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OU: 200-ZP-2
TSD: N/A
ERA: CCl4
Subject Code: 4170; 4170

Environmental Restoration Contractor **ERC Team**

Meeting Minutes

SUBJECT 200-ZP-1 and 200-ZP-2 Status

TO Distribution

FROM V. J. Rohay VJR

DATE June 11, 1997

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NOV 1998
RECEIVED
EDMC

ATTENDEES

V. J. Rohay H9-02
M. A. Buckmaster H0-19
A. C. Tortoso H0-12
D. A. Faulk B5-01

DISTRIBUTION

Attendees

Document and Info Services H0-09

A meeting on the above subject was held on June 11, 1997, at the Bechtel Office Building, 3350 GWW, room 2C58. The agenda is included as Attachment 1.

200-ZP-2 Rebound Study

V. J. Rohay provided a graph illustrating the maximum carbon tetrachloride rebound concentration, as of 5/19/97, at each monitoring point as a function of depth (Attachment 2). During the first six months of the rebound study, carbon tetrachloride concentrations have remained less than 10 ppmv at monitoring points between the ground surface and approximately 10 m depth in the area remediated using soil vapor extraction. The highest carbon tetrachloride concentrations, between 100 and 700 ppmv, have been observed at wells and monitoring probes between approximately 26 and 40 m below ground surface, near the Plio-Pleistocene fine-grained soils and "caliche layer." Carbon tetrachloride vapor concentrations near the water table, between 56 and 64 m below ground surface, have not exceeded 45 ppmv. Concentrations at some monitoring locations exhibit fluctuations which appear to be related to fluctuations in barometric pressure.

During May 1997, all wells and soil gas probes identified for use in the rebound study were monitored once per month. In addition, 15 wells/probes with widely fluctuating carbon tetrachloride concentrations were monitored twice per month. The final round of sampling at all wells and probes will be in mid July prior to operating the soil vapor extraction systems to conclude the rebound study.

V. J. Rohay provided a status of the three mini-tests that include field activities. The Letter of Instruction for Rust Federal Services to install packers for the carbon tetrachloride-packer test was sent to Fluor Daniel on 6/2/97. Rust met with the BHI field engineer on 6/10/97 to establish the schedule. Data collection is anticipated to begin 6/16/97. Engineering design is being completed for the carbon tetrachloride-barometric pressure test and passive extraction valve test. Data collection is anticipated to begin 6/30/97 for the barometric pressure test and 8/11/97 for the passive extraction valve test.

M. A. Buckmaster stated that because of the extension of the restart date for soil vapor extraction operations, the draft rebound study final report will be delivered to BHI for review at the end of September; the final document will be transmitted to DOE and EPA early next fiscal year. D. A. Faulk noted that one of EPA's primary interests is in the implications of the rebound study for decisions regarding final cleanup levels. A. C. Tortoso suggested that the team hold a half-day workshop later in this fiscal year to discuss the rebound study data and target cleanup levels.

In response to a concern from D. A. Faulk, M. A. Buckmaster indicated that although BHI is planning to operate only one vapor extraction system next year, BHI is not planning to decommission or excess the other two systems next year.

200-ZP-1

M. A. Buckmaster provided an update on the 200-ZP-1 pump-and-treat remediation (Attachment 3). As of March 1997, the 200-ZP-1 Treatment System had removed 442 kg of carbon tetrachloride and treated 174 million liters of water. The first off-site quarterly verification samples for water and air effluent were submitted in March; laboratory results confirm the field screening results that carbon tetrachloride concentrations are below detection and that the remedial action objectives are being met. Analysis of the extraction well capture zones indicates that the pump-and-treat operation is achieving hydraulic containment. In addition, the response of the aquifer is within expected and acceptable limits; a slight increase in water level was recently observed at one RCRA well (299-W18-26) near the injection well. The extent of the carbon tetrachloride plume has expanded to the south and east of the current pump-and-treat operations as a result of natural plume migration; the last three extraction wells scheduled to be on-line in August should contain this lobe of the carbon tetrachloride plume. This southeasterly plume migration may also explain the slight (approximately 50 ppb) increase in carbon tetrachloride concentrations reported in the 200-UP-1 pump-and-treat extracted water.

The 200-ZP-1 pump-and-treat system is still experiencing leak detection problems. The vendor has replaced connections between pipes, and soldered joints are being checked and repaired. Installation of the piping and wiring for Phase III operations has been completed. Modifications to manifolds and pumps within the main process building are expected to take three to four weeks once a vendor has been identified. The last three extraction wells are scheduled to be on-line by August 31, 1997 to complete initiation of 200-ZP-1 Phase III operations. Prior to full-scale extraction operations, individual extraction wells may be pumped on a limited basis for clean-out.

M. A. Buckmaster indicated that Rust is planning to start decommissioning well 299-W15-5 next week. Pending final approval from EPA, the drilling wastes from 299-W15-5 that do not exceed Land Disposal Restrictions (LDR) standards will be sent to the Environmental Restoration Disposal Facility (ERDF).

Future Status Meetings

The next status meeting on the 200-ZP-1 and 200-ZP-2 projects is scheduled for July 22.

AGENDA
200-ZP-1 and 200-ZP-2 STATUS
JUNE 11, 1997

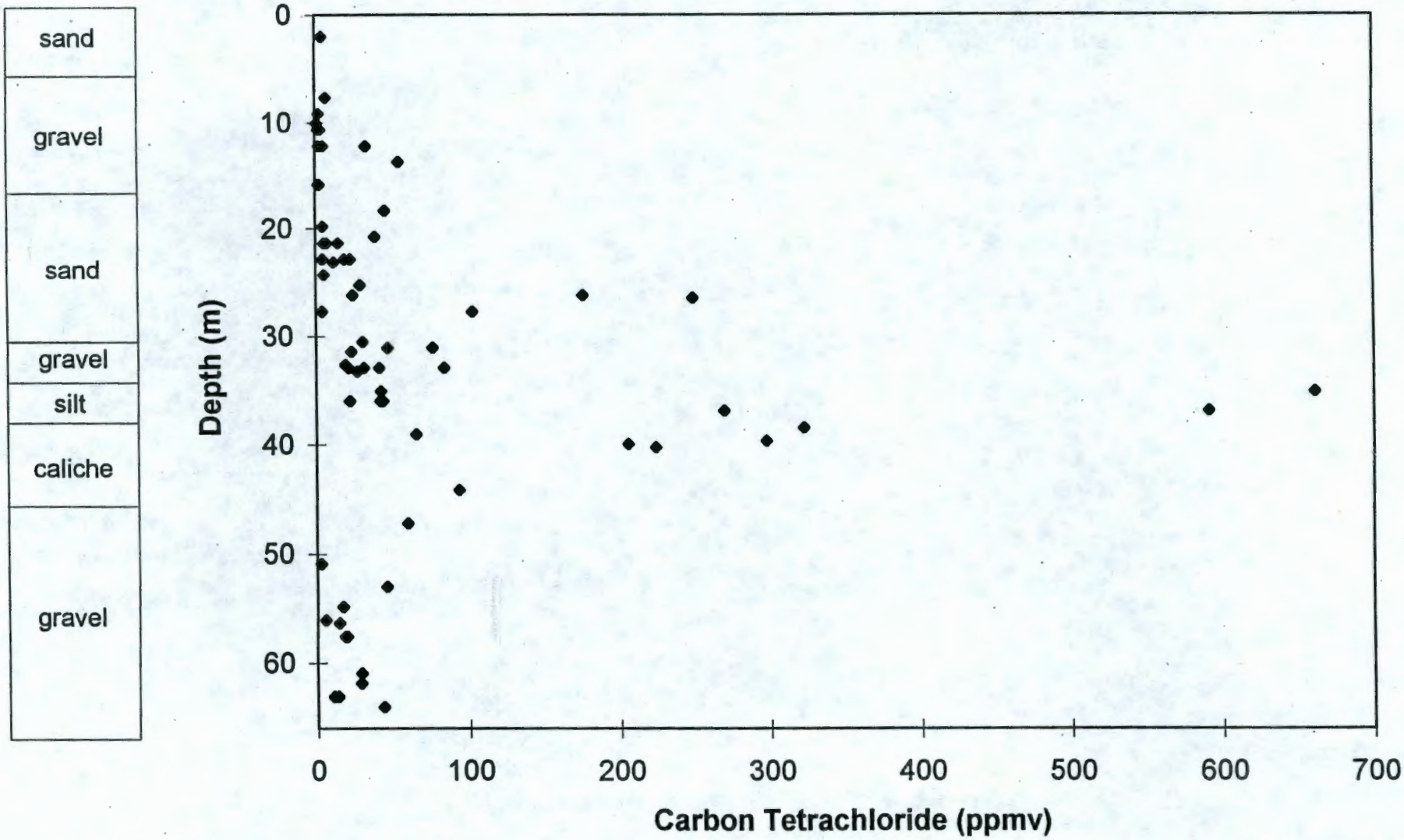
200-ZP-2 Rebound Study

- Summary of Rebound Study Data
- Status of Rebound Study "Mini-Tests"

200-ZP-1 Pump-and-Treat Remediation

- Summary of Pump-and-Treat Operations
- Decommissioning of Well 299-W15-5

Maximum Carbon Tetrachloride Rebound 11/4/96 - 5/19/97



Attachment 2

Table 1 presents a process summary for operational periods beginning August 1994.

Table 2-1. 200-ZP-1 Pump-and-Treat Summary Data

Reporting Period	Liters Treated	Mass Carbon Tetrachloride Removed (kg)
August 1994 through July 1996	26,676,000	75.85
August 1996 through September 1996	33,232,327	60.96
October 1996 through December 1996	44,583,715	143.54
January 1997 through March 1997	69,869,904	161.25
Total	174,361,946	441.60

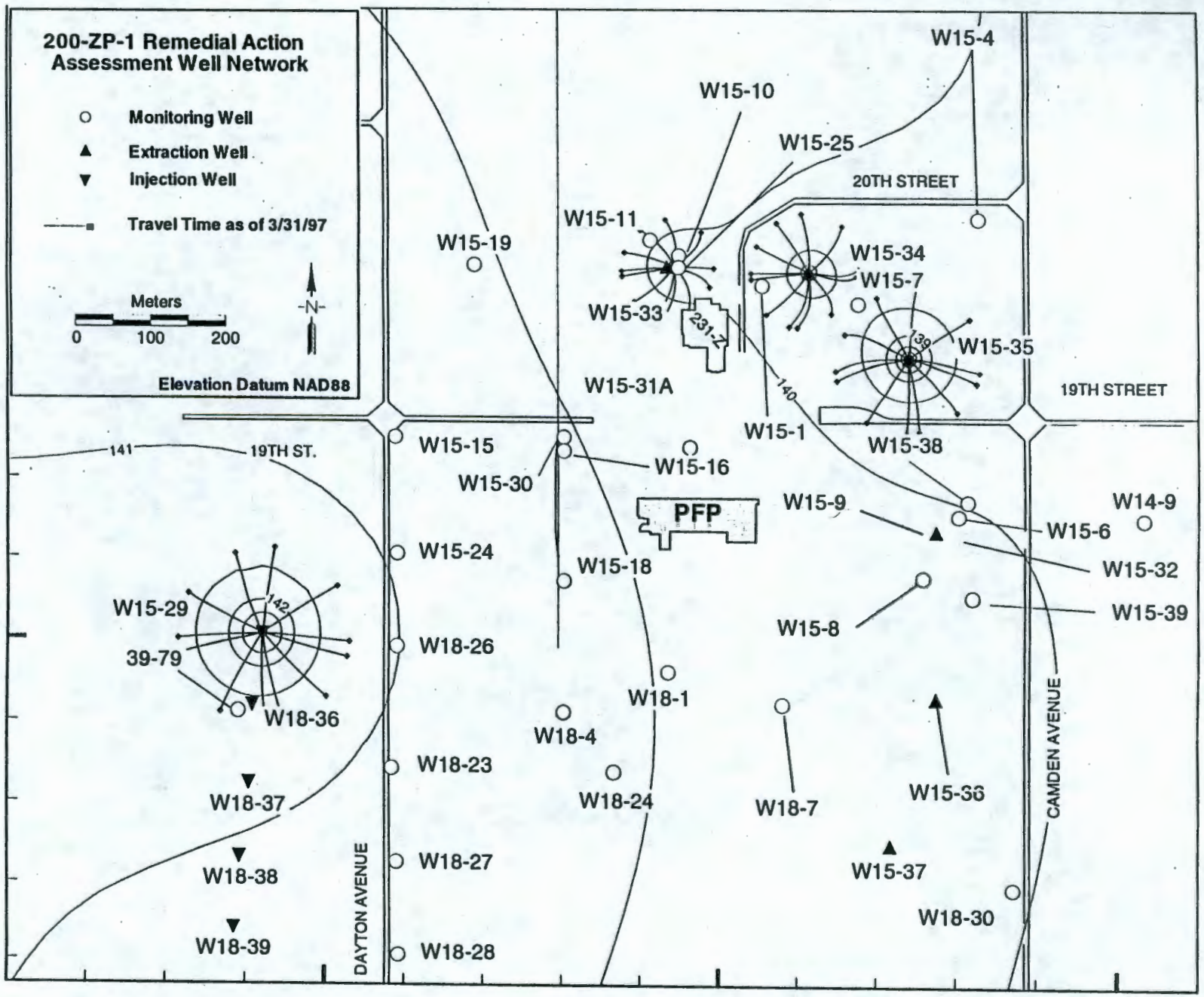
Weekly Average Contaminant Level - Water.

Date (weekly)	Cumulative Volume Treated (L)	Contaminant	Average Concentration (µg/L)		299-W15-33 Conc. (µg/L)	299-W15-34 Conc. (µg/L)	299-W15-35 Conc. (µg/L)
			Tank T-01 (Influent)	Tank T-02 (Effluent)			
01/08/97	82,730,600	Carbon Tetrachloride	3400	3	4800	2600	3400
		Chloroform	15	ND	21	13	16
		Trichloroethylene	6.8	ND	8.9	9.7	4.3
1/15/97	86,472,753	Carbon Tetrachloride	3200	ND	4600	2800	3300
		Chloroform	15	ND	21	13	15
		Trichloroethylene	5.8	ND	7.8	9.3	3.4
1/22/97	91,384,926	Carbon Tetrachloride	3000	2.0	4200	2300	3200
		Chloroform	16	ND	23	13	18
		Trichloroethylene	6.3	ND	8.3	9.3	3.9
1/29/97	97,246,775	Carbon Tetrachloride	3500	3.2	4800	2900	3200
		Chloroform	16	ND	23	14	19
		Trichloroethylene	6.5	ND	8.5	11	3.7
2/05/97	102,580,332	Carbon Tetrachloride	3900	4.6	5500	3300	3700
		Chloroform	17	ND	24	14	16
		Trichloroethylene	8	ND	11	12	5.1
2/12/97	108,471,142	Carbon Tetrachloride	3200	ND	5100	2600	3100
		Chloroform	18	ND	26	16	18
		Trichloroethylene	7.6	ND	10	11	4.4
2/19/97	114,259,222	Carbon Tetrachloride	3600	4.1	5200	3000	2900
		Chloroform	19	ND	28	18	16
		Trichloroethylene	7.4	ND	11	12	4.5
2/26/97	119,560,417	Carbon Tetrachloride	3600	2.8	4600	2500	3100
		Chloroform	19	ND	25	15	18
		Trichloroethylene	8.0	ND	10	11	4.2
3/05/97	125,458,840	Carbon Tetrachloride	2800	ND	4200	2400	2900
		Chloroform	13	ND	22	11	16
		Trichloroethylene	3.7	ND	4	5.8	ND
3/12/97	131,334,371	Carbon Tetrachloride	2900	ND	4100	2500	2600
		Chloroform	12	ND	15	10	14
		Trichloroethylene	2.0	ND	3	5.0	ND

Weekly Average Contaminant Level - Water.

Date (weekly)	Cumulative Volume Treated (L)	Contaminant	Average Concentration (µg/L)		299-W15-33 Conc. (µg/L)	299-W15-34 Conc. (µg/L)	299-W15-35 Conc. (µg/L)
			Tank T-01 (Influent)	Tank T-02 (Effluent)			
3/19/97	136,111,340	Carbon Tetrachloride	3800	2.4	6600	3100	4000
		Chloroform	15	ND	24	12	16
		Trichloroethylene	6.6	ND	10	10	3.9
3/26/97	141,994,502	Carbon Tetrachloride	3700	3.5	5500	3000	3400
		Chloroform	20	ND	30	17	20
		Trichloroethylene	7.9	ND	12	12	7.9
4/02/97	147,685,946	Carbon Tetrachloride	3400	3.4	5400	2900	3400
		Chloroform	17	ND	24	15	17
		Trichloroethylene	6.8	ND	10	11	6.8

* No Data collected


200-ZP-1 Remedial Action
Assessment Well Network
Monitoring Well
Extraction Well
Injection Well
Travel Time as of 3/31/97
Meters
0
100
200
-N-
Elevation Datum NAD88
W15-4
W15-10
W15-25
20TH STREET
W15-11
W15-19
W15-34
W15-7
W15-33
231-Z
139
W15-35
W15-31A
140
19TH STREET
W15-1
W15-38
141
19TH ST.
W15-15
W15-16
W15-30
PFP
W15-9
W14-9
W15-6
W15-24
W15-18
W15-32
W15-29
142
W15-39
W15-8
39-79
W18-26
W18-1
W18-36
W18-4
W18-23
W18-24
W18-7
W15-36
CAMDEN AVENUE
W18-37
W18-38
W18-27
W15-37
W18-30
W18-39
DAYTON AVENUE
W18-28

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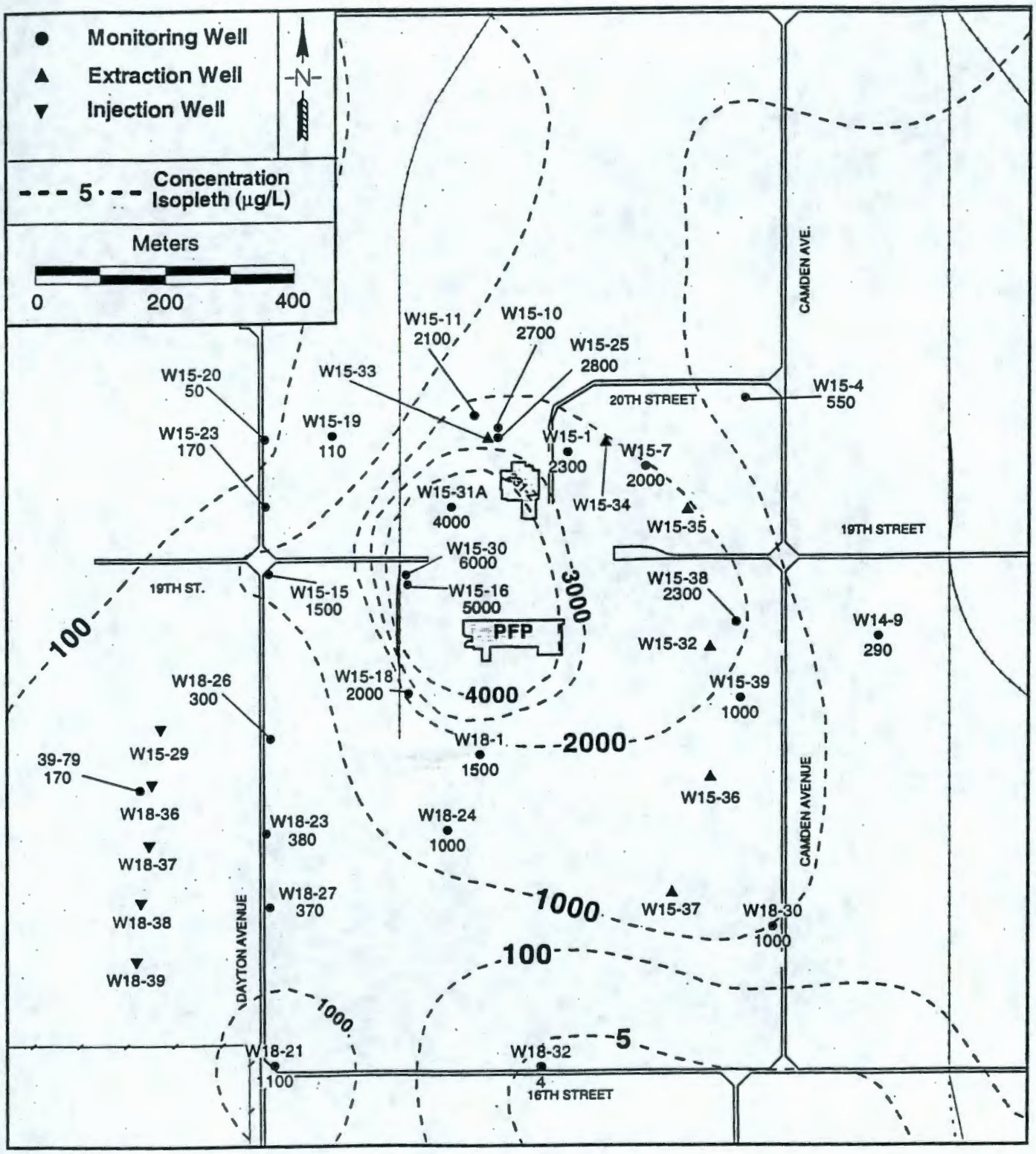
Monitoring Well
Extraction Well
Injection Well
N
5 Concentration Isopleth (µg/L)
Meters
0
200
400
W15-11
2100
W15-10
2700
W15-25
2800
W15-33
W15-20
50
W15-23
170
W15-19
110
W15-4
550
20TH STREET
W15-1
2300
W15-7
2000
W15-31A
4000
W15-34
W15-35
19TH STREET
W15-30
6000
W15-16
5000
W15-15
1500
19TH ST.
3000
W15-38
2300
PFP
W14-9
290
W15-32
100
W18-26
300
W15-18
2000
4000
W15-39
1000
W18-1
1500
2000
39-79
170
W15-29
W18-36
W15-36
W18-23
380
W18-24
1000
W18-37
W18-27
370
1000
W15-37
W18-30
1000
W18-38
100
W18-39
DAYTON AVENUE
CAMDEN AVENUE
CAMDEN AVE.
1000
5
W18-21
1100
W18-32
4
16TH STREET