16/1982	-68.33	0.77	217
35 28 101	124QNCT	25	290	01/30/1942	-2.90		287
				09/29/1960	-18.10	-15.20	272
				07/21/1964	-22.30	-4.20	268
				06/18/1970	-16.60	5.70	273
				03/02/1971	-8.85	7.75	281
				02/14/1972	-3.52	5.33	286
				02/14/1973	-4.28	-0.76	286
				02/14/1975	-3.44	0.84	287
				12/04/1975	-16.74	-13.30	273
				12/15/1976	-9.15	7.59	281
				12/09/1977	-19.84	-10.69	270
				11/28/1978	-21.22	-1.38	269
				11/12/1981	-20.45	0.77	270
				11/16/1982	-22.05	-1.60	268
				11/16/1983	-19.49	2.56	271
				10/30/1984	-19.56	-0.07	270
				11/17/1986	-18.98	0.58	271
35 28 903	124CZWX	240	370	10/26/1960	-96.30		274
				03/02/1971	-102.90	-6.60	267
				02/10/1972	-105.80	-2.90	264
				02/08/1974	-104.20	1.60	266
				02/13/1975	-105.07	-0.87	265
				12/10/1975	-111.40	-6.33	259
				12/15/1976	-109.06	2.34	261

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
35 29 101	124QNCT	34	310	10/03/1960	-24.70		285
				07/29/1964	-28.20	-3.50	282
				06/22/1970	-23.78	4.42	286
				03/03/1971	-26.58	-2.80	283
				02/14/1972	-26.36	0.22	284
				02/14/1973	-26.05	0.31	284
				02/08/1974	-15.59	10.46	294
				02/14/1975	-13.34	2.25	297
				12/04/1975	-24.03	-10.69	286
				12/16/1976	-25.95	-1.92	284
				12/09/1977	-30.98	-5.03	279
				11/28/1978	-28.74	2.24	281
				03/20/1981	-27.77	0.97	282
				11/11/1981	-28.81	-1.04	281
				11/16/1982	-30.27	-1.46	280
				11/16/1983	-29.13	1.14	281
				10/30/1984	-30.03	-0.90	280
				11/17/1986	-28.01	2.02	282
				02/04/1988	-27.11	0.90	283
				10/17/1988	-28.20	-1.09	282
				10/16/1989	-26.19	2.01	284
				11/13/1990	-26.81	-0.62	283
				11/05/1991	-26.27	0.54	284
				11/11/1992	-26.45	-0.18	284
35 30 702	124WLCX	351	361	/ /1936	-100.00		261
				11/12/1941	-181.80	-81.80	179
				06/19/1970	-62.80	119.00	298
				03/03/1971	-63.80	-1.00	297
				02/11/1972	-65.36	-1.56	296
				02/14/1973	-66.27	-0.91	295
				06/26/1973	-65.82	0.45	295
				07/16/1973	-65.84	-0.02	295
				08/15/1973	-65.95	-0.11	295
				09/19/1973	-66.10	-0.15	295
				10/15/1973	-66.02	0.08	295
				11/14/1973	-65.93	0.09	295
				12/15/1973	-65.82	0.11	295
				01/15/1974	-65.81	0.01	295
				02/07/1974	-65.63	0.18	295
				03/15/1974	-65.58	0.05	295

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WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				04/15/1974	-65.60	-0.02	295
35 30 702	124WLCX	351	361	05/14/1974	-65.35	0.25	296
				06/15/1974	-65.33	0.02	296
				07/15/1974	-65.54	-0.21	295
				08/15/1974	-65.78	-0.24	295
				09/15/1974	-65.69	0.09	295
				10/15/1974	-65.67	0.02	295
				11/13/1974	-65.62	0.05	295
				12/15/1974	-65.43	0.19	296
				01/15/1975	-65.52	-0.09	295
				02/13/1975	-65.44	0.08	296
				03/15/1975	-65.33	0.11	296
				04/15/1975	-65.33	0.00	296
				05/13/1975	-64.96	0.37	296
				06/15/1975	-64.84	0.12	296
				07/15/1975	-65.06	-0.22	296
				08/14/1975	-65.48	-0.42	296
				09/15/1975	-65.65	-0.17	295
				10/15/1975	-65.75	-0.10	295
				12/05/1975	-65.77	-0.02	295
				12/15/1975	-65.76	0.01	295
				01/15/1976	-65.76	0.00	295
				02/15/1976	-65.65	0.11	295
				03/15/1976	-65.39	0.26	296
				03/23/1976	-65.62	-0.23	295
35 30 703	124WLCX	375	332	/ /1937	-100.00		232
				11/12/1941	-180.90	-80.90	151
				06/19/1970	-41.85	139.05	290
				03/03/1971	-41.25	0.60	291
				02/11/1972	-43.57	-2.32	288
				02/14/1973	-44.72	-1.15	287
35 30 705	124WLCX	225	310	10/ /1974	-60.00		250
				06/14/1977	-25.75	34.25	284
				12/09/1977	-27.21	-1.46	283
				11/28/1978	-27.89	-0.68	282
				03/19/1981	-28.29	-0.40	282
				11/11/1981	-27.75	0.54	282
				11/16/1982	-28.52	-0.77	281
				11/17/1983	-28.23	0.29	282
				10/31/1984	-28.77	-0.54	281

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WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				12/06/1985	-29.99P		280
35 30 705	124WLCX	225	310	11/17/1986	-28.35	0.42	282
				02/05/1988	-27.77	0.58	282
				10/18/1988	-29.34	-1.57	281
				10/17/1989	-28.28	1.06	282
				11/14/1990	-28.26	0.02	282
35 31 301	124WLCX	16	230	10/06/1960	-12.70		217
				06/16/1970	-4.73	7.97	225
				03/02/1971	-3.28	1.45	227
				02/14/1972	-5.10	-1.82	225
				02/13/1973	-2.44	2.66	228
				02/14/1975	-1.25	1.19	229
				12/04/1975	-2.92	-1.67	227
35 31 602	124WLCX	185	300	06/ /1974	-70.00		230
				07/28/1976	-24.06	45.94	276
				12/16/1976	-26.50P		274
				12/08/1977	-26.48	-2.42	274
				11/29/1978	-27.89	-1.41	272
				11/11/1981	-28.91	-1.02	271
				11/16/1982	-28.32	0.59	272
				11/16/1983	-27.55	0.77	272
				10/30/1984	-27.09	0.46	273
				12/06/1985	-27.10	-0.01	273
				11/15/1986	-27.07	0.03	273
				02/05/1988	-26.70	0.37	273
				10/15/1988	-28.13	-1.43	272
				10/16/1989	-26.57	1.56	273
				11/14/1990	-25.09	1.48	275
				11/05/1991	-28.60	-3.51	271
				11/11/1992	-25.25	3.35	275
35 35 501	124QCRK	50	300	05/11/1976	-22.00		278
				07/27/1976	-14.06	7.94	286
				12/16/1976	-15.60	-1.54	284
				12/09/1977	-16.56	-0.96	283
				11/29/1978	-18.15	-1.59	282
				03/17/1981	-16.71	1.44	283
				11/10/1981	-17.51	-0.80	282
				11/16/1982	-17.41	0.10	283
				11/16/1983	-17.12	0.29	283

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WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				10/30/1984	-17.13	-0.01	283
35 35 501	124QCRK	50	300	11/16/1986	-16.84	0.29	283
				02/04/1988	-14.13	2.71	286
				10/18/1988	-16.78	-2.65	283
				10/16/1989	-14.27	2.51	286
				11/13/1990	-15.68	-1.41	284
				11/05/1991	-15.36	0.32	285
				11/09/1992	-15.90	-0.54	284
35 35 603	124QCRK	40	300	10/25/1960	-23.60		276
				06/18/1970	-2.49	21.11	298
				03/02/1971	-5.15	-2.66	295
				02/11/1972	-2.16	2.99	298
				02/13/1973	-0.30	1.86	300
				02/08/1974	-0.01	0.29	300
				02/13/1975	-0.01	0.00	300
				12/10/1975	-7.57	-7.56	292
35 36 206	124CZWX	300	300	06/17/1973	-134.00		166
				07/27/1976	-135.40	-1.40	165
				12/16/1976	-135.90	-0.50	164
				12/09/1977	-137.63	-1.73	162
				11/29/1978	-138.80	-1.17	161
				03/20/1981	-140.91	-2.11	159
				11/10/1981	-140.33	0.58	160
35 36 501	124CRRZ	28	340	01/27/1942	-19.10		321
				10/26/1960	-24.30	-5.20	316
				07/28/1964	-27.10	-2.80	313
				06/18/1970	-20.85	6.25	319
				03/02/1971	-23.97	-3.12	316
				02/11/1972	-21.38	2.59	319
				02/13/1973	-17.76	3.62	322
				02/08/1974	-11.25	6.51	329
				02/13/1975	-9.13	2.12	331
				12/10/1975	-20.44	-11.31	320
35 36 601	124WLCX	220	336	/ /1956	-100.00		236
				10/30/1984	-80.28	19.72	256
35 37 201	124WLCX	300	345	08/03/1964	-64.70		280
				06/15/1970	-67.05	-2.35	278

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WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

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				03/02/1971	-67.45	-0.40	278
35 37 201	124WLCX	300	345	02/11/1972	-67.63	-0.18	277
				02/13/1973	-69.75	-2.12	275
				02/07/1974	-69.45	0.30	276
				02/13/1975	-69.23	0.22	276
				12/10/1975	-69.69	-0.46	275
				12/16/1976	-69.73	-0.04	275
				12/09/1977	-72.62	-2.89	272
				11/29/1978	-72.55	0.07	272
				03/19/1981	-92.97	-20.42	252
				11/11/1981	-78.60	14.37	266
				11/16/1982	-74.81	3.79	270
				11/16/1983	-76.96	-2.15	268
				10/31/1984	-75.27	1.69	270
				12/06/1985	-78.49	-3.22	267
				11/15/1986	-78.26	0.23	267
				02/04/1988	-77.05	1.21	268
				10/18/1988	-78.17	-1.12	267
				10/16/1989	-72.15	6.02	273
				11/13/1990	-77.33	-5.18	268
				11/05/1991	-78.30	-0.97	267
				11/12/1992	-81.30	-3.00	264
35 37 801	110AVWX	200	285	11/10/1960	-30.70		254
				07/27/1976	-35.54	-4.84	249
				12/16/1976	-35.90	-0.36	249
				12/09/1977	-36.56	-0.66	248
				11/29/1978	-37.33	-0.77	248
				11/11/1981	-46.40P		239
				11/16/1982	-47.26	-9.93	238
				11/16/1983	-49.68	-2.42	235
				10/31/1984	-51.09	-1.41	234
				12/06/1985	-52.07	-0.98	233
				11/15/1986	-51.55	0.52	233
				02/05/1988	-50.67	0.88	234
				10/18/1988	-51.42	-0.75	234
				10/16/1989	-50.34	1.08	235
				11/13/1990	-51.03	-0.69	234
				11/05/1991	-51.90	-0.87	233
				11/12/1992	-54.15	-2.25	231
35 38 101	124WLCX	43	330	02/17/1942	-4.90		325

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WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

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				11/10/1960	-12.10	-7.20	318
35 38 101	124WLCX	43	330	06/15/1970	-6.89	5.21	323
				02/11/1972	-7.00	-0.11	323
				02/13/1973	-2.60	4.40	327
				02/07/1974	-1.20	1.40	329
				12/10/1975	-14.70	-13.50	315
35 38 402	124WLCX	250	340	07/06/1964	-26.20		314
				06/15/1970	-28.56	-2.36	311
				02/11/1972	-31.75	-3.19	308
				02/07/1974	-29.20	2.55	311
				02/13/1975	-26.64	2.56	313
				12/10/1975	-19.72	6.92	320
				12/16/1976	-31.40	-11.68	309
				12/09/1977	-33.18	-1.78	307
				11/29/1978	-34.58	-1.40	305
				03/19/1981	-34.58	0.00	305
				11/11/1981	-33.06	1.52	307
				11/16/1982	-33.63	-0.57	306
				11/16/1983	-34.05	-0.42	306
35 39 401	124WLCX	35	310	02/17/1942	-4.40		306
				11/30/1960	-11.20	-6.80	299
				06/15/1970	-7.63	3.57	302
				03/02/1971	-4.65	2.98	305
				02/11/1972	-6.80	-2.15	303
				02/13/1973	-1.99	4.81	308
				02/07/1974	-1.85	0.14	308
				02/13/1975	-1.12	0.73	309
				12/10/1975	-12.20	-11.08	298
35 39 402	124WLCX	190	313	08/11/1964	-18.70		294
				06/15/1970	-21.62	-2.92	291
				03/02/1971	-27.50	-5.88	286
				02/11/1972	-26.54	0.96	286
				02/13/1973	-25.28	1.26	288
35 39 404	124WLCX	194	290	04/ /1976	-2.00		288
				07/29/1976	-0.23	1.77	290
				12/16/1976	0.10	0.33	290
35 40 402	124WLCX	190	330	10/06/1964	-78.40		252

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				06/16/1970	-51.54	26.86	278
35 40 402	124WLCX	190	330	03/02/1971	-52.37	-0.83	278
				02/11/1972	-53.90	-1.53	276
				02/13/1975	-51.10	2.80	279
35 40 507	124WLCX	145	280	07/27/1973	-50.00		230
				06/14/1977	-40.98	9.02	239
				12/09/1977	-42.84	-1.86	237
				11/29/1978	-43.27	-0.43	237
				11/11/1981	-42.92	0.35	237
				11/16/1982	-42.57	0.35	237
				11/16/1983	-44.78	-2.21	235
				10/31/1984	-43.38	1.40	237
				12/06/1985	-44.04	-0.66	236
				11/15/1986	-43.88	0.16	236
				02/05/1988	-42.43	1.45	238
				10/15/1988	-44.84	-2.41	235
				10/16/1989	-42.39	2.45	238
				11/15/1990	-44.08	-1.69	236
				11/05/1991	-41.24	2.84	239
				11/11/1992	-41.97	-0.73	238
35 46 202	124WLCX	147	290	11/10/1960	-42.50		248
				08/05/1964	-42.00	0.50	248
				06/15/1970	-45.04	-3.04	245
				03/02/1971	-45.85	-0.81	244
				02/11/1972	-45.91	-0.06	244
				02/13/1973	-45.53	0.38	244
				02/07/1974	-42.72	2.81	247
				02/13/1975	-41.39	1.33	249
				12/10/1975	-48.38	-6.99	242
				12/16/1976	-44.10	4.28	246
				12/09/1977	-45.54	-1.44	244
				03/19/1981	-47.96P		242
				11/11/1981	-47.12	-1.58	243
				11/16/1982	-48.99	-1.87	241
				11/17/1983	-47.15	1.84	243
				10/31/1984	-49.36	-2.21	241
				12/06/1985	-50.34	-0.98	240
				11/15/1986	-49.91	0.43	240
				02/05/1988	-47.99	1.92	242
				10/15/1988	-14.62	33.37	275

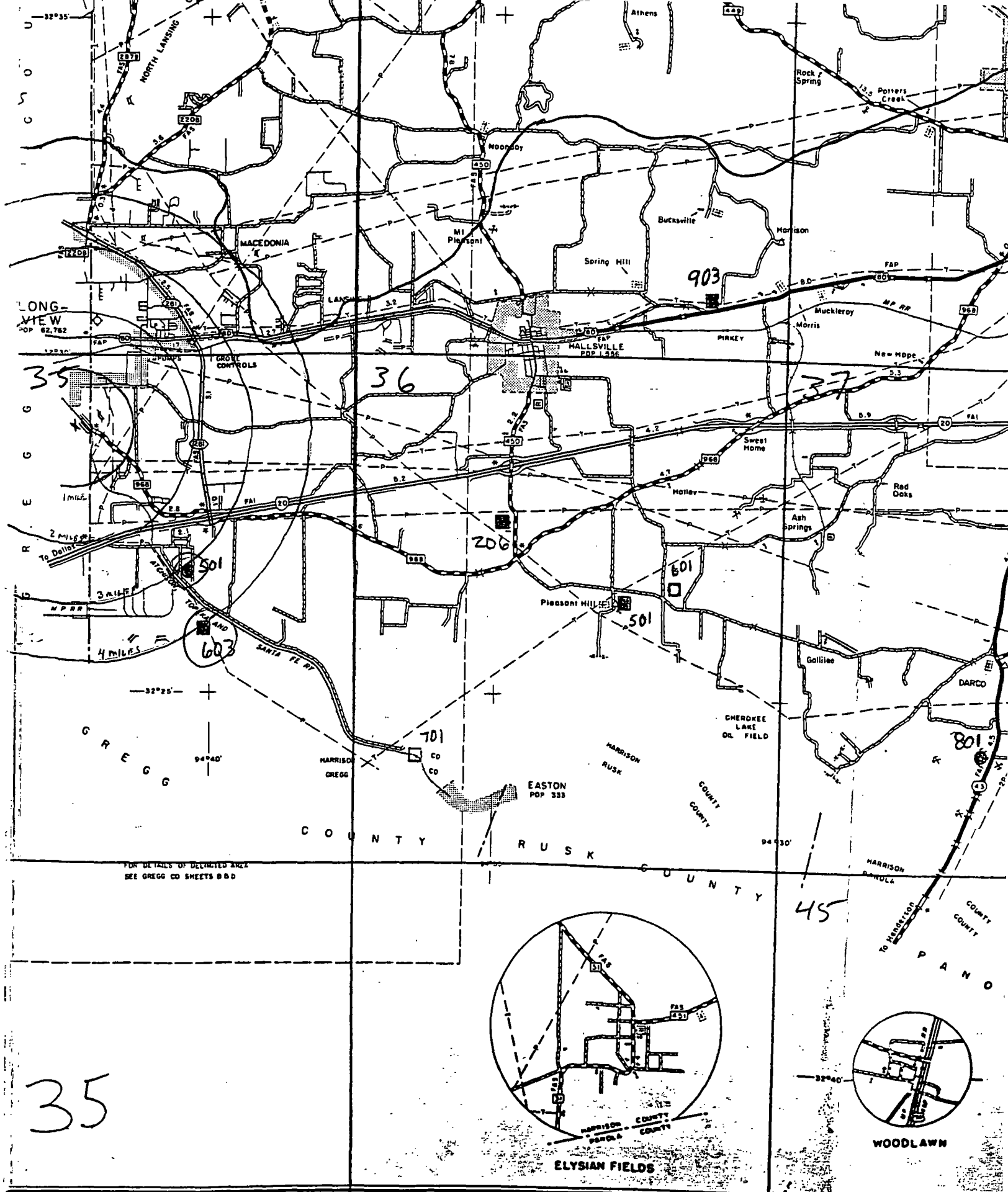
P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

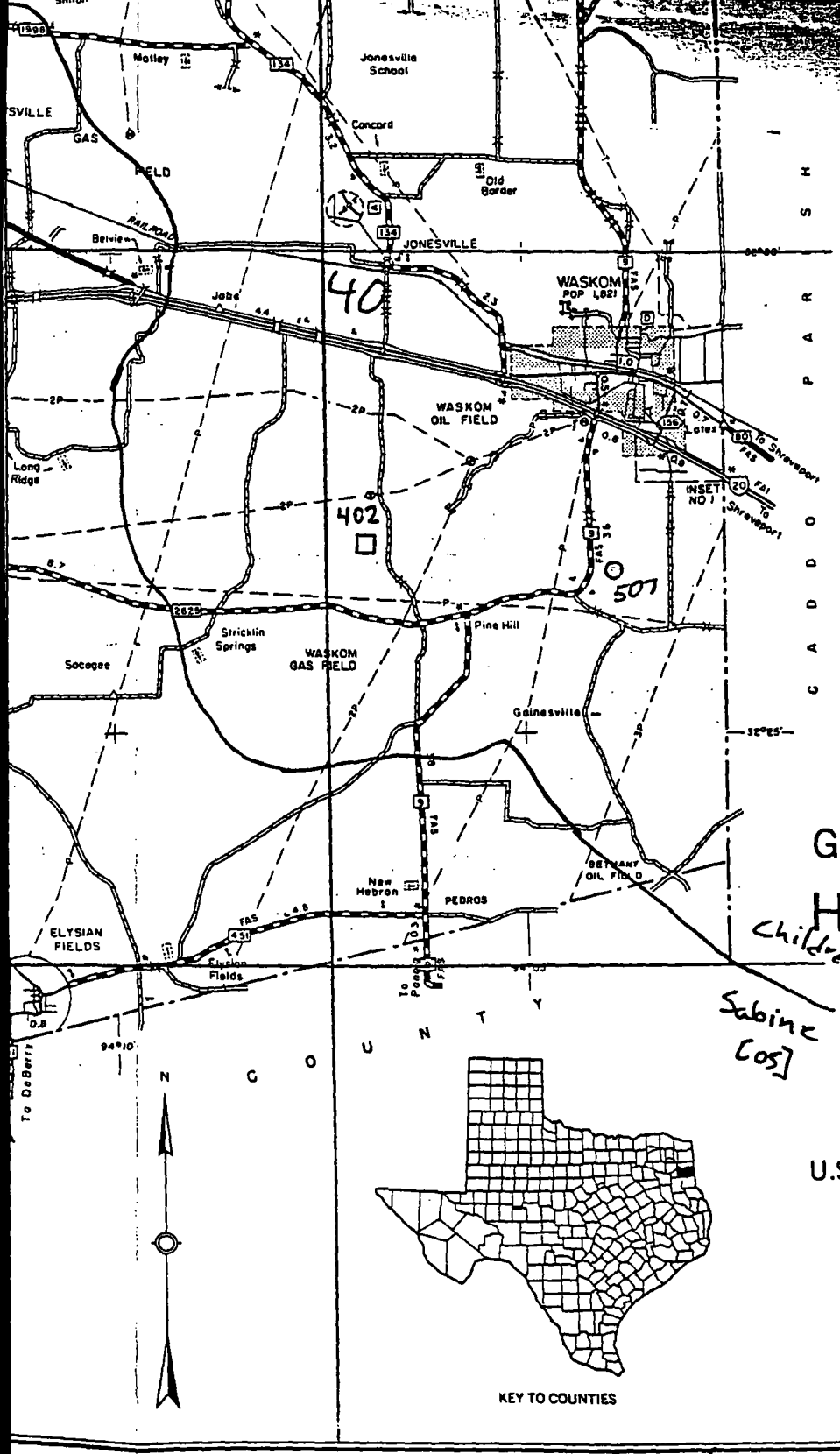
STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
				10/17/1989	-12.42	2.20	278
35 46 202	124WLCX	147	290	11/14/1990	-12.24	0.18	278
				11/05/1991	-9.53	2.71	280
				11/11/1992	-14.65	-5.12	275

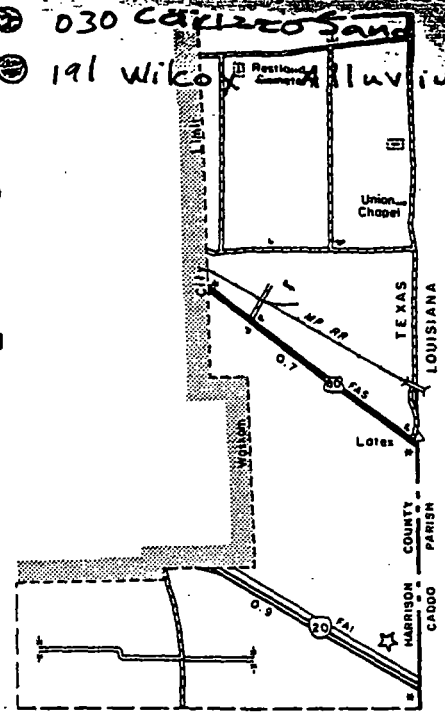
TOTAL WELLS: 36

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE



FOR DETAILS OF DELIMITED AREA
SEE GREGG CO SHEETS 8 & 9





INSET NO 1

894 Sq. Miles

GENERAL HIGHWAY MAP
HARRISON COUNTY
TEXAS

PREPARED BY THE

STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION

TRANSPORTATION PLANNING DIVISION

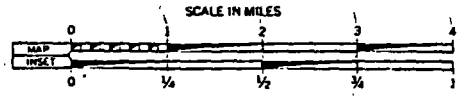
IN COOPERATION WITH THE

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

KEY TO COUNTIES

SCALE IN MILES



1967

1980 CENSUS FIGURES

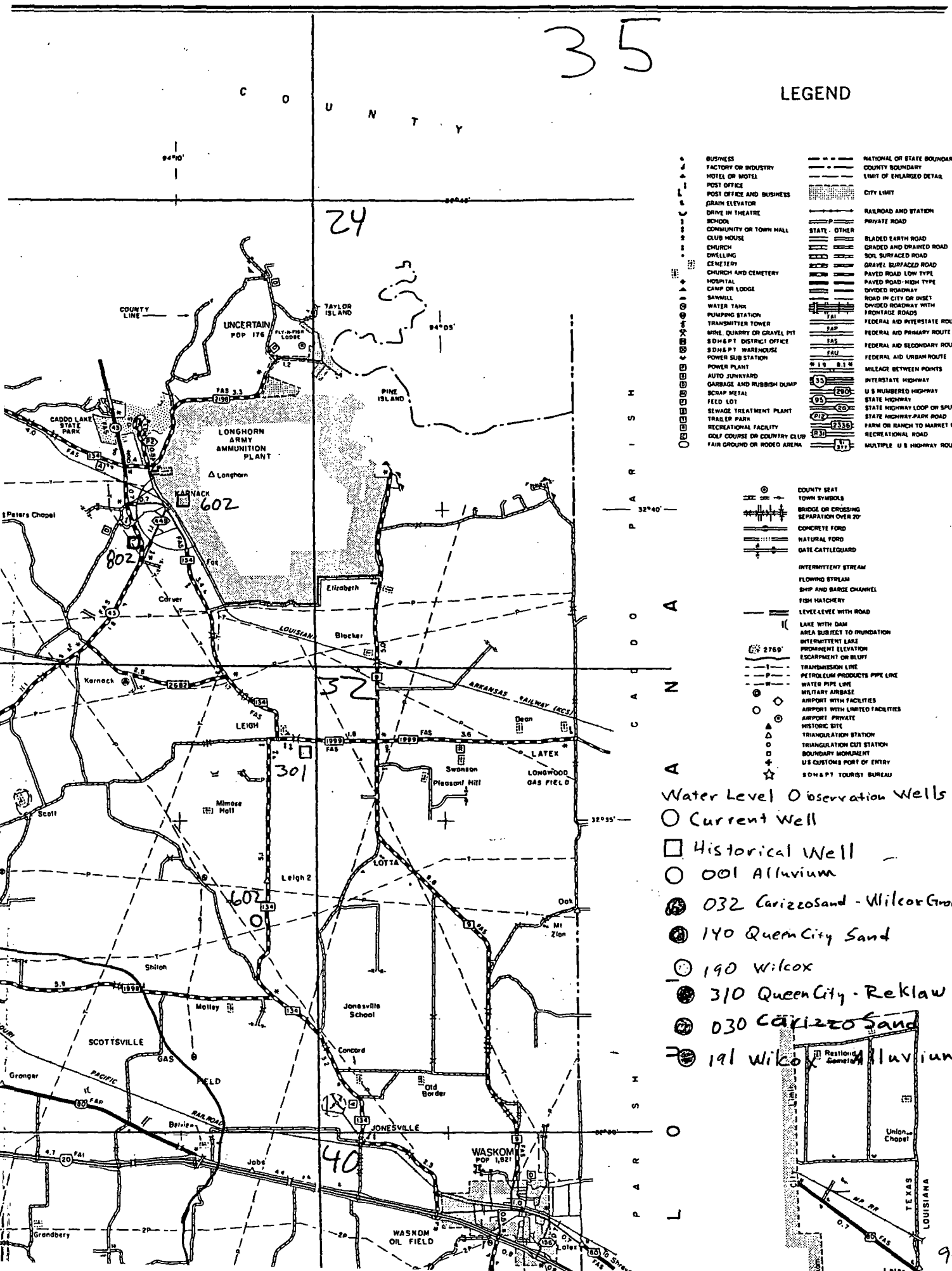
HIGHWAYS REVISED TO MAY 1, 1983

Sheet 1 of 1 Base Sheet and 1 Supplement

7/25/85

HARRISON COUNTY TEXAS

9-21


35
24
32
40
C O U N T Y
LOUISIANA
CADDO PARISH
LEGEND
BUSINESS
FACTORY OR INDUSTRY
HOTEL OR MOTEL
POST OFFICE
POST OFFICE AND BUSINESS
GRAIN ELEVATOR
DRIVE IN THEATRE
SCHOOL
COMMUNITY OR TOWN HALL
CLUB HOUSE
CHURCH
DWELLING
CEMETERY
CHURCH AND CEMETERY
HOSPITAL
CAMP OR LODGE
SAWMILL
WATER TANK
PUMPING STATION
TRANSMITTER TOWER
MINE, QUARRY OR GRAVEL PIT
SDH&PT DISTRICT OFFICE
SDH&PT WAREHOUSE
POWER SUB STATION
POWER PLANT
AUTO JUNKYARD
GARBAGE AND RUBBISH DUMP
SCRAP METAL
FEED LOT
SEWAGE TREATMENT PLANT
TRAILER PARK
RECREATIONAL FACILITY
GOLF COURSE OR COUNTRY CLUB
FAIR GROUND OR RODEO ARENA
NATIONAL OR STATE BOUNDARY
COUNTY BOUNDARY
LIMIT OF ENLARGED DETAIL
CITY LIMIT
RAILROAD AND STATION
PRIVATE ROAD
STATE - OTHER
BLADED EARTH ROAD
GRADED AND DRAINED ROAD
SOIL SURFACED ROAD
GRAVEL SURFACED ROAD
PAVED ROAD LOW TYPE
PAVED ROAD-HIGH TYPE
DIVIDED ROADWAY
ROAD IN CITY OR INSET
DIVIDED ROADWAY WITH FRONTAGE ROADS
FEDERAL AID INTERSTATE ROUTE
FEDERAL AID PRIMARY ROUTE
FEDERAL AID SECONDARY ROUTE
FEDERAL AID URBAN ROUTE
MILEAGE BETWEEN POINTS
INTERSTATE HIGHWAY
U S NUMBERED HIGHWAY
STATE HIGHWAY
STATE HIGHWAY LOOP OR SPUR
STATE HIGHWAY-PARK ROAD
FARM OR RANCH TO MARKET ROAD
RECREATIONAL ROAD
MULTIPLE U S HIGHWAY ROUTE
COUNTY SEAT
TOWN SYMBOLS
BRIDGE OR CROSSING SEPARATION OVER 20'
CONCRETE FORD
NATURAL FORD
GATE-CATTLEGUARD
INTERMITTENT STREAM
FLOWING STREAM
SHIP AND BARGE CHANNEL
FISH HATCHERY
LEVEE-LEVEE WITH ROAD
LAKE WITH DAM
AREA SUBJECT TO INUNDATION
INTERMITTENT LAKE
PROMINENT ELEVATION
ESCARPMENT OR BLUFF
TRANSMISSION LINE
PETROLEUM PRODUCTS PIPE LINE
WATER PIPE LINE
MILITARY AIRBASE
AIRPORT WITH FACILITIES
AIRPORT WITH LIMITED FACILITIES
AIRPORT PRIVATE
HISTORIC SITE
TRIANGULATION STATION
TRIANGULATION CUT STATION
BOUNDARY MONUMENT
U S CUSTOMS PORT OF ENTRY
SDH&PT TOURIST BUREAU
Water Level Observation Wells
Current Well
Historical Well
001 Alluvium
032 Carizzo Sand - Wilcox Group Alluvium
140 Queen City Sand
190 Wilcox
310 Queen City - Reklaw
030 Carizzo Sand
191 Wilcox Alluvium
COUNTY LINE
UNCERTAIN POP 176
TAYLOR ISLAND
PINE ISLAND
CADDO LAKE STATE PARK
LONGHORN ARMY AMMUNITION PLANT
Longhorn
KARNACK
602
802
Peters Chapel
Carver
Elizabeth
Blocker
LOUISIANA
ARKANSAS RAILWAY (KCS)
Karnack
LEIGH
Dean
LATEX
Swanson
Pleasant Hill
LONGWOOD GAS FIELD
301
Mimose Hall
Scott
LOTTA
Leigh 2
Oak
Mt Zion
Shiloh
Motley
Jonesville School
SCOTTSVILLE GAS FIELD
Concord
Old Border
Granger
PACIFIC RAILROAD
Belview
JONESVILLE
Jobe
WASKOM POP 1,821
WASKOM OIL FIELD
Grandbery
Restland Cemetery
Union Chapel
TEXAS
LOUISIANA
94°10'
94°05'
32°40'
32°35'
9-22

TEXAS WATER DEVELOPMENT BOARD
GROUND WATER DATA SYSTEM

GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SIO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 11 801	124ONCT	16	01/29/1942 U							6	17	36		0	0	97	32		22.0	210		85
	124ONCT	16	08/18/1970					5.5	69	8	4	31		0	6	34	39	0.3	10.0	198	252	38
	124ONCT	16	07/28/1976					6.3	70	12	3	75		0	6	26	114	0.2	18.0	321	504	42
35 11 902	124WLCX	101	10/20/1964 U					5.0	43	21	14	19		0	3	112	23	0.1		233	337	110
	124WLCX	101	07/28/1976				23	6.6	49	45	16	21		0	6	172	29	0.1	0.4	335	464	178
	124WLCX	101	05/05/1982				16	7.0	41	18	20	17	3	0	43	102	25	0.1	0.0	248	353	131
35 19 301	124CPRS	39	01/29/1942 U							21		30		0	134	3	4	0.2				
35 19 501	124CPRS	35	01/29/1942 U									22		0	12	10	16		26.0			
35 19 601	124CPRS	32	01/29/1942 U							15	15	90		0	18	2	198	0.1		328		89
35 20 401	124CPRS	18	01/29/1942 U							8		3		0	6	3	14	0.2				
35 20 402	124CPRS	850	07/02/1964				22	7.4	15	6	2	235	4	0	272	11	221	0.4	3.8	631	1160	24
35 20 403	124WLCX	583	07/06/1964					7.5	14	6	2	394	4	0	288	0	455	0.3	2.8	1019	1870	25
35 20 501	124CPRS	36	07/02/1964 U					6.2						0	25		6				88	
	124CPRS	36	07/28/1976				24	6.9	18	4	2	3		0	7	4	6	0.1	9.0	49	51	17
	124CPRS	36	05/05/1982				14	5.6	19	2	2	4	2	0	1	1	8	0.1	17.2	55	67	15
35 20 502	124CPRS	310	10/21/1964					7.3	10	13	6	345		0	312	0	388	0.6	0.6	815	1700	54
35 20 601	124CPRS	61	01/29/1942 U							6	4	28		0	37	30	20	0.3		104		33
35 20 901	124CPRS	34	01/29/1942 U									13		0	6	10	12					
35 20 903	124ONCT	90	07/28/1976				27	6.8	68	14	1	8		0	32	7	11	0.1	3.5	128	115	36
	124ONCT	90	05/05/1982				16	6.3	42	4	1	5	3	0	11	4	8	0.1	6.4	79	70	14
35 21 801	124CPRS		01/30/1942 U									9		0	12	2	5	0.1				
35 21 901	124CPRS		01/30/1942 U									15		0	6	3	24	0.1				
35 22 403	124CPRS	260	08/07/1964 U					7.9	12	4	1	125	2	0	274	54	8	0.3		341	583	17
	124CPRS	260	07/28/1976				27	8.0	12	8	1	121		0	271	53	10	0.3	2.1	340	534	21

* Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
U after date of collection signifies unbalanced or partial chemical analysis

GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 22 501	124CPRS	30	02/11/1942 U								3	4		0	18	2	3	0.1				
35 22 504	124CPRS	365	10/23/1964					7.9	13	2	0	123		0	282	30	9	0.2	0.2	316	506	7
	124CPRS	365	07/28/1976				23	8.5	28	19	3	66		3	212	12	7	0.2	0.4	242	355	60
35 22 505	124CPRS	45	02/11/1942 U							14		5		0	55	2	4					
35 22 601	124CPRS	17	02/11/1942 U									5		0	12	2	3	0.1				
35 22 704	124CPRS	215	08/26/1964					7.5	17	28	10	110		0	166	164	22	0.4	3.0	436	768	111
35 22 705	124CPRS	215	08/22/1964				21	6.5	23	8	4	87	5	0	172	48	31	0.1	5.8	296	485	40
35 22 706	124CPRS	316	12/30/1960 U				19	8.1	13	1	0	148		0	235	98	18	0.2		391	651	3
	124CPRS	316	08/22/1964				22	7.8	13	2	0	150	2	0	240	107	19	0.2	3.0	413	672	5
35 22 707	124CPRS	200	08/22/1964				21	6.9	17	10	3	163	6	0	162	221	24	0.1	9.6	533	837	39
35 22 708	124WLCX	400	07/28/1976				22	8.2	13	3	1	218		0	471	24	45	0.6	1.5	537	845	8
	124WLCX	400	11/15/1988				21	8.7	11	1	1	223	1	15	449	33	52	0.5	0.0	558	1001	3
35 23 101	124CPRS	31	08/22/1991 U	03	02	10		6.6	18	9	1	29	4	0	56	23	25	<.1		136	227	27
35 23 301	124CPRS	31	08/22/1991 U	03	02	10		6.5	14	9	1	14	2	0	67	8	20	<.1		101	148	27
35 23 502	124CPRS	315	10/27/1941 U									128		0	256	25	38	0.4				
	124CPRS	315	08/17/1964					7.2	25	7	3	115		0	232	32	37	0.2	2.2	335	538	29
35 23 505	124CPRS	21	08/22/1991 U	03	02	10		7.0	35	20	5	29	3	0	104	17	10	0.1		170	291	72
35 23 506	124CPRS	36	08/21/1991	03	02	10		7.1	17	13	4	97	3	0	195	50	36	0.2		316	549	48
35 23 602	124WLCX	133	02/21/1942 U							6	3	174		0	360	10	74	0.1		444		32
35 23 603	124CPRS	51	08/22/1991 U	03	02	10		7.0	11	20	3	12	4	0	366	26	15	<.1		271	205	63
35 23 701	124CPRS		10/28/1941 U									234		0	354	4	168					
35 23 801	124CPRS	430	02/21/1942 U							10		142		0	299	30	44	0.1				
	124CPRS	430	07/17/1964 U					8.0	13	7	1	144	2	0	307	21	47		1.8	387	661	26
	124CPRS	430	07/28/1976				21	7.9	12	13	1	141		0	321	19	38	0.2	0.7	382	680	33

* Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
U after date of collection signifies unbalanced or partial chemical analysis

GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 23 902	124CPRS	105	10/27/1941	U						24	20	81		0	262	42	52	0.2		358		142
35 24 101	124CPRS	103	10/28/1941	U								121		0	220	23	50					
35 24 401	124CPRS	103	11/03/1941	U								108		0	201	31	34	0.3				
35 24 701	124CPRS	38	02/12/1942	U							4	26		0	6	17	34	0.2				
35 27 301	124CPRS	18	01/29/1942	U								6		0	6	2	11	0.1				
35 27 302	124CPRS	424	10/21/1964	U			21	8.2	6	4	1	271		0	284	1	262	0.3		684	1260	15
35 27 901	124CPRS	274	07/24/1964	U			21	7.4	43	48	3	42	4	0	215	41	9		0.8	286	443	132
35 28 101	124QNCT	25	01/30/1942	U								12		0	12	3	8	0.2				
35 28 102	124CPRS	200	10/22/1964					8.2	30	12	7	31		0	105	27	10	0.1	0.2	168	255	61
35 28 402	124CPRS	30	01/28/1942	U								9		0	6	10	4					
35 28 802	124CPRS	242	08/12/1964				21	7.8	10	3	1	99		0	176	63	10	0.1	2.5	275	446	10
35 28 803	124CPRS	201	10/17/1941	U					15	2	1	114		0	156	105	17			330		14
	124CPRS	201	08/12/1964				21	7.6	11	2	1	110		0	152	84	16	0.1	4.0	312	507	10
35 28 804	124CPRS	245	08/12/1964				24	7.5	10	1	0	110		0	160	89	13	0.1	3.8	305	495	8
	124CPRS	245	07/28/1976				21	8.3	10	3	1	105		0	165	83	12	0.1	0.4	295	504	7
	124CPRS	245	05/05/1982				19	8.2	10	1	1	108	2	0	163	88	15	0.1	0.1	305	518	5
	124CPRS	245	11/17/1988				24	8.3	4	3	1	93	2	0	149	67	21	0.3	0.1	264	465	12
35 28 902	124CPRS	250	10/17/1941	U						9	6	58		0	98	69	18	0.1		209		49
35 28 903	124CZWX	240	10/17/1941	U						14	7	47		0	79	69	21	0.3		197		65
	124CZWX	240	02/10/1972					8.8	13	12	6	62		0	94	80	21	0.1	0.4	240	393	52
	124CZWX	240	11/10/1981				21	7.2	12	11	4	62	5	0	92	80	21	0.1	0.3	240	413	45
35 29 102	124CPRS	240	07/29/1964					8.1	11	1	1	254	2	0	647	8	8	2.4	3.2	608		8
35 29 103	124CPRS	530	07/29/1964					8.2	13	1	0	229	1	0	511	36	40	0.7	1.2	573	855	6
35 29 201	124CPRS	600	07/29/1964				24	8.1	13	<1	<1	207	1	0	408	52	47	0.5	2.0	524	875	3
35 29 301	124CPRS	37	01/30/1942	U								17		0	6	26	8	0.1				

* Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
U after date of collection signifies unbalanced or partial chemical analysis

GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 29 401	124CPRS	23	02/17/1942 U									4		0	6	8	5	0.3				
35 29 501	124CPRS	30	01/30/1942 U								6	17		0	18	20	25	0.2				
35 29 701	124CPRS	25	01/28/1942 U									11		0	6	3	14	0.1				
35 29 703	124CPRS	220	07/30/1984					8.0	11	3	0	196		0	378	108	7	0.7	3.2	514	822	11
35 29 802	124CPRS	30	01/28/1942 U							6	4	22		0	0	10	24		5.0	71		33
35 29 902	124CPRS	444	10/23/1984 U					8.3	12	2	0	246			564	62	8	1.1	0.2	608	968	6
35 29 903	124CPRS	316	10/28/1980				21	7.5	12	7	3	122	4	0	267	63	10	0.4	2.5	354	574	33
35 29 904	124CPRS	410	08/05/1984					8.2	12	1	0	170	1	0	417	23	4	0.4	0.2	416	681	2
35 29 906	124CPRS	246	11/18/1941 U							22	9	11		0	0	23	64			129		91
35 29 907	124CPRS	192	11/18/1941 U							23	24	45		0	0	50	162	0.0		324		155
35 29 908	124CPRS	201	11/18/1941 U							19	24	64		0	0	88	185			400		145
35 29 909	124CPRS	111	11/18/1941 U							20	20	46		0	0	81	208			375		132
35 29 910	124CPRS	50	11/18/1941 U							10		17		0	12	4	42					
35 29 911	124CPRS	126	11/18/1941 U							20	13	16		0	85	46	14	0.2		150		103
35 29 912	124CPRS	125	11/18/1941 U							44	25	5		0	116	100	16			247		210
35 30 401	124CPRS	610	11/17/1941 U							10	5	4		0	6	40	8	0.2		70		48
35 30 402	124CPRS	300	11/12/1941 U								6	16		0	24	42	7	0.1				
35 30 403	124CPRS	300	12/00/1944 U					5.6	31	8	5	22		0	18	53	12			139		41
35 30 405	124CPRS	300	11/12/1941 U							10	5	2		0	0	96	6	0.0		119		48
	124CPRS	300	12/00/1944 U					4.0	32	7	4	7		0	0	55	11			116		34
35 30 406	124CPRS	240	11/12/1941 U							7	9	2		0	31	26	6	0.2		65		56
	124CPRS	240	12/00/1944 U					6.3	30	9	9	5		0	24	34	11	0.4		110		60

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GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 30 408	124CPRS	479	07/22/1940 U					7.4	29	43	9	84		0	201	112	32		2.2	410		145
35 30 408	124CPRS	479	11/12/1941 U							6	11	109		0	195	103	20	0.0		344		62
	124CPRS	479	12/00/1944					7.6	24	40	9	79		0	199	111	21	0.4	1.8	384		137
35 30 701	124CPRS	323	11/18/1941 U							104	9	23		0	275	100	12	0.3		383		286
35 30 702	124WLCX	351	11/13/1941 U							15		100		0	189	77	16	0.2				
	124WLCX	351	12/00/1944 U					7.8	14	12	3	104		0	201	71	21	0.5		324		43
	124WLCX	351	08/28/1973					7.1	1	12	1	9	3	0	27	4	22	0.2	0.4	65	129	36
35 30 703	124WLCX	375	07/22/1940 U					7.2	24	32	9	90 *		0	195	94	39			383		117
	124WLCX	375	11/12/1941 U							10	3	89		0	165	77	15	0.2		275		42
	124WLCX	375	12/00/1944 U					7.9	24	33	7	73		0	189	75	27	0.4		332		112
35 30 704	124CPRS	473	11/12/1941 U							18		103		0	177	100	18	0.1				
	124CPRS	473	12/00/1944 U					7.9	22	27	6	95		0	195	100	25	0.4		371		92
35 30 705	124WLCX	225	08/14/1977				24	7.8	15	10	3	77	4	0	184	13	33	0.1	2.8	246	429	36
	124WLCX	225	11/11/1981				22	8.2	16	8	3	79	5	0	181	14	32	0.1	1.6	247	447	33
	124WLCX	225	11/17/1986				19	8.1	15	10	3	79	4	0	184	14	32	0.1	0.1	247	438	36
35 30 803	124CPRS	24	02/17/1942 U							13	36	38		0	12	146	69	0.1		306		183
35 30 804	124CPRS	364	10/23/1964					7.1	22	21	7	60		0	152	26	42	0.2	1.6	254	421	82
	124CPRS	364	07/29/1976				21	7.7	23	23	7	54		0	145	24	41	0.1	2.1	245	416	86
	124CPRS	364	05/06/1982				16	8.0	24	6	16	59	5	0	151	28	43	0.1	0.0	255	404	82
	124CPRS	364	11/15/1986				20	7.8	23	21	7	57	4	0	151	28	40	0.1	1.1	255	450	81
35 30 805	124CPRS	24	02/08/1977					5.8	10	2	1	6		0	5	4	8	0.1	1.5	35	48	9
35 30 806	124CPRS	45	02/08/1977					6.2	18	9	1	8		0	26	4	15	0.1	0.4	68	102	28
35 30 901	124CPRS	31	02/09/1942 U								6	5		0	37	3	4	0.1				
35 30 903	124CPRS	40	02/08/1977					6.3	8	5	4	6		0	13	5	17	0.1	4.4	55	96	28
35 31 302	124CPRS	205	02/14/1942 U								4	11		0	49	2	1	0.4				
35 31 601	124CPRS	17	02/12/1942 U							118	56	108		0	232	2	401	0.3		799		525
35 31 602	124WLCX	185	07/28/1976				22	7.6	35	66	23	37		0	326	15	37	0.3	0.4	373	665	259
	124WLCX	185	11/11/1981				19	8.1	1	59	24	37		0	322	17	36	0.3	0.4	333	666	246
	124WLCX	185	11/15/1986				16	8.0	33	60	22	37	2	0	320	14	37	0.3	0.1	362	670	243

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GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 31 701	124CPRS	28	02/09/1942 U									18		0	12	17	20					
35 31 702	124CPRS	411	06/22/1964					4.0	50	44	42	52	6	0	0	106	217	0.1	0.8	517	931	282
35 31 703	124CPRS	792	12/30/1960					7.4	15	16	5	83	3	0	221	23	24	0.2	3.0	281	464	59
	124CPRS	792	07/10/1964					7.5	17	16	4	80	3	0	217	24	23	0.2	4.8	278	467	58
35 31 708	124CPRS	27	02/09/1942 U									10		0	6	2	8					
35 31 709	124CPRS	415	06/22/1964					8.0	14	2	0	141	2	0	316	3	38	0.3	2.5	357	607	8
	124CPRS	415	07/29/1976				22	8.0	12	4	1	109		0	273	13	7	0.2	2.7	283	485	9
	124CPRS	415	05/05/1982				17	8.4	15	6	1	116	2	1	244	16	36	0.2	2.4	315	548	21
	124CPRS	415	11/15/1986				19	8.4	11	2	1	108	1	1	268	14	6	0.2	0.1	275	474	6
35 31 801	124CPRS	19	02/12/1942 U								11	61		0	31	20	129	0.2				
35 31 901	124CPRS	220	04/22/1960 U					6.6		50	30	62		0	200	0	160			400		
35 32 501	124CPRS	18	02/12/1942 U							23	6	14		0	85	11	9	0.1		104		67
35 35 201	124CPRS	304	11/04/1941 U									79		0	165	46	8	0.4				
35 35 501	124QCRK	50	07/27/1976				23	8.0	25	53	1	12	16	0	201	8	6	0.2	0.4	220	360	136
	124QCRK	50	11/10/1981				20	7.7	29	36	1	4		0	115	2	5	0.1	0.5	134	204	93
35 35 601	124CPRS	450	07/24/1964 U					7.7	8	4	1	686	3	0	584	1	760		0.8	1741	3170	18
35 35 604	124CPRS	500	07/24/1964					7.9	12	4	1	447	2	0	664	4	305	1.4	4.2	1107	1930	17
35 36 101	124CPRS	35	01/27/1942 U									40		0	18	60	14					
35 36 201	124QNCT	32	01/27/1942 U									10		0	12	2	3					
35 36 202	124QNCT	26	01/27/1942							6	7	66		0	6	2	88	1.2	120.0	313		44
35 36 206	124CZWX	300	07/27/1976					7.9	13	4	1	302		0	550	32	136	0.8	2.2	763	1390	14
35 36 301	124RKLW	20	01/28/1942 U									12		0	12	3	12	0.1				
35 36 401	124RKLW	27	11/04/1941 U									3		0	6	7	5					
35 36 501	124CRRZ	28	01/27/1942 U								3	3		0	6	2	5					

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GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Reliability Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 36 601	124WLCX	220	07/28/1964					8.0	12	3	0	187	2	0	456	29	13	0.5	2.5	473	779	11
	124WLCX	220	10/30/1984				22	8.4	11	3	1	184	0	3	428	32	13	0.7	0.5	457	788	14
35 36 901	124WLCX	200	11/14/1941 U									281		0	685	3	44					
35 37 101	124CZWX	465	01/28/1942 U									2		0	6	2	7	0.1				
35 37 201	124WLCX	300	02/11/1972					8.7	9	2	1	157		11	320	40	14	0.2	2.0	393	675	8
35 37 401	124CRRZ	22	01/28/1942 U									6		0	6	2	3	0.1				
35 37 402	124WLCX	370	08/03/1964					7.7	17	3	1	238		0	608	0	20	1.6	0.5	579	940	12
	124WLCX	370	07/27/1976				23	7.0	24	3	1	6		0	20	4	5	0.1	0.4	53	48	10
35 37 601	124WLCX	6	02/14/1942 U							130	63	143		0	0	699	101	0.6		1356		666
35 37 701	124WLCX	25	11/04/1941 U								6	6		0	24	2	18					
35 37 601	110AVWX	200	08/03/1964					8.1	12	2	1	301		0	723	0	46	2.4	0.2	720	1200	10
	110AVWX	200	07/27/1976				21	8.7	13	5	1	305		15	690	4	47	2.4	0.4	732	1146	12
	110AVWX	200	11/11/1981				22	8.8	11	3	1	302	3	23	680	5	81	2.4	0.0	735	1288	8
	110AVWX	200	11/15/1986				19	8.6	14	6	2	217	1	12	444	11	63	0.6	0.0	566	1050	30
35 37 802	124WLCX	429	08/03/1964						13	<1	<1	283	1	0	608	0	63	1.3	2.2	663		4
35 37 803	124WLCX	420	08/03/1964				18	8.2	12	<1	<1	272		0	629	3	52	1.2	0.6	651	1100	5
35 38 101	124WLCX	43	02/17/1942 U							23	3	25		0	122	15	7			132		72
	124WLCX	43	02/11/1972					6.8	46	21	3	12		0	66	14	12	0.1	0.4	140	177	63
35 38 402	124WLCX	250	08/15/1970					7.6	18	55	16	51		0	281	31	37	0.2	1.0	347	638	206
	124WLCX	250	02/11/1972					7.8	17	36	12	70		0	268	36	26	0.2	2.0	330	588	141
	124WLCX	250	07/29/1976				23	7.7	18	40	13	68		0	279	35	27	0.2	0.4	338	590	152
	124WLCX	250	05/05/1982				14	8.2	16	33	11	77	4	0	277	37	25	0.2	0.0	339	600	130
	124WLCX	250	11/15/1986				17	8.0	18	44	14	66	4	0	285	37	32	0.2	0.0	355	652	166
35 38 602	124WLCX	150	02/13/1942 U									115		0	262	10	28	0.1				
35 38 603	124CPRS		11/04/1941 U				20					186		0	415	5	50	0.3				
35 38 701	124WLCX	105	11/04/1941 U							52	39	35		0	372	2	41			351		289

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GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

Well	Aquifer	Well Depth (Feet)	Date of Collection	Agency Code	Lab Code	Relia-bility Code	Temp. Deg. C	pH	Silica (SiO2) MG/L	Calcium (Ca) MG/L	Magnesium (Mg) MG/L	Sodium (Na) MG/L	Potassium (K) MG/L	Carbonate (CO3) MG/L	Bicarb. (HCO3) MG/L	Sulfate (SO4) MG/L	Chloride (Cl) MG/L	Fluoride (F) MG/L	Nitrate (NO3) MG/L	Dissolved Solids MG/L	Spec. Cond. (micromhos)	Hardness as CaCO3 MG/L
35 38 801	124WLCX	73	11/14/1941	U						128	155	384		0	756	238	620	0.1		1876		858
35 38 802	124CPRS	91	11/14/1941	U						31	15	174		0	518	12	57			544		139
35 38 803	124WLCX		11/14/1941	U						30		118		0	153	7	148	0.8				
35 38 804	124CPRS		11/14/1941	U								173		0	433	4	24					
35 39 201	124CPRS	33	02/13/1942	U								4		0	12	4	4	0.1		18		
35 39 301	124WLCX	190	07/13/1964	U				7.4						0	348		40				694	
35 39 304	124CPRS	247	10/06/1964	U				8.8	23	20	8	100		0	290	6	40	0.2		339	610	84
35 39 401	124WLCX	35	02/17/1942							20	18	140		0	67	67	127	0.2	156.0	561		126
	124WLCX	35	06/15/1970					7.4	16	41	13	47		0	161	30	64	0.3	3.0	293	564	157
35 39 402	124WLCX	190	06/15/1970					8.3	11	5	5	177		0	443	12	26	0.4	1.5	455	790	34
	124WLCX	190	07/29/1976				21	8.0	13	6	1	179		0	450	12	29	0.4	1.2	464	804	24
	124WLCX	190	11/15/1986				20	8.5	12	3	1	183	1	6	427	11	29	0.4	0.1	456	810	11
35 39 404	124WLCX	194	07/29/1976				23	8.3	19	7	3	154		0	405	12	22	0.3	0.4	416	720	31
	124WLCX	194	05/05/1982				16	8.2	17	8	4	173		0	418	10	40	0.3	1.2	459	803	38
35 39 605	124CPRS	245	10/06/1964					7.8	11	1	0	169		0	362	28	33	0.2	0.2	420	641	5
35 39 801	124CPRS	259	08/11/1964	U				6.4	57	18	3	15		0	108	2	0			148	181	61
35 39 902	124CPRS	280	08/11/1964	U				6.4	62	11	4	26		0	102	0	13	0.2		166	210	46
35 40 101	124CPRS	205	07/10/1964					8.0	11	2	0	179	1	0	368	5	60	0.2	5.0	444	752	8
35 40 102	124CPRS	208	10/20/1964	U				8.0	11	4	1	197		0	396	0	85	0.3		493	845	18
	124CPRS	208	07/29/1976				21	7.9	10	7	1	188		0	390	4	85	0.3	0.4	497	814	19
	124CPRS	208	05/05/1982				15	8.6	10	6	1	187	2	7	375	2	85	0.3	0.2	484	748	23
	124CPRS	208	11/15/1986				14	8.4	10	5	1	190	1	3	381	2	85	0.3	0.3	484	900	19
35 40 201	124CPRS	135	07/10/1964					7.9	11	13	3	304	2	0	396	200	132	0.2	0.2	860	1400	48
35 40 204	124CPRS	151	10/29/1941	U						16	16	172		0	262	77	130			539		105
	124CPRS	151	06/18/1964	U				7.4	14	32	9	178		0	272	76	143	0.1		587	1000	120
35 40 206	124CPRS	150	06/18/1964				20		15	30	10	294		0	256	136	282	0.1	5.6	898		116

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GROUND WATER QUALITY SAMPLES
COUNTY - Harrison

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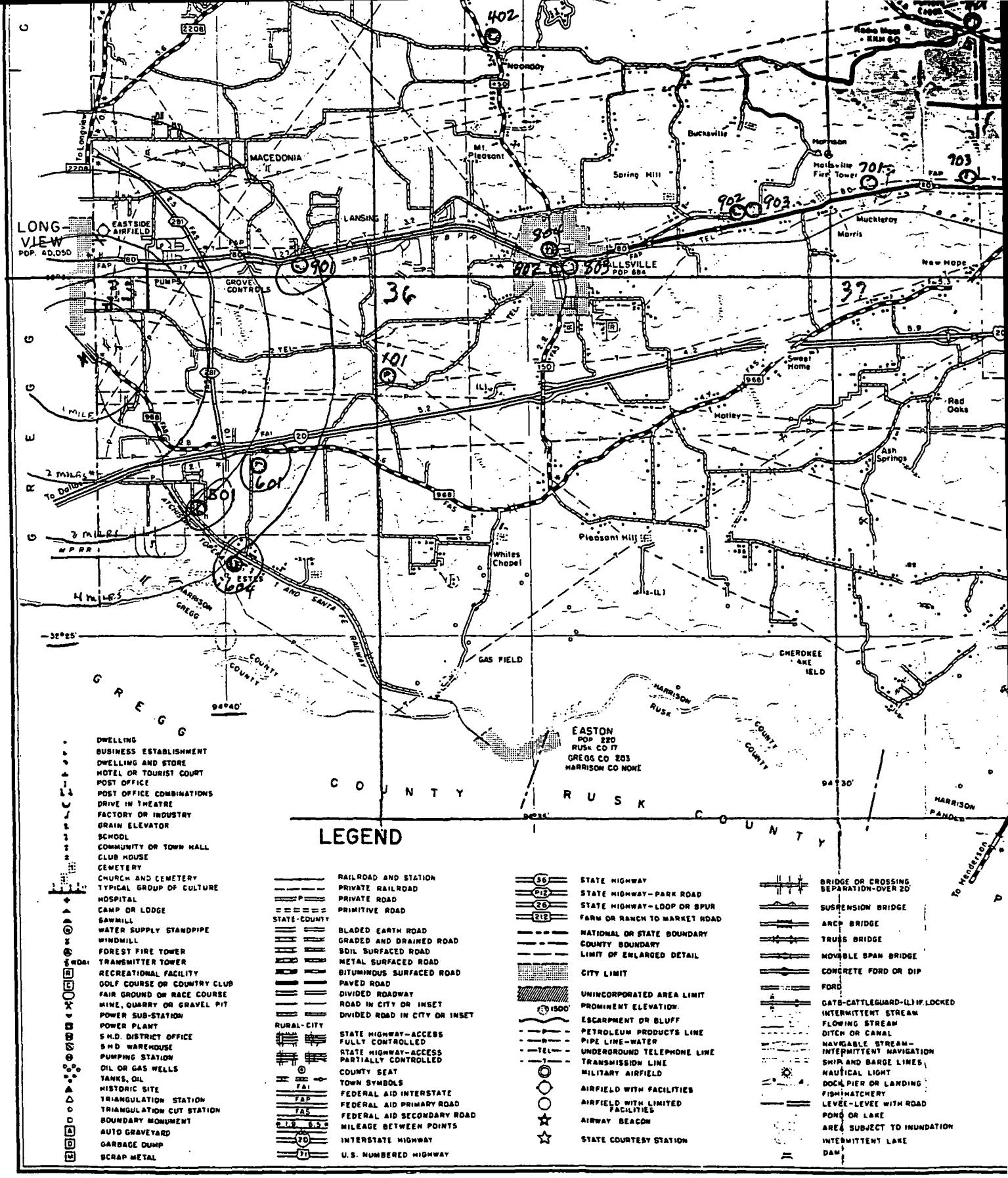
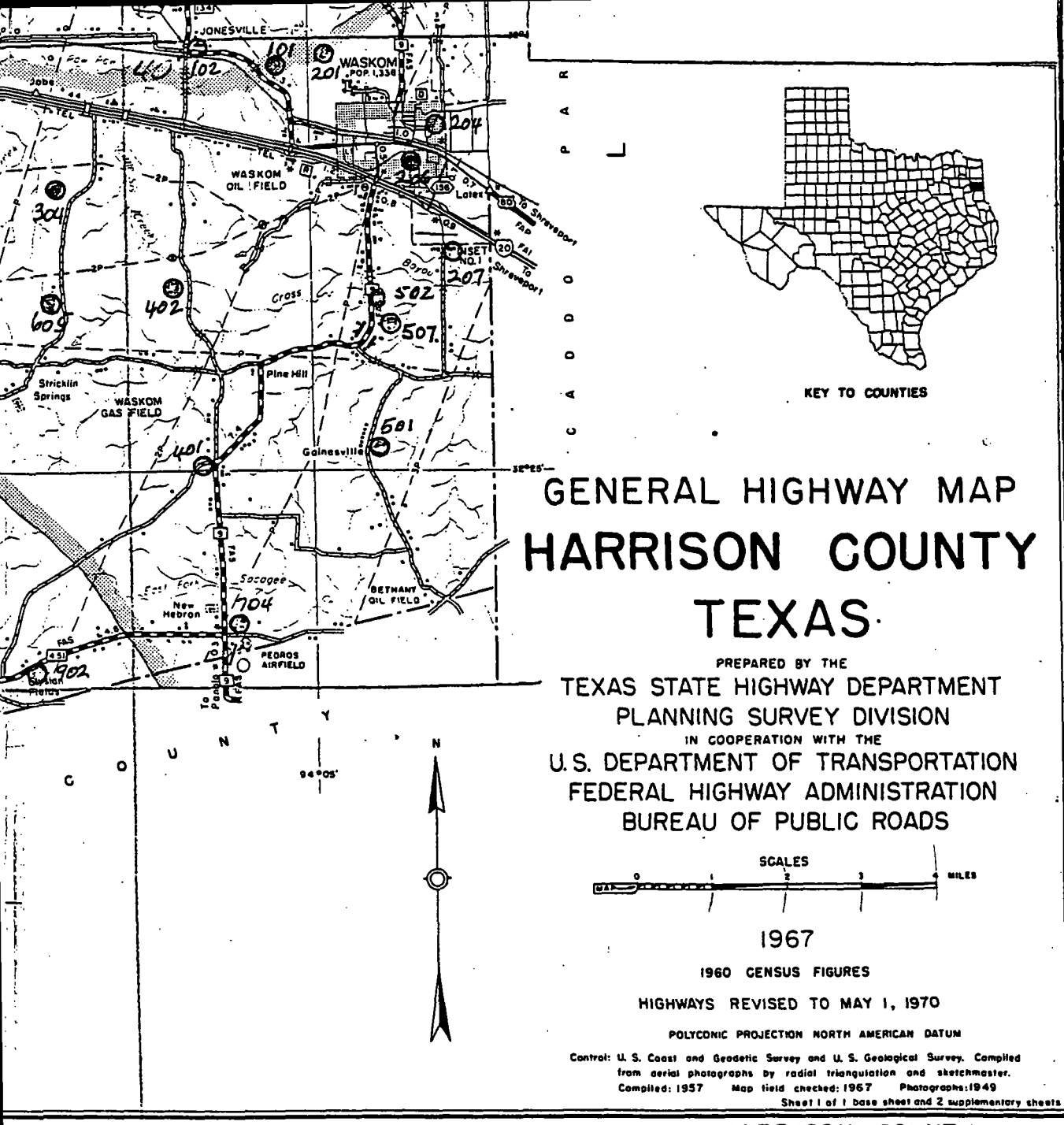
35 40 207	124CPRS	170	10/31/1941	U						13	15	177		0	293	77	112			538		94
35 40 401	124CPRS	40	02/13/1942	U								18		0	12	23	7	0.1				
35 40 402	124WLCX	190	10/06/1964					7.1	19	43	12	130		0	328	115	35	0.2	1.8	517	812	157
35 40 501	124CPRS	22	02/13/1942	U						8		45		0	92	10	24	0.9				
35 40 502	124CPRS	158	10/20/1964	U				8.8	4	10	59	492			622	0	565	0.1	1.0	1456	2550	268
35 40 507	124WLCX	145	06/14/1977				23	7.6	26	34	10	82		0	245	64	44	0.7	0.4	393	584	126
	124WLCX	145	11/11/1981				19	7.9	29	23	9	83		0	215	53	35	0.8	0.0	338	502	96
	124WLCX	145	11/15/1988				10	8.2	16	14	5	86	1	0	245	26	30	0.7	0.0	309	544	57
35 40 704	124CPRS	25	02/13/1942	U						10	7	84		0	37	8	141			268		65
35 46 202	124WLCX	147	11/14/1941	U					7			119		0	317	8	12	0.3				
	124WLCX	147	06/15/1970					8.1	12	8	1	117		0	321	6	11	0.2	1.0	314	505	26
	124WLCX	147	05/05/1982				17	8.7	12	6	1	122	2	7	296	8	13	0.2	0.2	315	689	17
35 47 201	124CPRS	310	08/11/1964					7.8	34	2	1	103	1	0	246	0	24	0.1	0.0	286	443	7

* Depth value here reflects the bottom of the SAMPLED INTERVAL which was different from the completed well depth
U after date of collection signifies unbalanced or partial chemical analysis


LONG-VIEW
POP. 40,050
EASTSIDE AIRFIELD
MACEDONIA
LANSING
GROVE CONTROLS
PUMPS
Mt. Pleasant
Spring Hill
Buckaville
Harrison
Hallsville Fire Tower
Muckleroy
Morris
New Hope
HALLSVILLE
POP 684
Sweet Home
Hatley
Red Oaks
Ash Springs
Pleasant Hill
Whites Chapel
ESTES
GAS FIELD
CHEROKEE
EASTON
POP 220
RUSK CO 17
GREGG CO 203
HARRISON CO NONE
GREGG COUNTY
RUSK COUNTY
HARRISON COUNTY
To Longview
To Dallas
To Henderson
1 MILE
2 MILES
3 MILES
4 MILES
32°25'
94°40'
94°30'
36
37
401
402
501
601
604
701
703
801
802
803
804
901
902
903
LEGEND
DWELLING
BUSINESS ESTABLISHMENT
DWELLING AND STORE
HOTEL OR TOURIST COURT
POST OFFICE
POST OFFICE COMBINATIONS
DRIVE IN THEATRE
FACTORY OR INDUSTRY
GRAIN ELEVATOR
SCHOOL
COMMUNITY OR TOWN HALL
CLUB HOUSE
CEMETERY
CHURCH AND CEMETERY
TYPICAL GROUP OF CULTURE
HOSPITAL
CAMP OR LODGE
SAWMILL
WATER SUPPLY STANDPIPE
WINDMILL
FOREST FIRE TOWER
TRANSMITTER TOWER
RECREATIONAL FACILITY
GOLF COURSE OR COUNTRY CLUB
FAIR GROUND OR RACE COURSE
MINE, QUARRY OR GRAVEL PIT
POWER SUB-STATION
POWER PLANT
S.H.D. DISTRICT OFFICE
S.H.D. WAREHOUSE
PUMPING STATION
OIL OR GAS WELLS
TANKS, OIL
HISTORIC SITE
TRIANGULATION STATION
TRIANGULATION CUT STATION
BOUNDARY MONUMENT
AUTO GRAVEYARD
GARBAGE DUMP
SCRAP METAL
RAILROAD AND STATION
PRIVATE RAILROAD
PRIVATE ROAD
PRIMITIVE ROAD
STATE-COUNTY
BLADED EARTH ROAD
GRADED AND DRAINED ROAD
SOIL SURFACED ROAD
METAL SURFACED ROAD
BITUMINOUS SURFACED ROAD
PAVED ROAD
DIVIDED ROADWAY
ROAD IN CITY OR INSET
DIVIDED ROAD IN CITY OR INSET
RURAL-CITY
STATE HIGHWAY-ACCESS FULLY CONTROLLED
STATE HIGHWAY-ACCESS PARTIALLY CONTROLLED
COUNTY SEAT
TOWN SYMBOLS
FEDERAL AID INTERSTATE
FEDERAL AID PRIMARY ROAD
FEDERAL AID SECONDARY ROAD
MILEAGE BETWEEN POINTS
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAY
STATE HIGHWAY
STATE HIGHWAY-PARK ROAD
STATE HIGHWAY-LOOP OR SPUR
FARM OR RANCH TO MARKET ROAD
NATIONAL OR STATE BOUNDARY
COUNTY BOUNDARY
LIMIT OF ENLARGED DETAIL
CITY LIMIT
UNINCORPORATED AREA LIMIT
PROMINENT ELEVATION
ESCARPMENT OR BLUFF
PETROLEUM PRODUCTS LINE
PIPE LINE-WATER
UNDERGROUND TELEPHONE LINE
TRANSMISSION LINE
MILITARY AIRFIELD
AIRFIELD WITH FACILITIES
AIRFIELD WITH LIMITED FACILITIES
AIRWAY BEACON
STATE COURTESY STATION
BRIDGE OR CROSSING SEPARATION-OVER 20'
SUSPENSION BRIDGE
ARCH BRIDGE
TRUSS BRIDGE
MOVABLE SPAN BRIDGE
CONCRETE FORD OR DIP
FORD
GATE-CATTLEGUARD-(L) IF LOCKED
INTERMITTENT STREAM
FLOWING STREAM
DITCH OR CANAL
NAVIGABLE STREAM-INTERMITTENT NAVIGATION
SHIP AND BARGE LINES
NAUTICAL LIGHT
DOCK PIER OR LANDING
FISH HATCHERY
LEVEE-LEVEE WITH ROAD
POND OR LAKE
AREA SUBJECT TO INUNDATION
INTERMITTENT LAKE
DAM



GENERAL HIGHWAY MAP
HARRISON COUNTY
TEXAS

PREPARED BY THE
TEXAS STATE HIGHWAY DEPARTMENT
PLANNING SURVEY DIVISION
IN COOPERATION WITH THE
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS

SCALES

MILES

1967

1960 CENSUS FIGURES

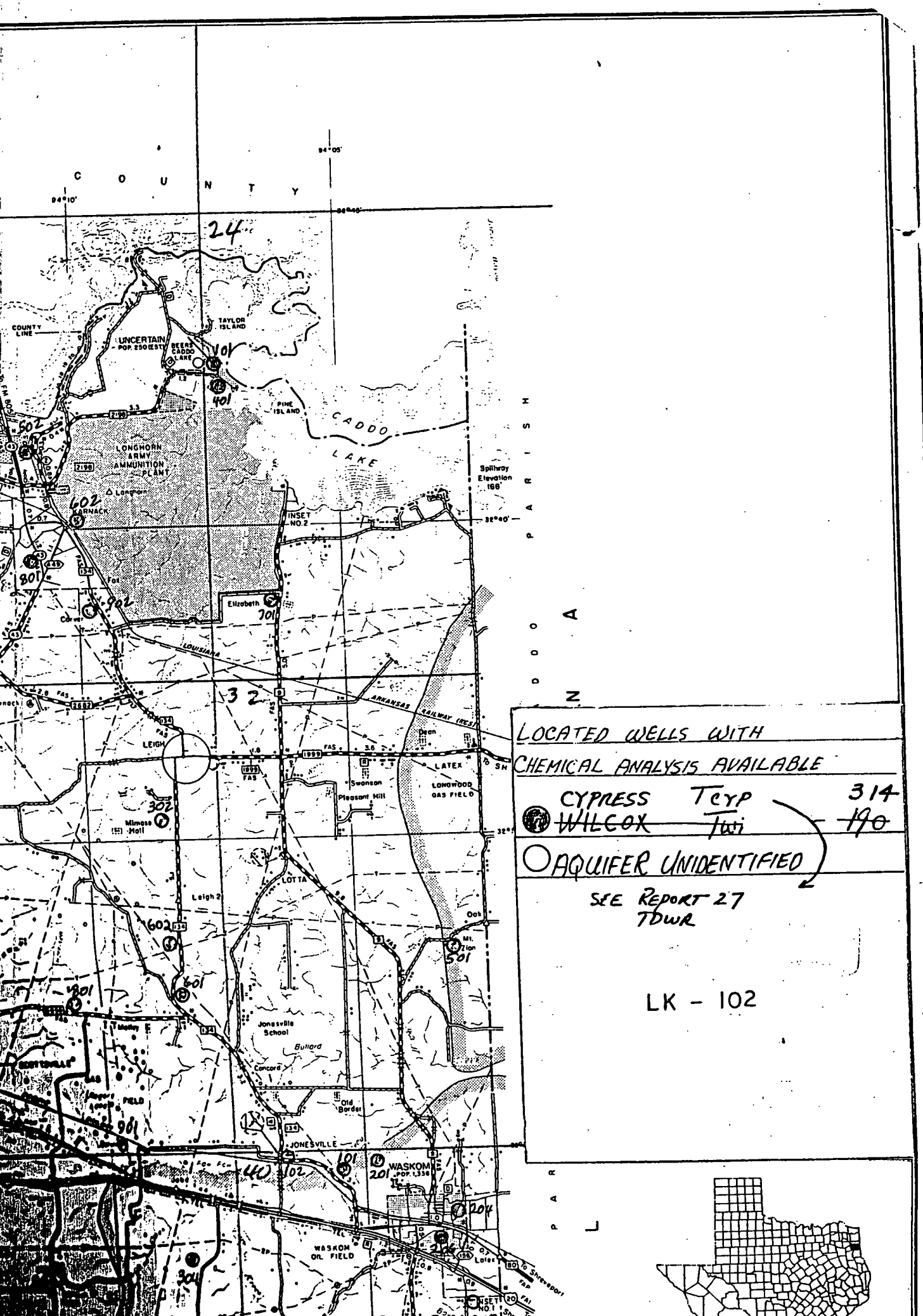
HIGHWAYS REVISED TO MAY 1, 1970

POLYCONIC PROJECTION NORTH AMERICAN DATUM

Control: U. S. Coast and Geodetic Survey and U. S. Geological Survey. Compiled from aerial photographs by radial triangulation and sketchmaster.
Compiled: 1957 Map field checked: 1967 Photographs: 1949
Sheet 1 of 1 base sheet and 2 supplementary sheets

HARRISON COUNTY TEXAS 103

9-33



LOCATED WELLS WITH CHEMICAL ANALYSIS AVAILABLE

CYPRESS Tcyp 314

~~WILCOX~~ ~~Twi~~ ~~190~~

AQUIFER UNIDENTIFIED

SEE REPORT 27 TDWR

LK - 102

9-34

REFERENCE 10

KEITH WESTBERRY, FLUOR DANIEL, INC., "DRINKING WATER WELL DISTANCE CALCULATIONS", AUGUST 1993.

DISTANCE TO DRINKING WATER WELL CALCULATIONS

-See attached map for location of wells.

(b) (6) [redacted] Residence

Distance to residence from the center of the site = 2.6875 in.

Conversion: 2.625 inches = 1 mile

Calculation: 2.6875/2.625 = 1.02 miles

(b) (6) [redacted] Residence

Distance to residence from the center of the site = 3.9375 in.

Conversion: 2.625 inches = 1 mile

Calculation: 3.9375/2.625 = 1.49 miles

Reference 12 was used to calculate distances.

REFERENCE 11

"COUNTY AND CITY DATA BOOK", U.S. BUREAU OF THE CENSUS, 1988.

A Statistical Abstract Supplement

County and City Data Book

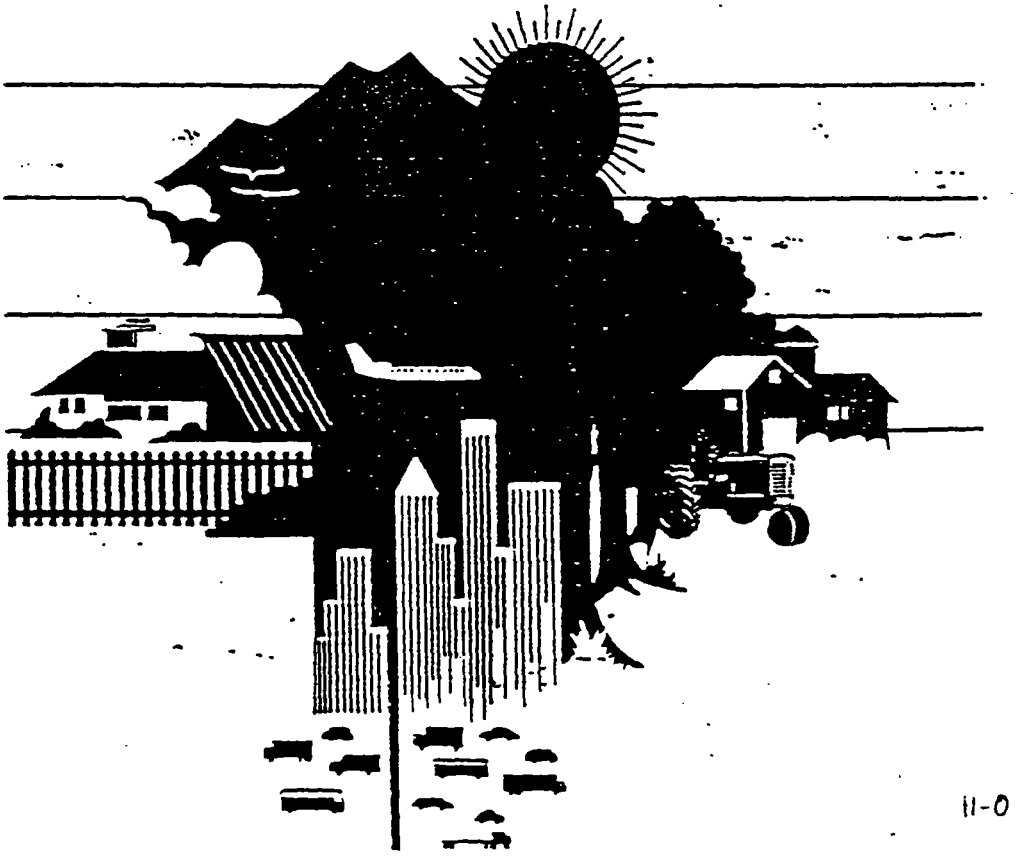
1988

States

Counties

Cities of 25,000 or More

Places of 2,500 or More



U.S. Department of Commerce

C. William Verity, Secretary
Donna C. Tuttle, Deputy Secretary
Robert Ortner, Under Secretary for Economic Affairs

BUREAU OF THE CENSUS
John G. Keane, Director

11-01

BUREAU OF THE CENSUS

John G. Keane, Director
C.L. Kincannon, Deputy Director
Roland H. Moore, Associate Director for Field Operations

DATA USER SERVICES DIVISION
Gerard C. Iannelli, Chief

ACKNOWLEDGMENTS

This volume was prepared under the general direction of Marie Argana, Assistant Division Chief, and under the general supervision of Glenn W. King, Chief, Statistical Compendia Staff. David C. Shaw was responsible for coordination of procedures, compilation, computer systems design, and technical supervision, assisted by Wanda K. Cavis. Subject development and analytical review was provided by Lars B. Johanson, Edward C. Jagers, and Rosemary E. Clark. Kathleen A. Siemer was responsible for computer operations, assisted by Mary Grace Lynch. Ellen M. Ewell provided publications planning and layout. Deloris W. Byers was responsible for text preparation. Statistical assistance was provided by Cheryl L. Slacum and clerical support was provided by Elsie F. Kesterson and Mary K. Cator.

The staff of Publications Services Division, Walter C. Odom, Chief, performed publication planning, design, composition, editorial review, and printing planning and procurement. Nelsa Brown provided publication coordination and editing. Ernest A. Schwartz provided design and graphics services.

May 1988

Library of Congress Card No. 52-4576

SUGGESTED CITATION

U.S. Bureau of the Census, *County and City Data Book, 1988*
U.S.Government Printing Office: 1988

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, Tel. (202) 783-3238, or any U.S. Department of Commerce district office.

11-02

Table 8. Counties — Population Characteristics and Households

County	Population characteristics—Con.												Households				
	1984—Con.									1980			1985			1980	
	Percent—									Percent—							Perc
	Under 5 years	5 to 14 years	15 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over	American Indian, Eskimo, and Aleut	Asian and Pacific Islander	Hispanic[1]	Number	Percent change, 1980–1985	Persons per household	Number	Female family householder[2]
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
TEXAS—Con.																	
Palo	S	S	S	S	S	S	S	S	S	.14	.12	9.42	6 800	-1.8	2.53	6 920	10.6
Panola	6.9	14.2	11.9	11.5	12.0	10.0	11.7	12.0	9.9	.25	.17	1.33	9 300	.8	2.54	9 287	6.8
Parker	S	S	S	S	S	S	S	S	S	.14	.08	5.14	7 900	5.4	2.58	7 467	5.7
Parmer	S	S	S	S	S	S	S	S	S	.17	.10	18.79	2 100	-4.7	2.87	2 204	4.4
Pecos	S	S	S	S	S	S	S	S	S	.23	.12	33.69	3 100	-4.4	2.88	3 397	9.2
Polk	S	S	S	S	S	S	S	S	S	.19	.09	11.03	700	-14.4	2.48	880	7.1
Potter	10.9	18.4	13.0	25.0	18.2	7.4	5.1	2.3	1.5	.21	2.85	20.57	57 600	44.5	2.15	39 840	6.8
Presidio	S	S	S	S	S	S	S	S	S	.28	.15	1.13	2 700	4.0	2.59	2 618	5.0
Rains	S	S	S	S	S	S	S	S	S	.15	.24	2.03	6 400	14.9	2.58	5 608	8.1
Reagan	S	S	S	S	S	S	S	S	S	.17	.12	68.29	4 100	1.6	3.48	4 041	10.4
Real	S	S	S	S	S	S	S	S	S	.23	.13	30.63	4 500	6.0	3.23	4 190	5.0
Red River	8.4	15.1	16.9	18.5	13.7	9.9	8.9	5.7	3.4	.27	.90	12.02	77 400	11.7	2.72	69 284	10.5
Reeves	S	S	S	S	S	S	S	S	S	.41	.24	24.53	1 900	5.3	2.80	1 842	7.7
Refugio	S	S	S	S	S	S	S	S	S	.14	.03	10.04	6 200	18.0	2.44	5 219	5.5
Roberts	S	S	S	S	S	S	S	S	S	.15	.08	28.83	400	-4.3	2.48	387	2.1
Robertson	S	S	S	S	S	S	S	S	S	.08	.08	35.61	1 900	8.5	2.91	1 777	8.2
Rockwall	S	S	S	S	S	S	S	S	S	.08	.07	28.60	6 600	10.9	2.78	5 949	9.1
Runnels	9.8	13.3	14.2	15.1	11.7	10.5	10.3	8.7	6.3	.58	.33	4.41	10 500	2.1	2.53	10 224	5.6
Rusk	7.4	14.6	14.5	15.1	13.2	9.4	10.3	8.7	6.8	.70	.31	1.50	38 800	8.4	2.58	33 972	8.3
Sabine	8.5	15.2	16.6	17.3	13.1	9.4	8.6	6.4	4.7	.35	.39	2.02	4 200	14.7	2.67	3 664	9.0
San Augustine	S	S	S	S	S	S	S	S	S	.03	.10	9.07	5 600	20.3	2.88	4 657	11.5
San Jacinto	7.8	15.7	16.0	15.9	14.1	10.1	9.2	6.7	4.6	.24	.45	25.42	18 000	21.1	2.53	15 733	8.3
San Patricio	9.8	17.2	17.0	14.3	11.5	10.0	8.3	7.0	5.0	.24	.38	33.74	12 400	.5	2.91	12 385	6.9
San Saba	S	S	S	S	S	S	S	S	S	.13	.07	15.05	2 000	-7.2	2.38	2 175	4.9
Schleicher	S	S	S	S	S	S	S	S	S	.16	.19	2.13	3 300	-4.7	2.34	3 423	4.8
Scurry	S	S	S	S	S	S	S	S	S	.43	.24	11.95	2 400	6.0	2.71	2 269	4.6
Shackelford	S	S	S	S	S	S	S	S	S	.44	.08	8.01	2 400	-4.7	2.62	2 478	6.1
Shelby	8.7	17.5	14.4	17.2	13.2	9.6	8.9	6.4	4.1	.10	.08	1.40	14 700	7.2	2.89	13 727	7.4
Sherman	8.8	14.9	18.4	22.9	14.0	8.6	8.5	3.6	2.2	.22	1.92	15.32	1 015 800	13.1	2.67	869 882	10.0
Smith	9.1	16.0	14.7	15.3	13.5	9.1	8.6	7.3	5.5	.18	.12	1.53	19 900	10.5	2.63	18 049	10.7
Somervell	S	S	S	S	S	S	S	S	S	.23	.03	4.46	1 300	-4.4	2.73	1 381	3.9
Starr	S	S	S	S	S	S	S	S	S	.22	.18	15.47	2 900	-3.8	2.48	2 981	5.0
Stephens	9.4	13.3	12.8	15.1	10.8	7.0	7.1	4.7	2.9	.20	.20	30.51	18 700	48.4	2.78	12 583	8.9
Sterling	S	S	S	S	S	S	S	S	S	.49	.11	10.23	1 800	-3.8	2.94	1 837	4.5
Stonewall	S	S	S	S	S	S	S	S	S	.22	.14	1.45	23 000	24.1	2.57	18 087	8.8
Sutton	8.8	13.8	13.4	12.0	11.8	11.2	14.8	10.8	5.8	.22	.14	1.45	23 000	24.1	2.57	18 087	8.8
Swisher	9.6	21.8	17.9	15.1	11.4	8.0	7.3	5.4	3.2	.10	.15	81.28	98 800	31.8	3.54	75 818	12.1
Tarrant	7.8	13.7	13.0	12.5	11.0	9.4	11.9	11.9	8.8	.18	.18	5.85	10 500	8.9	2.52	9 683	7.3
Taylor	11.2	13.2	17.4	18.0	12.1	7.5	6.7	6.2	3.8	.31	.85	27.03	7 800	4.4	2.11	7 522	5.7
Terrell	7.3	13.8	13.0	18.1	13.2	10.8	12.9	9.4	4.5	.34	.20	2.58	9 700	43.8	2.60	6 759	5.0
Terry	8.1	14.3	15.2	14.8	13.2	8.6	9.8	9.4	6.8	.14	.11	1.57	10 900	14.2	2.60	9 528	7.5
Throckmorton	7.7	13.6	12.7	13.6	11.4	10.9	10.1	10.1	7.3	.16	.11	3.63	7 500	4.7	2.52	7 204	10.8
Titus	7.8	15.4	18.3	13.3	12.2	11.2	12.3	8.9	4.6	.38	.49	21.05	13 300	11.4	2.52	11 965	7.3
Tom Green	S	S	S	S	S	S	S	S	S	.44	.15	58.25	700	-8.9	1.41	822	7.9
Travis	7.8	14.3	17.2	14.4	13.1	10.4	9.5	7.8	5.6	.31	.38	2.39	24 600	20.8	2.58	20 331	7.7
Trinity	9.8	15.4	13.1	18.4	11.1	9.3	10.3	8.2	4.1	.41	.13	4.80	10 200	3.4	2.72	9 837	4.8
Tyler	S	S	S	S	S	S	S	S	S	.14	-	18.54	700	38.8	2.82	507	4.5
Upshur	S	S	S	S	S	S	S	S	S	.45	.18	1.31	2 900	-.1	2.61	2 584	4.7
Upton	S	S	S	S	S	S	S	S	S	.08	.04	18.68	4 600	-.6	2.88	4 685	8.0
Uvalde	8.1	17.3	14.6	13.8	12.4	9.8	8.9	6.3	3.8	.10	.07	1.24	11 100	4.0	2.67	10 708	8.1
Val Verde	S	S	S	S	S	S	S	S	S	.18	.08	47.18	600	5.9	2.79	592	5.9
Van Zandt	8.5	14.5	17.4	18.8	11.3	9.8	10.0	7.0	4.7	.18	1.06	4.10	91 700	31.8	2.71	90 745	10.6
Victoria	S	S	S	S	S	S	S	S	S	-	.02	90.54	1 600	1.9	3.41	1 564	13.9
Walker	10.6	19.0	18.3	15.7	11.8	8.5	8.3	6.4	3.6	.10	.11	67.18	12 300	10.2	3.25	11 165	9.4
Waller	8.5	16.9	15.3	16.1	13.2	9.1	7.9	6.0	4.6	.19	.20	4.10	23 900	29.2	2.89	23 122	6.7
Ward	S	S	S	S	S	S	S	S	S	.24	.34	14.66	6 800	5.4	2.52	6 387	5.4
Washington	S	S	S	S	S	S	S	S	S	.07	.12	42.99	4 400	-3.2	3.00	4 522	9.2
Webb	8.2	16.7	13.3	13.9	13.4	10.5	8.5	7.5	5.6	.17	.22	4.34	16 700	28.9	2.84	13 154	9.5
Wharton	S	S	S	S	S	S	S	S	S	.24	.19	12.22	5 000	32.7	2.67	3 801	6.4
Wheeler	S	S	S	S	S	S	S	S	S	.74	-	82.97	200	13.1	1.18	169	3.8
Wichita	S	S	S	S	S	S	S	S	S	-	.09	7.77	400	1.9	2.60	431	3.0
Wilbarger	6.6	11.8	17.9	12.4	10.3	10.0	13.1	12.8	9.8	.22	.13	13.47	13 800	23.5	2.42	11 171	7.2
Willacy	S	S	S	S	S	S	S	S	S	.05	.02	17.40	1 700	10.9	2.29	1 584	7.0
Williamson	S	S	S	S	S	S	S	S	S	.24	-	9.85	100	-4.8	2.75	134	2.9
Wilson	S	S	S	S	S	S	S	S	S	.13	.13	57.46	800	7.9	2.90	771	7.5
Winkler	9.7	16.3	23.1	18.4	9.7	8.2	7.1	4.4	3.1	.22	1.41	52.19	11 000	7.3	2.95	10 290	9.3
Wise	S	S	S	S	S	S	S	S	S	.11	.08	17.70	2 100	4.5	2.52	2 042	6.5
Wood	7.1	15.3	18.5	12.0	13.4	9.2	10.1	9.3	7.1	.51	.22	.90	16 800	6.7	2.52	15 710	9.6
Yoakum	S	S	S	S	S	S	S	S	S	.29	.10	30.39	5 800	-3.0	2.98	6 408	6.2
Young	S	S	S	S	S	S	S	S	S	.24	.84	10.70	5 400	22.9	2.50	4 414	7.0
Zapata	S	S	S	S	S	S	S	S	S	.07	.11	72.70	1 900	11.0	2.96	1 725	10.6
Zavala	S	S	S	S	S	S	S	S	S	.17	.18	6.92	6 800	-3.0	2.66	7 150	5.9
Lee	S	S	S	S	S	S	S	S	S	.24	.18	6.02	4 700	21.4	2.77	3 856	5.3

[1]Hispanic persons may be of any race. [2]No spouse present. [3]Householder living alone.

11-03

REFERENCE 12

DAVE TERRY, TEXAS WATER COMMISSION, RECORD OF COMMUNICATION WITH KEITH WESTBERRY, FLUOR DANIEL, INC., CONCERNING WELLHEAD PROTECTION AREAS, AUGUST 3, 1993.

RECORD OF TELEPHONE CONVERSATION

From: Keith Westberry Keith Westberry **Date:** 08-02-93

Location: Fluor Daniel Inc., Dallas **Time:** 2:10

Subject: WHPA's of Longview SI sites

To: Dave Terry **P.O. Number:** _

Location: TWC - Austin

Other Ref.: (512) 463-8266

I spoke with Mr. Terry concerning the SI site in Longview, TX. Mr. Terry stated that the City of Longview was on a surface water system therefore they would not be part of the Wellhead Protection Program. However upon asking about the communities of Gum Springs and White Oak he did alert me that there were some WHPA's.

Gum Springs - Has 2 wells, each of which have a 1/4 mile WHPA around them.

White Oak - The White Oak Valley Estates Community has 2 wells which together have 1 WHPA.

These areas were not positively identified as within the 4-mile radius of the site. Therefore I sent Mr. Terry a fax with maps locating the sites. He stated that he would call back and let me know how close the WHPA's were to my sites.

FAX No. (512) 463-6648

12-01

REFERENCE 13

RAINFALL FREQUENCY ATLAS OF THE UNITED STATES, TECHNICAL PAPER NO. 40, U.S. DEPARTMENT OF AGRICULTURE, ENGINEERING DIVISION, SOIL CONSERVATION SERVICE, NOT DATED.

U.S. DEPARTMENT OF COMMERCE
LUTHER H. HODGES, Secretary

WEATHER BUREAU
F. W. REICHELDERFER, Chief

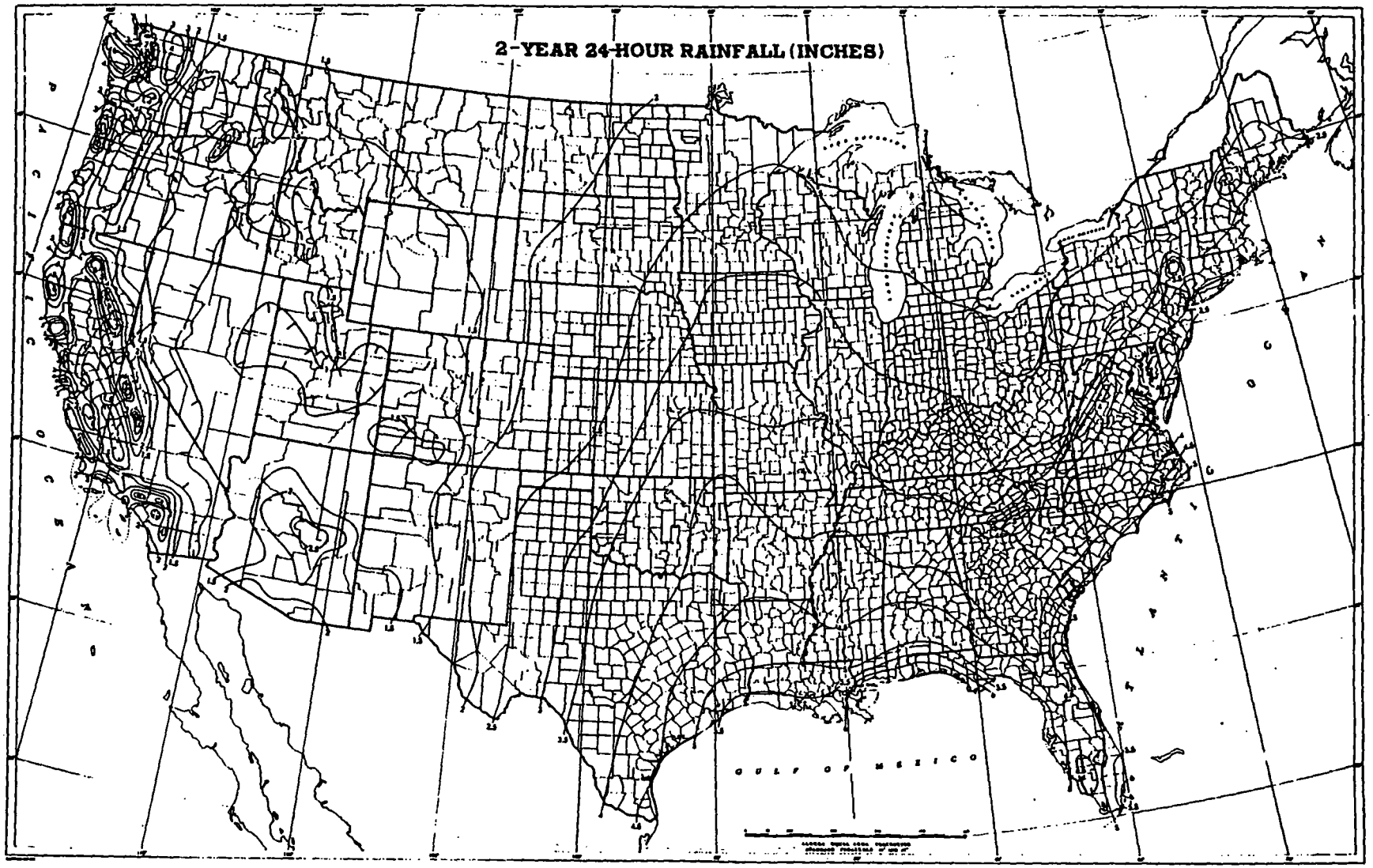
TECHNICAL PAPER NO. 40

RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture

10-31



13-02

REFERENCE 14

WAYNE PENICK, DPC INDUSTRIES, INC., LETTER TO KEITH WESTBERRY, FLUOR DANIEL, INC., CONCERNING DIXIE (TEI) PETRO-CHEMICAL, INC., APRIL 12, 1993.

DPC INDUSTRIES, INC.
P.O. Box 24600
Houston, Texas 77229-4600
(713) 457-4888
FAX (713) 457-4807

RECEIVED
APR 1 4 1993

April 12, 1993

Mr. Keith Westberry
Fluor Daniel, Inc.
12790 Merit, Suite 200
Dallas, TX 75251

RE: DPC Industries, Inc., Site Inspection
Gum Springs Road, Longview, Texas

Dear Mr. Westberry:

I have included with this letter some of the information you requested regarding the property located on Gum Springs Road. DPC Industries, Inc. operated a solvent terminal and chemical distribution facility at this location from 1979 until 1986. The facility was relocated to another site following 1986. The Gum Springs site was purchased by Dixie Petro-Chem from TEI Petro-Chem in 1979. I was informed that TEI constructed the terminal in 1975. In 1989 Dixie Petro-Chem changed it's company name to DPC Industries, Inc. The following information is included with this letter.

1. Facility site map
2. USGS map showing site location
   Lat. 32 29' 20" Long. 94 42' 30"
3. List of bulk chemicals that were handled on-site.
4. Two hazardous waste manifests from on-stie shipments.

Please contact me regarding the time you would like to meet at the Gum Springs site on April 19th. I plan on arriving in Longview Sunday night. I can be reached at (713) 457-4821.

Sincerely,

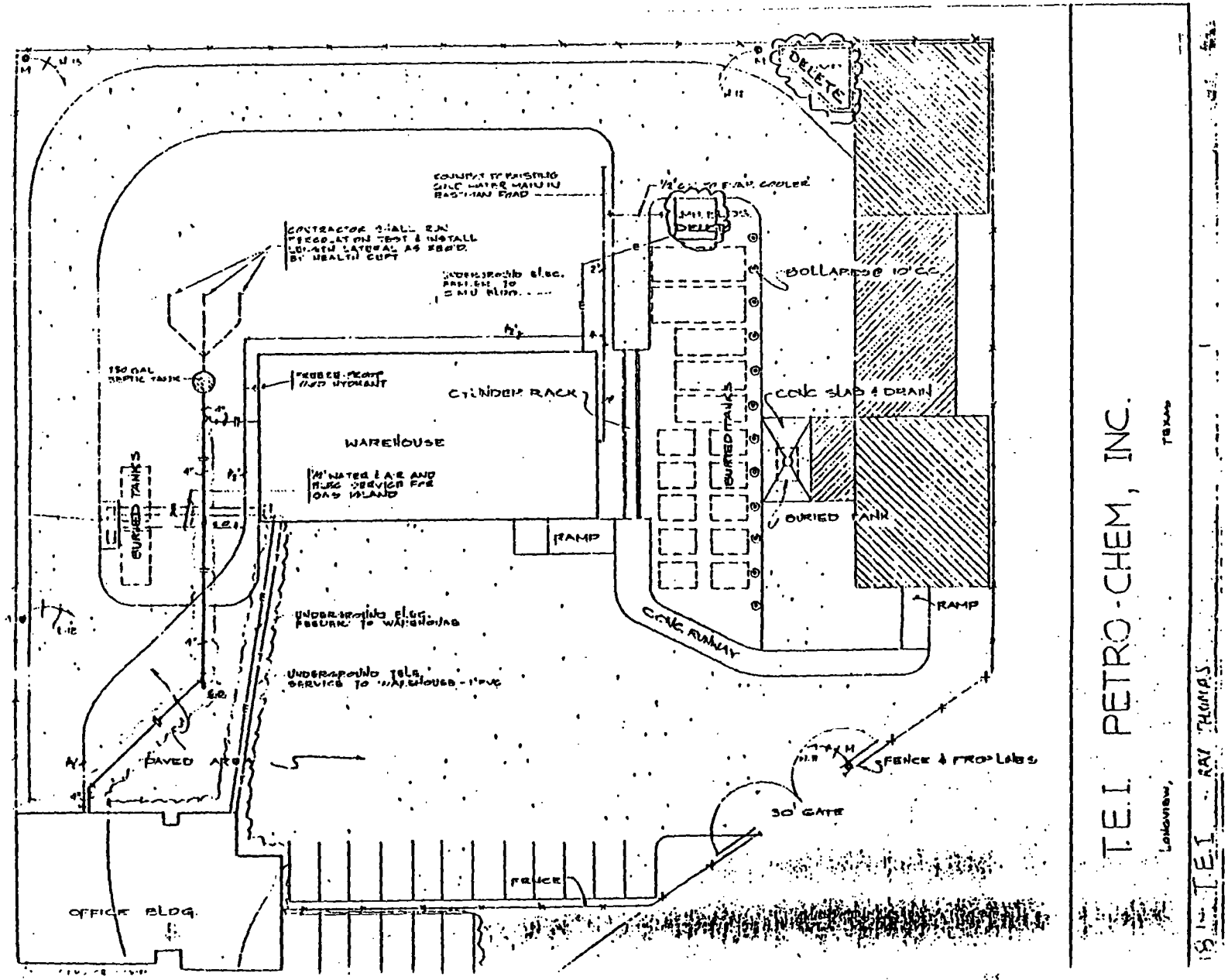
DPC Industries, Inc.

Wayne Penick

Wayne L. Penick
Sr. Environmental Specialist

PW/WLP/LVGUM93

14-01


DELETE
CONNECT TO EXISTING GOLD WATER MAIN IN EAST-MAN ROAD
CONTRACTOR SHALL RUN PERCOLATION TEST & INSTALL LENGTH LATERAL AS REQ'D. BY HEALTH DEPT
UNDERGROUND ELEC. FEEDER TO S.M.U. BLDG.
BOLLARDS @ 10' C.C.
CONC SLAB & DRAIN
CYLINDER RACK
WAREHOUSE
BURIED TANKS
BURIED TANK
RAMP
CONC RUNWAY
UNDERGROUND ELEC. FEEDER TO WAREHOUSE
UNDERGROUND TELE. SERVICE TO WAREHOUSE - 1" PVC
PAVED AREA
FENCE & PROP LINES
30' GATE
FENCE
OFFICE BLDG.
T.E.I. PETRO-CHEM, INC.
LONGVIEW, TEXAS
T.E.I. - RAY THOMAS

14-0

PRODUCT	TANK CAPACITY	EST. ANNUAL THRU PUT
Acetone	8,000 gal.	800,000 lbs.
Anti-Freeze	8,000 gal.	325,500 lbs.
Glycol Ether DB	1,000 gal.	45,000 lbs.
Glycol Ether EB	4,000 gal.	260,000 lbs.
Diethanolamine 85%	2,000 gal.	40,000 lbs.
Ethyl Acetate	4,000 gal.	185,000 lbs.
Ethyl Alcohol	4,000 gal.	264,000 lbs.
Ethylene Glycol	2,000 gal.	74,400 lbs.
Heavy Aromatic Naphtha	8,000 gal.	584,000 lbs.
Isopropyl Alcohol	8,000 gal.	975,000 lbs.
Lacquer Diluent	4,000 gal.	78,000 lbs.
Methanol	30,000 gal. (1)	*6,600,000 lbs.
Methyl Ethyl Ketone	8,000 gal.	540,000 lbs.
Methyl Isobutyl Ketone	2,000 gal.	130,000 lbs.
Methylene Chloride	4,000 gal.	135,000 lbs.
Mineral Seal Oil	2,000 gal.	150,000 lbs.
Mineral Spirits	~~12,000~~ gal.	795,000 lbs.
Naphthol Spirits	2,000 gal.	105,000 lbs.
N. Butyl Acetate	2,000 gal.	45,000 lbs.
N. Butyl Alcohol	8,000 gal.	160,000 lbs.
N. Propyl Acetate	2,000 gal.	150,000 lbs.
N. Propyl Alcohol	4,000 gal.	80,000 lbs.
Perchlorethylene	2,000 gal.	110,000 lbs.
Solvent 100	2,000 gal.	146,000 lbs.
Solvent 150	2,000 gal.	58,000 lbs.
140 Solvent	2,000 gal.	52,800 lbs.
Toluol	30,000 gal. (1)	*1,000,000 lbs.
1-1-1 Trichlorethane	4,000 gal.	550,000 lbs.
Triethylene Glycol	8,000 gal.	750,000 lbs.
VM&P	~~12,000~~ gal.	760,000 lbs.
Xylene	8,000 gal.	875,000 lbs.
Caustic Soda 50%	8,000 gal. (2)	600,000 lbs.

(1) Tank already in place.

(2) Needs to be insulated.

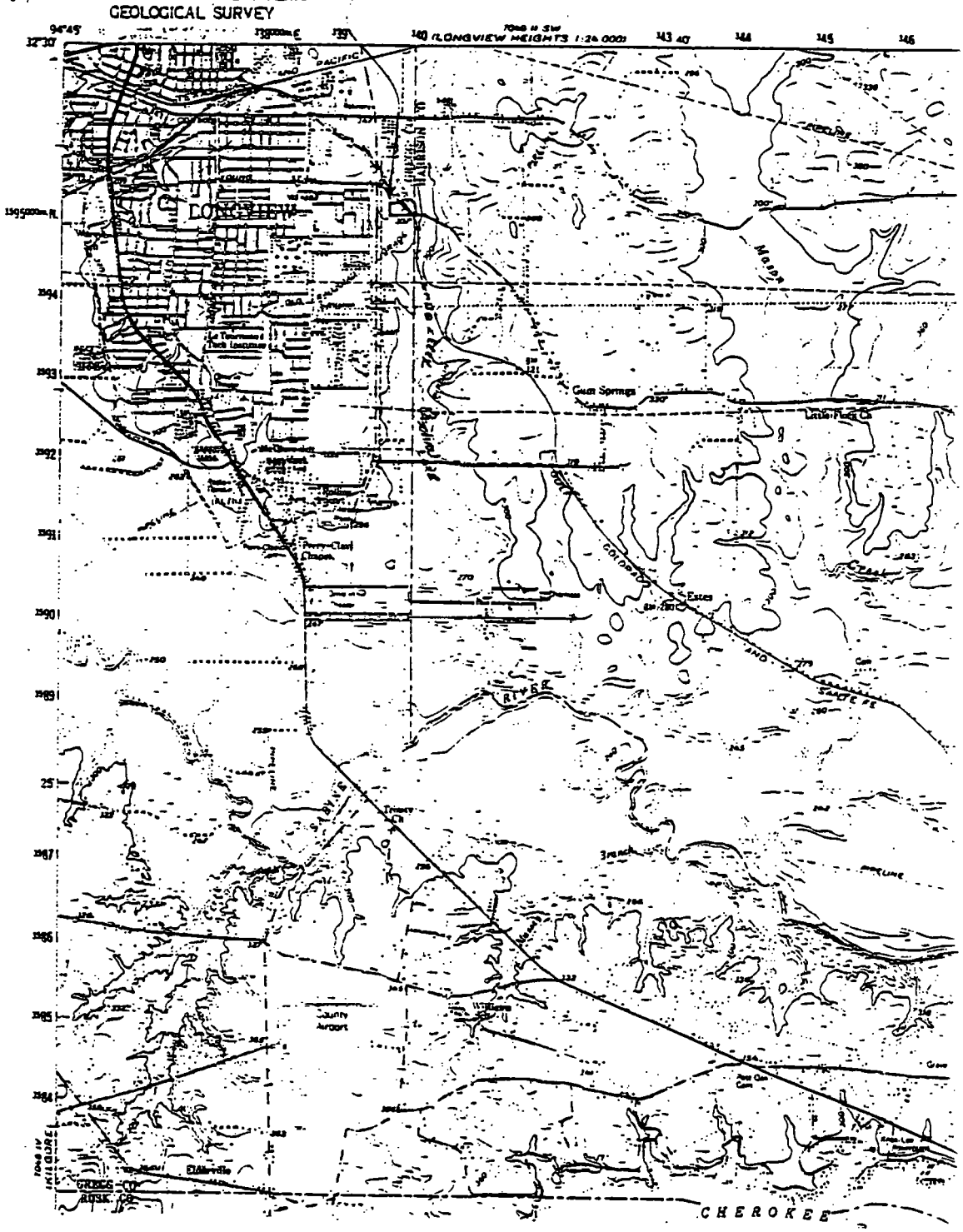
TANK SIZE RECAP

30,000 Gal.	12,000 Gal.	8,000 Gal.	*4,000 Gal.
Methanol	Mineral Spirits	Acetone	EB
Toluene	VM&P	HAN	Ethyl Acetate
		IPA	Ethyl Alcohol
		MEK	Lacquer Diluent
		N. Butyl Alcohol	Methylene Chloride
		Xylene	N. Propyl Alcohol
		Caustic Soda 50% (1)	1-1-1 Trichlorethane
			N. Propyl Acetate
			DEA 85%
			Triethylene Glycol
			Solvent 100
			Anti-Freeze

LAT 32° 29' 20"

SITE LON 94° 42' 30"

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



14-04

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 7-31-85

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. T X D 0 0 7 9 8 3 6 7 6 3 8 1 1 9 6 4
2. Page 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Dixie Petro Chem, Inc
P.O. Box 8406
Longview, 75608

4. Generator's Phone 214/643-7362

5. Transporter 1 Company Name: Gibraltar Chemical Resources
6. US EPA ID Number T X D 0 0 0 0 7 4 2 3 0 4

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Gibraltar Chemical Resources
Hwy 155, 1 mi North of I-20
Winona, TX 75792
10. US EPA ID Number T X D 0 0 0 0 7 4 2 3 0 4

11. Facility's Phone

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Container No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Waste Flammable NOS, FLAMMABLE LIQUID, UN1993			2454 GAL	
b.				
c.				
d.				

DOT-E-8408

RECEIVED APR 3 1987

15. Additional Descriptions for Materials Listed Above
100% = EPA WASTE

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of processing, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: CHRISTOPHER L. HAUPT
Signature: Christopher L. Haupt
Month Day Year: 03 27 87

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: CHRLNE BOURGOIS JR.
Signature: Charlene Bourgois Jr.
Month Day Year: 03 27 87

CHRISTOPHER L. HAUPT
Christopher L. Haupt

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Nancy Blount
Signature: Nancy Blount
Month Day Year: 03 30 87

EPA Form 8700-22 (Rev. 4-85) Previous edition is obsolete. White-Original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy
TWC 0311 (Rev. 05-01-85)

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

G 33

Form Approved. OMB No. 2050-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. T X D 0 7 9 8 3 6 7 6 3 8 1 9 6 — Manifest Document No. 001 01 1962

2. Page 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Dixie Petro Chem, Inc.
P.O. Box 8406
Longview, TX 75607

4. Generator's Phone (214) 643-7362

5. Transporter 1 Company Name — US EPA ID Number
Gibraltar Chemical Resources — T X D 0 0 7 4 2 3 0 4

6. Transporter 2 Company Name — US EPA ID Number

7. Designated Facility Name and Site Address — US EPA ID Number
Gibraltar Chemical Resources
Hwy 155, 1 mi North of I20
Winona, TX 75792 — T X D 0 0 7 4 2 3 0 4

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Container No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Waste Flammable NOS, FLAMMABLE LIQUID, UN1993	001	TT	5112	G
b.				
c.				
d. DOT-E 8552				

J. Additional Descriptions for Materials Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of processing, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: Gary Brandenburg — Signature: Gary Brandenburg — Month Day Year: 10 13 12 4 87

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Darrell Markham — Signature: Darrell Markham — Month Day Year: 10 13 12 4 87

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: ROBERT C. MANN — Signature: Robert C. Mann — Month Day Year: 11 3 24 87

EPA Form 8700-22 (Rev. 4-85) Previous edition is obsolete. White-Original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy
TWC-0311 (Rev. 09-01-83)

MAR 30 1987 Petro-Chem

EXHIBIT "A"

Being 4.02 acres of land located in the H. W. Norvell A-156 and F. W. Sanders A-188 Surveys, Gregg County, Texas, said 4.02 acres being a part of a 5.29 acre tract described in deed of record in Vol. 969, Pg. 474, Deed Records, Gregg County, Texas, and also a part of a 5.24 acre tract described in deed of record in Vol. 1036, Pg. 15, Deed Records, Gregg County, Texas, said 4.02 acre being more particularly described as follows:

BEGINNING at a 5/8" iron rod in the W. ROW line of Gum Springs Road, said Beginning point being the SE corner of said 5.24 acre tract;

THENCE West 453.7 feet along the SBL of said 5.24 acre tract to a 3/8" iron rod for corner;

THENCE N 0 deg. 14' E, 248.2 feet along a fence on the EBL of trailer park to a 1/2" iron pipe for corner;

THENCE West 116.6 feet along the NBL of said trailer park to a point in same for corner;

THENCE North 289.3 feet to a point for corner, same being the NW corner at tanks;

THENCE S 89 deg. 16' E, 192.8 feet to a point in the W. ROW line of Gum Springs Road for corner;

THENCE S 35 deg. 14' E, 64.7 feet and S 35 deg. 08' E, 589.6 feet along the W. ROW line of said Gum Springs Road to the Place of Beginning and containing 4.02 acres of land.

14-07

REFERENCE 15

"Soil Survey of Upshur and Gregg Counties, Texas", U.S. Department of Agriculture, May 1993.

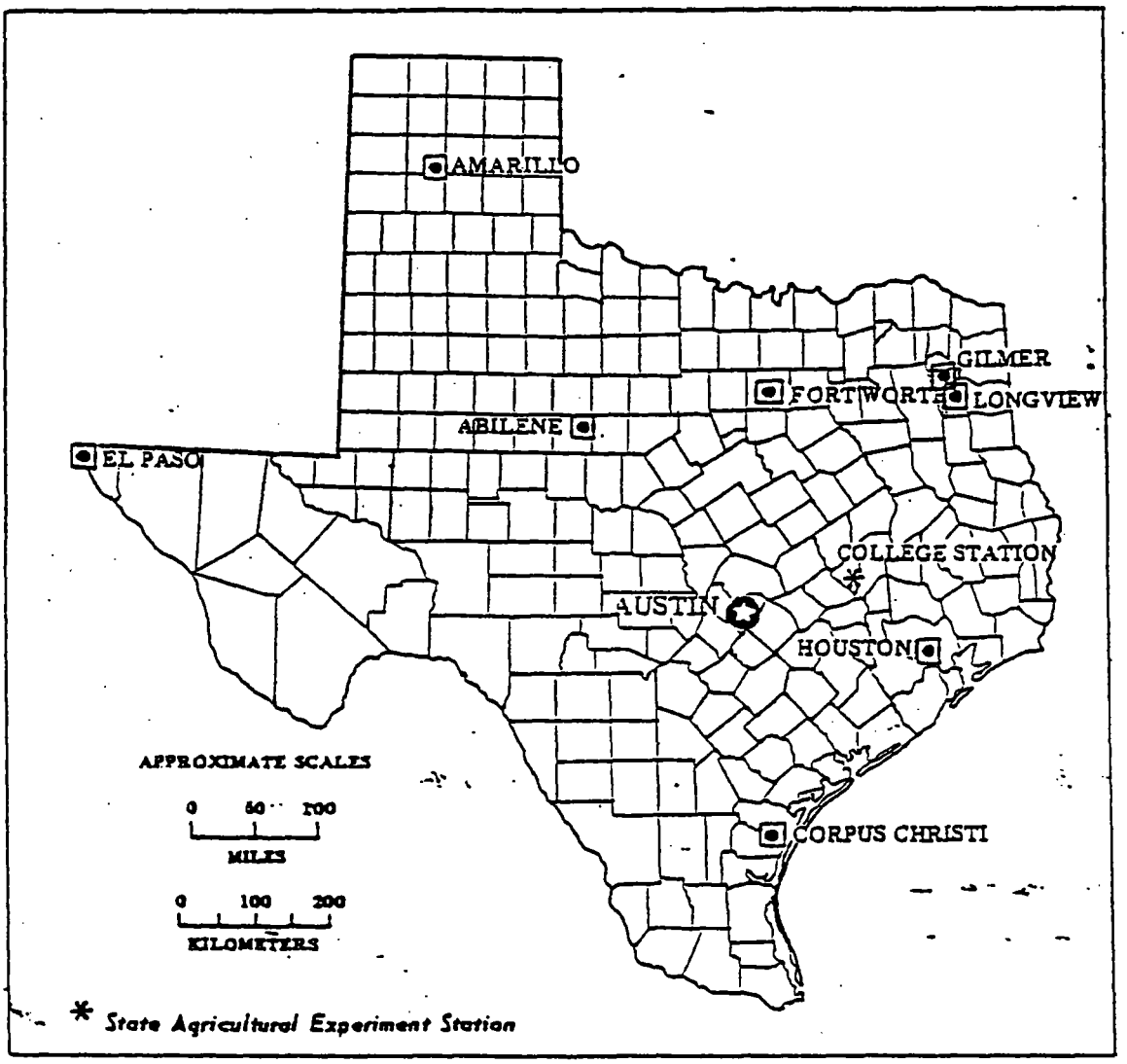
United States
Department of
Agriculture

Soil
Conservation
Service

In Cooperation with
the Texas
Agricultural
Experiment Station

Soil Survey of Upshur and Gregg Counties, Texas

15-01



Location of Upshur and Gregg Counties, Texas

15-02

soil survey of
Upshur and Gregg Counties, Texas

By Kirthell Roberts
Soil Conservation Service

Soils survey by Thomas L. Galloway, Gaylon L. Lane,
Kirthell Roberts, and Jesse R. Thomas, Jr.,
Soil Conservation Service

United States Department of Agriculture,
Soil Conservation Service
in cooperation with the
Texas Agricultural Experiment Station

UPSHUR AND GREGG COUNTIES are in central northeastern Texas. Gilmer is the county seat of Upshur County, and Longview is the county seat of Gregg County. The total area of the two counties is 873 square miles, or 558,720 acres. Elevation ranges from about 680 feet above sea level in central Upshur County to about 240 feet above sea level in southeastern Gregg County.

The counties are in the East Texas Timberlands Land Resource Area. The topography of the area is nearly level to hilly. The area has a well-defined drainage pattern and is dissected by many streams. The northern and southeastern parts of Upshur County drain into Little Cypress Creek from Kelsey Creek, Lilly Creek, Caney Creek, Gum Creek, and Walnut Creek. The extreme northeast corner of the county drains north into Big Cypress Creek and Lake O'the Pines. The southwestern part drains south into the Sabine River. Gregg County is bisected by the Sabine River. All drainage in Gregg County is into the Sabine River except the northernmost part, which drains into Little Cypress Creek.

Timber, livestock, and dairy farming are the major farming enterprises in the area. According to records of the local field office of the Soil Conservation Service, about 48 percent of the area is used for woodland, 29 percent for pasture and hay, 8 percent for crops, and the remaining 15 percent for urban and built-up areas or water areas.

The soils of the area formed mostly under forest vegetation. The soils on uplands are light colored and dominantly loamy or sandy. In unprotected sloping areas, they are subject to water erosion. The soils on flood plains are loamy or clayey. These soils are mostly along the Little Cypress Creek, Sabine River, and adjoining streams.

general nature of the area

This section provides general information about Upshur and Gregg Counties. It briefly describes the settlement and population, agriculture, natural resources, and climate of the area.

settlement and population

Upshur County was created and organized in 1846 from parts of Harrison and Nacogdoches Counties. It was named in honor of former U.S. Secretary of State A. P. Upshur.

The population of Upshur County, according to the 1980 census, is 28,595. Gilmer, the seat of Upshur County and its major city, has a population of 5,119.

Gregg County was created and organized in 1873 from parts of Upshur and Rusk Counties. It was named in honor of Confederate General John Gregg.

The population of Gregg County is 98,445. Longview, the seat of Gregg County and its major city, has a population of 63,763.

15-03

agriculture

Agriculture in the counties has changed drastically over the years. The early settlers were mainly farmers, and sweet potatoes and cotton were the main cash crops. Cattle and hogs were raised for home use. Crop farming has declined over the years, and many old cropland fields and woodland areas have been cleared and planted to pasture.

Most livestock are raised in cow-calf operations. The livestock are mostly pastured in summer and fed hay and feed supplements in winter. Pastures are mainly in Coastal bermudagrass, common bermudagrass, and bahiagrass, which also provide hay for beef production. Cool-season legumes are overseeded in many pastures to improve the soil and provide additional forage.

Dairy farming has become increasingly important in the area. There are more than 50 dairy herds in Upshur County. These are located dominantly in the Kelsey-Shady Grove area, where the farms average more than 100 milk cows each (*5*). Many acres of pasture are required for grazing, hay, and silage.

Crop production is mainly nonirrigated truck crops of corn, peas, sweet potatoes, and watermelons. Most farms are small.

Commercial timber production in the area is mostly on locally owned small tracts. Each year pine and hardwood timber is harvested for pulpwood, saw logs, crossties, posts, and poles. This activity is significant to the local economy. Many fields that were once in cropland have been converted to pine plantations to increase future timber yields.

natural resources

Soil is the most important resource in Upshur and Gregg Counties. The production of livestock, forage, crops, and timber, which are sources of livelihood for many people, all depend on the soil.

Oil and gas production is also significant in the survey area (fig. 1). Gregg County is in the center of the East Texas Oil Field, which also extends into southern Upshur County. The numerous oil and gas wells are sources of income for many landowners. Oil and gas exploration, drilling, and servicing provide employment for countless people.

Sand and gravel are mined in the counties. Sand is mined on the stream terraces of the Sabine River and Big Sandy Creek. Gravel is obtained from an iron ore hill in the area. The sand and gravel are used mainly in construction.

Land leasing for mining of lignite coal has become increasingly important in the northwestern part of the area. The coal is burned to generate electricity.

Water, fish, and wildlife are important natural resources. Lake O'the Pines; Lake Cherokee; Lake Gladewater; the Sabine River; and numerous smaller lakes, ponds, and creeks provide abundant water for the area. These water sources are used for agriculture, industry, recreation, and domestic needs. Fish and wildlife provide recreation and income to the landowners of the counties.

climate

Prepared by the National Climatic Center, Asheville, North Carolina.

Gregg and Upshur Counties have long, hot summers because moist tropical air from the Gulf of Mexico persistently covers the area. Winters are cool and fairly short, with only a rare cold wave that moderates in 1 or 2 days. Precipitation is fairly heavy throughout the year, and prolonged droughts are rare. Summer precipitation, mainly afternoon thundershowers, is adequate for all crops.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Gilmer, Texas, in the period 1951 to 1978. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter the average temperature is 46 degrees F, and the average daily minimum temperature is 34 degrees. The lowest temperature on record, which occurred at Gilmer on February 2, 1951, is minus 3 degrees. In summer the average temperature is 81 degrees, and the average daily maximum temperature is 92 degrees. The highest recorded temperature, which occurred at Gilmer on August 17, 1951, is 109 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is 48 inches. Of this, 24 inches, or 50 percent, usually falls in April through September, which includes the growing season for most crops. In 2 years out of 10, the rainfall in April through September is less than 16 inches. The heaviest 1-day rainfall during the period of record was 7.88 inches at Gilmer on April 23, 1966. Thunderstorms occur on about 50 days each year, and most occur in summer.

Average seasonal snowfall is 2 inches. The greatest snow depth at any one time during the period of record was 5 inches. Seldom is there a day with an inch of snow on the ground, but the number of such days varies greatly from year to year.

The average relative humidity in midafternoon is about 55 percent. Humidity is higher at night, and the average at dawn is about 85 percent. The sun shines 70 percent of the time possible in summer and 50 percent in winter. The prevailing wind is from the south. Average windspeed is highest, 12 miles per hour, in spring.

15-04

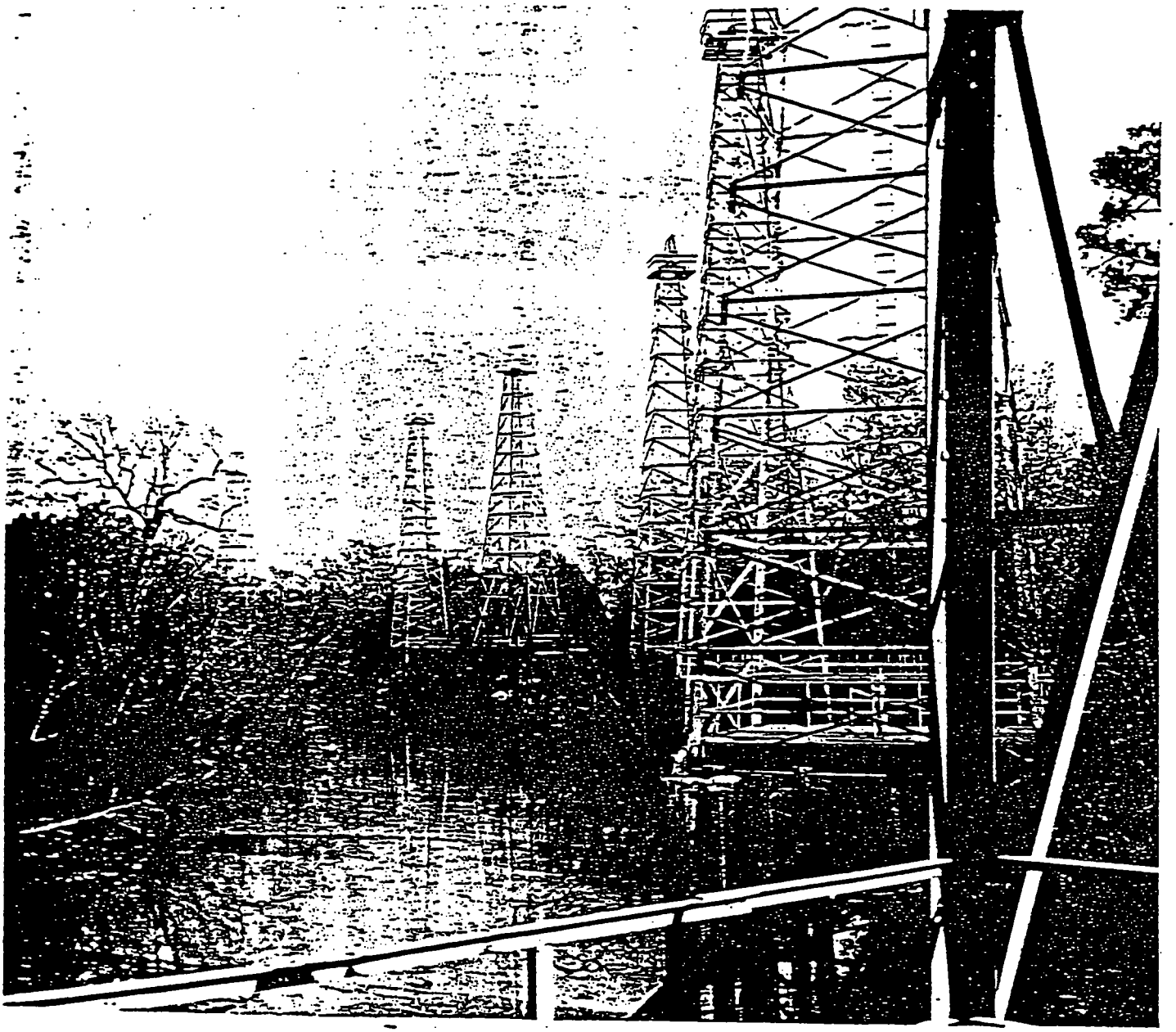


Figure 1.—Oil derricks along the Sabine River in Gregg County.

Severe local storms, including tornadoes, strike occasionally in or near the area. They are short and cause variable and spotty damage. Every few years in summer or autumn, a tropical depression or remnant of a hurricane that has moved inland causes extremely heavy rains for 1 to 3 days.

how this survey was made

Soil scientists made this survey to learn what soils are in the survey area, where they are, and how they can be used. They observed the steepness, length, and shape of slopes; the size of streams and the general pattern of drainage; the kinds of native plants or crops; and the kinds of rock. They dug many holes to study soil profiles. A profile is the sequence of natural layers, or horizons, in a soil. It extends from the surface down into the parent material, which has been changed very little by leaching or by plant roots.

15-05

The soil scientists recorded the characteristics of the profiles they studied and compared those profiles with others in nearby counties and in more distant places. They classified and named the soils according to nationwide uniform procedures. They drew the boundaries of the soils on aerial photographs. These photographs show trees, buildings, fields, roads, and other details that help in drawing boundaries accurately. The soil maps at the back of this publication were prepared from aerial photographs.

The areas shown on a soil map are called map units. Most map units are made up of one kind of soil. Some are made up of two or more kinds. The map units in this survey area are described under "General soil map units" and "Detailed soil map units."

While a soil survey is in progress, samples of some soils are taken for laboratory measurements and for engineering tests. All soils are field tested to determine their characteristics. Interpretations of those characteristics may be modified during the survey. Data are assembled from other sources, such as test results, records, field experience, and state and local specialists. For example, data on crop yields under defined management are assembled from farm records and from field or plot experiments on the same kinds of soil.

But only part of a soil survey is done when the soils have been named, described, interpreted, and delineated on aerial photographs and when the laboratory data and other data have been assembled. The mass of detailed information then needs to be organized so that it can be used by farmers, rangeland and woodland managers, engineers, planners, developers and builders, home buyers, and others.

15-06

LONGVIEW
county seat
Eastside
Airfield
HARRISON COUNTY
TEXAS
PACIFIC
AND
ATCHISON
MISSOURI
Ud
BuC
KrC
KuB
SuC
BoC
LbC
KsC
Iu
Ma
CbE
Ow
63
149
259
281
2208

SOIL LEGEND

The map symbols recommended for publication are alphabetic letters. The first, a capital letter, is the first letter of the soil name. The second is a lower case letter. The third letter is a capital letter used to show the dominant slope. Symbols without a third letter are for nearly level flood plain soils and for miscellaneous areas, oil wasteland and Udorthents, loamy and clayey.

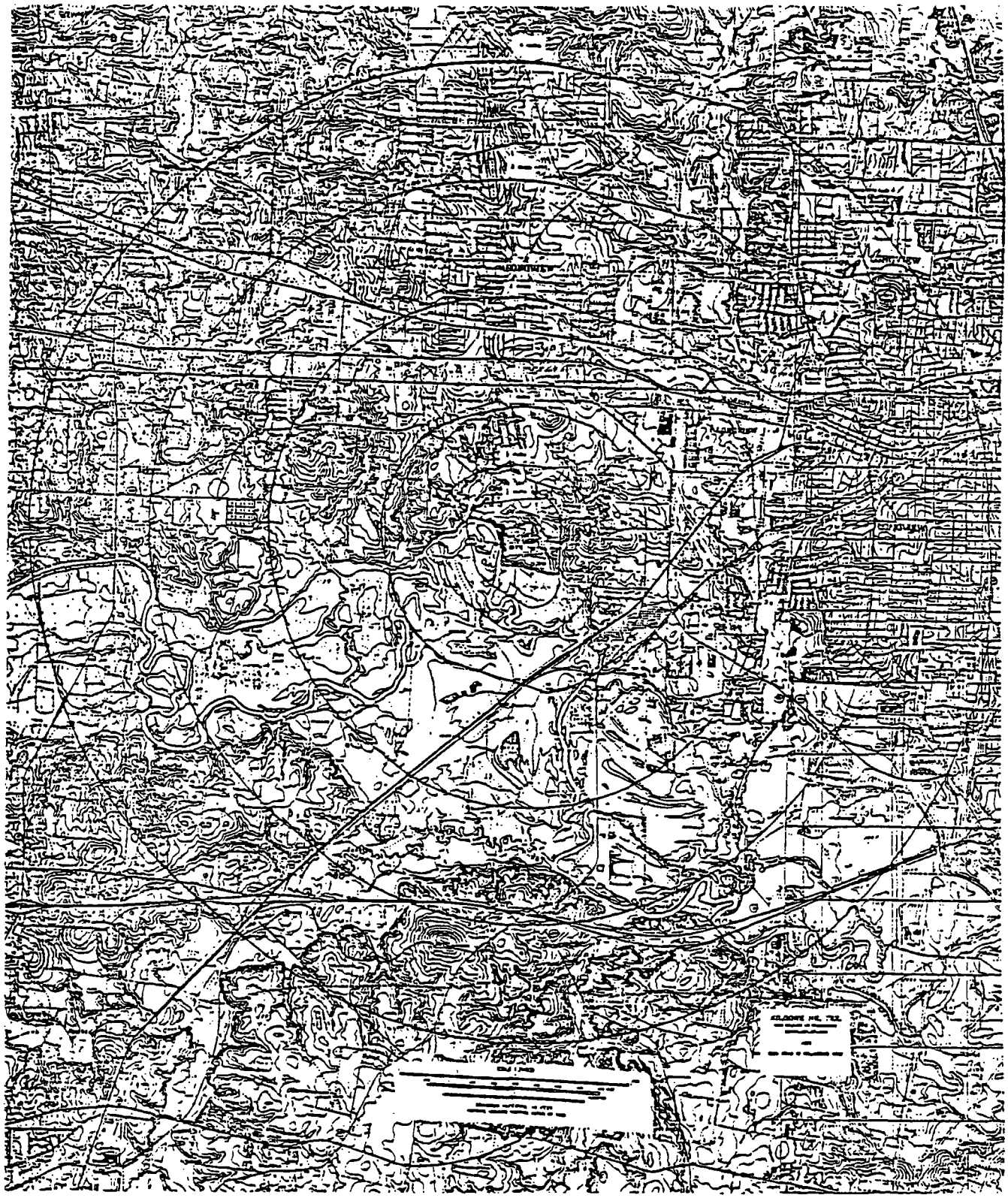
SYMBOL	NAME
BeB	Bienville loamy fine sand, 0 to 3 percent slopes
BoC	Bowie fine sandy loam, 2 to 5 percent slopes
BuC	Bowie-Urban land complex, 2 to 5 percent slopes
ByC	Briley loamy fine sand, 2 to 5 percent slopes
CbE	Cuthbert fine sandy loam, 8 to 25 percent slopes
CcE	Cuthbert-Urban land complex, 8 to 25 percent slopes
CrF	Cuthbert and Redsprings soils, 15 to 40 percent slopes
DaC	Darco fine sand, 2 to 5 percent slopes
DaE	Darco fine sand, 8 to 15 percent slopes
ErC	Elrose fine sandy loam, 3 to 5 percent slopes
Iu	Iuka fine sandy loam, frequently flooded
KfC	Kirvin very fine sandy loam, 2 to 5 percent slopes
KgC	Kirvin gravelly fine sandy loam, 3 to 8 percent slopes
KrC	Kirvin-Urban land complex, 2 to 5 percent slopes
KsC	Kirvin soils, graded, 3 to 8 percent slopes
KtB	Kullit very fine sandy loam, 1 to 3 percent slopes
KuB	Kullit-Urban land complex, 1 to 3 percent slopes
LaA	Latch-Mollville complex, 0 to 1 percent slopes
LbC	Lilbert loamy fine sand, 2 to 5 percent slopes
LuC	Lilbert-Urban land complex, 2 to 5 percent slopes
Ma	Mantachie loam, frequently flooded
MoA	Mollville very fine sandy loam, 0 to 1 percent slopes
Ow	Oil wasteland
ReB	Rentzel loamy fine sand, 0 to 3 percent slopes
RuC	Ruston fine sandy loam, 3 to 5 percent slopes
SaC	Sacul fine sandy loam, 2 to 5 percent slopes
SaD	Sacul fine sandy loam, 5 to 12 percent slopes
SuC	Sacul-Urban land complex, 2 to 8 percent slopes
TeE	Tenaha loamy fine sand, 8 to 20 percent slopes
TrC	Trep loamy fine sand, 1 to 8 percent slopes
Ud	Udorthents, loamy and clayey
Ur	Urbo clay, frequently flooded
WrA	Wrightsville-Raino complex, 0 to 1 percent slopes

C
BOUN
Nat
Cou
Min
Res
Lan
Lim
Fiel
AD HC
Sma
STATE
LAND
(sec
ROAD
Divi
Oth
Trai
ROAD
Inte
Fed
Stat
Cou
RAILR
POWEF
(nor
PIPE LI
(nor
FENCE
(nor
LEVEE
With
With
With
DAMS
Larg
Medi
PITS
Grav
Mine

15-08

REFERENCE 16

U.S. Geological Survey, 7.5 Minute Topographic Map, Lakeport Quadrangle, Texas, Provisional Edition, 1983.



U.S.G.S. 7.5 MIN. TOPOGRAPHIC MAP
LAKEPORT, QUADRANGLE

FLUOR DANIEL

FIGURE 4

4-MILE RADIUS MAP
DIXIE (TEI) PETRO-CHEM
LONGVIEW, TEXAS

CAD FILE No. R6-4

16-01

REFERENCE 17

Keith Westberry, Fluor Daniel, Inc., "Target Distance Population Counts", August 1993.

Target Distance Population Counts

	Ring	# of Homes	Residents
*	0 - 1/4 mile	#57	152
*	1/4 - 1/2 mile	25	67
*	1/2 - 1 mile	209	558
●	1 - 2 mile	N.A.	19,978
●	2 - 3 mile	N.A.	15,141
●	3 - 4 mile	N.A.	9,548
	Totals	**209+**	**45,444**

References: * U.S.G.S. 7.5 Minute Topographic Map, Lakeport Quadrangle (Ref. 12).

* "County and City Data Book", U.S. Bureau of the Census, 1988. (2.67 per./home) (Ref. 17)

● Printout of the Gems Software Package, 1993. (Ref. 20)

Home count includes the # of homes in the adjacent trailer park (Ref. 13).

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REFERENCE 18

Jack Tatum, Sabine River Authority, Record of Communication with Keith Westberry, Fluor Daniel, Inc., Concerning a Fish Production value for the Sabine River, September 13, 1993.

RECORD OF TELEPHONE CONVERSATION

From: Keith Westberry KW **Date:** 09-13-93

Location: Fluor Daniel Inc., Dallas **Time:** 16:00

Subject: Fish Production Value For Sabine River

To: Jack Tatum **P.O. Number:** _

Location: Sabine River Authority (SRA)

Other Ref.: (409) 746-2192

Mr. Tatum stated that the SRA had no valve for fish production in the river. However, he referred me to the Texas Parks and Wildlife Dept. (TP&WD) as well as Allen Forsage to gain this information.

Allen Forsage (TP&WD - Tyler)

(903) 566-1615

18-01

REFERENCE 19

Allen Forsage, Texas Parks & Wildlife, Record of Communication with Keith Westberry, Fluor Daniel, Inc., Concerning a Fish Production Value for the Sabine River, September 13, 1993.

RECORD OF TELEPHONE CONVERSATION

From: Keith Westberry KW **Date:** 09-13-93

Location: Fluor Daniel Inc., Dallas **Time:** 16:15

Subject: Fish Production Value For Sabine River

To: Allen Forsage **P.O. Number:** _

Location: Regional Fisheries Management - TP&WD

Other Ref.: (903) 566-1615

Mr. Forsage stated that there was no standing count value on fish production for the Sabine River near Longview. He also stated that the TP&WD was working on a catch per unit area valve for the river but they had not completed the research yet.. He also stated that there is quite a bit of fishing in the river downstream of Longview.

19-01

REFERENCE 20

U.S. Department of the Interior, Fish & Wildlife Service, "Classification of Wetlands and Deepwater Habitats of the U.S.", Lakeport Sheet, February 1980.

Dixie

NATIONAL WETLAN

UNITED STATES DEPARTMEN

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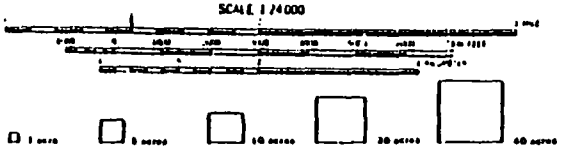
URVEY

SCALE 1:24000



ACREAGE GUIDE

For information on availability of NWI maps, call 1-800-USA-MAPS.

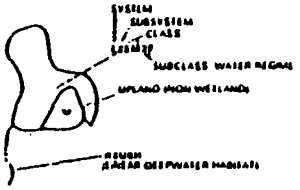
Regional Director (ARDS) Region II
U.S. Fish and Wildlife Service
P.O. Box 1308
Albuquerque, New Mexico 87103

SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with Classification of Wetlands and Deepwater Habitats of the United States (FWS/OBS - 79/31 December 1979). The aerial photographs typically reflect conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of the aerial photographs. Thus, a detailed on the ground and historical analysis of a single site may result in a revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this document.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt in either the design or products of this inventory to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE



U Primarily represents upland areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unclassified emissions.

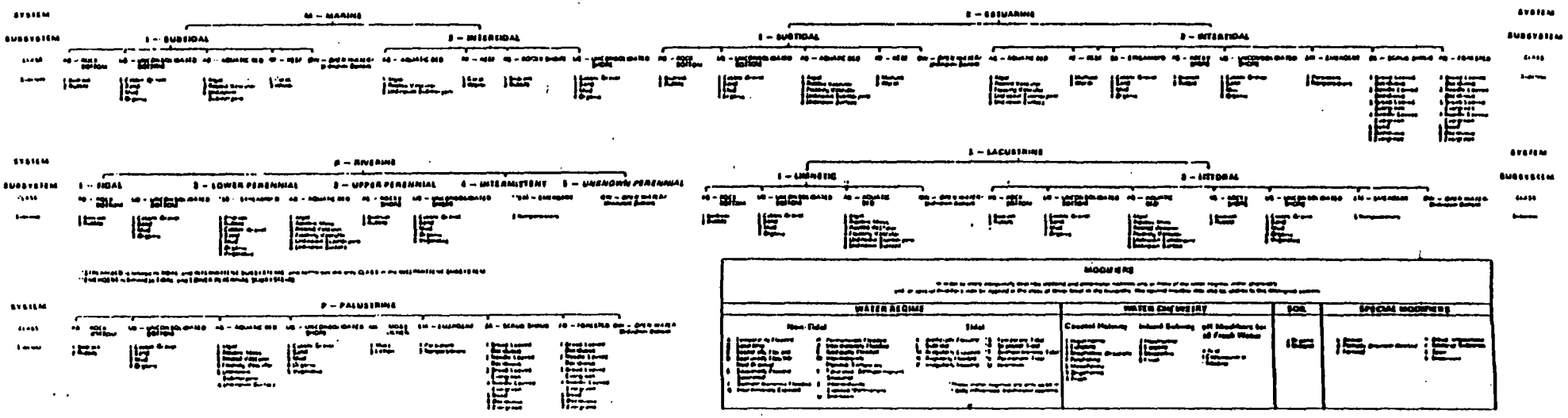
NOTES TO THE USER

- Subsystems, Classes, Subclasses and Water Regimes in Italics were developed specifically for NATIONAL WETLANDS INVENTORY mapping.
- Some areas designated as R4SB, R4SBW, OR R4SBJ (INTERMITTENT STREAMS) may not meet the definition of wetland.
- This map uses the class Unconsolidated Shore (US). On earlier NWI maps that class was designated Rock/Bar (RB), or Flat (FL). Subclasses remain the same in both versions.

AERIAL PHOTOGRAPHY

DATE 12 / / 89 DATE / /
SCALE 1:65 000 SCALE
TYPE CIR TYPE

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Prepared by National Wetlands Inventory
1992



20-02

REFERENCE 21

Shannon Breslin, Texas Parks & Wildlife, Texas Natural Heritage Program, Record of Communication with Keith Westberry, Fluor Daniel, Inc., Concerning Endangered species/Sensitve Env., April 15, 1993.

RECORD OF TELEPHONE CONVERSATION

From: Keith Westberry Keith Westberry 4/15/93 Date: 04-15-93

Location: Fluor Daniel Inc., Dallas Time: 10:30 AM

Subject: Endangered Species/Sensitive Environments

To: Shannon Breslin P.O. Number: _

Location: Texas Parks & Wildlife Dept.-Tx. Nat. Heritage Program

Other Ref.: (512) 448-4311

Mrs. Breslin looked up on a topo the locations of the three sites in question and passed along the information about endangered species and sensitive environments within a 4 mile radius and 15-mile downstream. This information is as follows:

New Longview Landfill

-Cat.#2 Federal (End. & Threat.) - Neches River Rose Mallow

-Cat.#2 Federal & State Threatened - Alligator, Snapping Turtle

-Wintering/Nesting Area for Bald Eagles.

Dixie (TEI) Petro-Chemical

-same as above

-Numerous Rookeries around the Texas Eastman Plant Southeast of Longview.

Delta Solvents & Chemical

-No Rookeries

-Everything else is the same as above.

21-01

REFERENCE 22

Printout of the GEMS Software Package for the Dixie (TEI) Petro-Chemical, Inc. Site, 1993.

COVERAGE

STATE	COUNTY	STATE NAME	COUNTY NAME
48	183	Texas	Gregg Co
48	203	Texas	Harrison Co
48	459	Texas	Upshur Co

CENTER POINT AT STATE : 48 Texas
COUNTY : 183 Gregg Co

REGION OF THE COUNTRY

Zipcode found: 75602 at a distance of 3.0 Km

STATE	CITY NAME	FIPSCODE	LATITUDE	LONGITUDE
TX	LONGVIEW	48183	32.4917	94.7400

22-01

CENSUS DATA

==========

Dixie (TEI) Petro-Chemical

LATITUDE 32:29:20 LONGITUDE 94:42:30 1990 POPULATION

KM	0.00-.400	.400-.800	.800-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	0	0	2534	3792	5493	11819
S 2	0	0	0	4694	0	0	4694
S 3	0	0	1329	2483	5709	0	9521
S 4	495	0	435	10267	5640	4055	20892
RING TOTALS	495	0	1764	19978	15141	9548	46926

22-02

STAR STATION

==========

WBAN NUMBER	STATION NAME	LATITUDE	LONGITUDE	PERIOD OF RECORD	DISTANCE (km)
13972	TYLER/POUNDS TX	32.3667	95.4000	1950-1954	66.3
13957	SHREVEPORT LA	32.4667	93.8167	1970-1974	83.6
13977	TEXARKANA/WEBB AR	33.4500	94.0000	1963-1967	125.5
93987	LUFKIN/ANGELINA CO TX	31.2333	94.7500	1967-1971	139.5
93992	ELDORADO/GOODWIN AR	33.2167	92.8000	1950-1954	195.6
13960	DALLAS/LOVE TX	32.8500	96.8500	1967-1971	204.3
03927	FT WORTH/REGIONAL TX	32.9000	97.0333	1957-1971	222.1

U.S. SOIL DATA

STATE : TEXAS

LATITUDE : 32:29:20 LONGITUDE : 94:42:30

THE STATION IS INSIDE H.U. 12010002

GROUND WATER ZONE	:	10			
RUNOFF SOIL TYPE	:	2			
EROSION	:	1.1210E-03			CM/MONTH
DEPTH TO GROUND WATER BETWEEN	:	1.0000E+02	AND	3.0000E+02	
FIELD CAPACITY FOR TOP SOIL	:	7.2000E-02			
EFFECTIVE POROSITY BETWEEN	:	2.0000E-02	AND	3.0000E-01	
SEEPAGE TO GROUNDWATER BETWEEN	:	4.6330E+03	AND	1.3900E+04	CM/MONTH
DISTANCE TO DRINKING WELL	:	2.8000E+04			CM

U.S. CITY

STATE	PLACE NAME	FIPSCODE	LATITUDE	LONGITUDE
TX	LONGVIEW	48183	32.4998	94.7612

REFERENCE 23

Keith Westberry, Fluor Daniel, Inc., "Wetlands Acreage Calculations for the Air Pathway", October 1993.

Wetlands Acreage Calculations for Air Pathway

Radius (miles)	Acreage
0 – 1/4	0.2
1/4 – 1/2	1.2
1/2 – 1	15
1 – 2	70
2 – 3	120
3 – 4	265
Total	471.4

* Note these values were measured from a U.S. Department of the Interior Wetlands Inventory Map.

TARGET SHEET

SITE NAME: DIXIE PETRO-CHEMICHAL

CERCLIS I.D.: TXD079836763

TITLE OF DOC.: PRESCORE

DATE OF DOC.: 01/01/2525

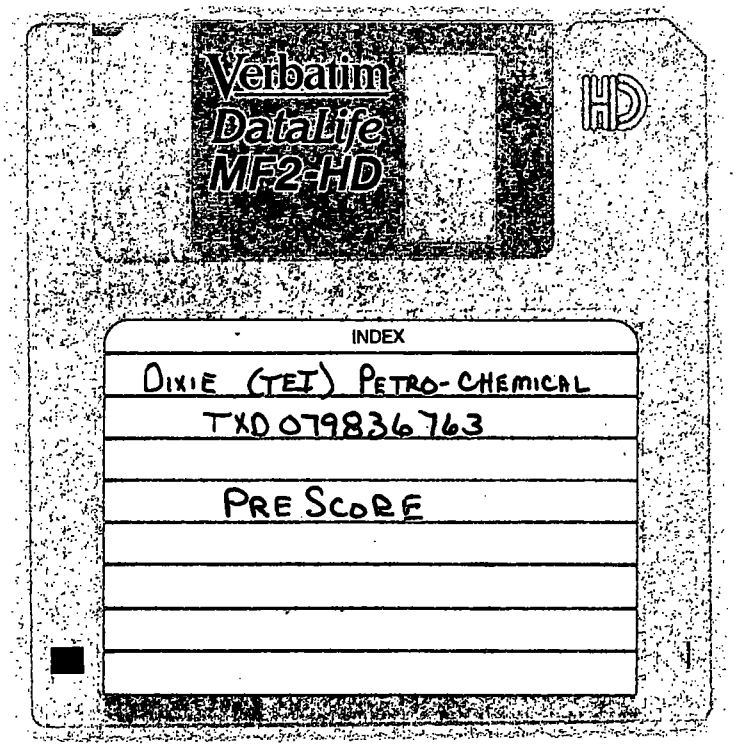
NO. OF PGS. THIS TARGET SHEET REPLACES: UNKNOWN

SDMS #: 90068907 KEYWORD:

CONFIDENTIAL ?		MISSING PAGES ?	X
ALTERN. MEDIA ?		CROSS REFERENCE ?	

LAB DOCUMENT ?		LAB NAME:	
ASC./BOX #:			
CASE #:		SDG #:	

COMMENTS : THIS FILE IS OF UNKNOWN OR UNSUPPORTED FORMAT AND CANNOT BE OPENED AT THIS TIME


Verbatim
DataLife
MF2-HD
HD
INDEX
DIXIE (TEI) PETRO-CHEMICAL
TXD 079836763
PRE SCORE

DIXIE (TEI) PETRO-CHEMICAL

TXD 079836763

PRE SCORE

from _____

FIRST CLASS MAIL

to _____

FLOPPY DISK MAILER

Do not bend or fold. Avoid exposure to all magnetic fields.
For 5¼" MINI FLOPPY DISK

FIRST CLAS

FLUOR DANIEL

Fluor Daniel, Inc.
12790 Merit Drive, Suite 200, LB 169
Dallas, TX 75251

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ATTN: WALT HELMICK (6E-SH)
1445 ROSS AVENUE
SUITE 1000
DALLAS, TEXAS 75202

RETURN AND FORWARDING POSTAGE GUARANTEED

SO 21-3-6