

Norwalk Tank Farm Update

*Presented to the Norwalk Tank Farm
Restoration Advisory Board*

January 22, 1998

Presentation Overview

Topics to be Covered

- SFPP/KM Re-organization
- OCCS update
- Semi annual monitoring event
- Remediation update
- Information of well HL-4
- Pressure testing

SFPP/Kinder Morgan Merger Re-organization

- KM in process of buying SFPP
- Deal to be finalized by 2/28/98
- Re-organized and there have been job cuts
- This will be my last RAB meeting

Introduce New Manager & Project Manager for NW

- New Manager of Remediation is Scott Kilkenny
- Mark Sandon reporting to Scott and working with RAB on NW
- Scott will report directly to President and COO
- RAB is only one person removed from person running SFPP/KM
- Words from Scott & Mark ?

OCCS Update

- RBCA Plan completed in December
- Incorporated comments from RAB members
- As agreed, next step is give community a chance to comment
- Suggest a special RAB meeting, post notices in paper & interested people can call SFPP of DFOLA for copies
- Include appropriate community suggestions, finalize & send to RWQCB

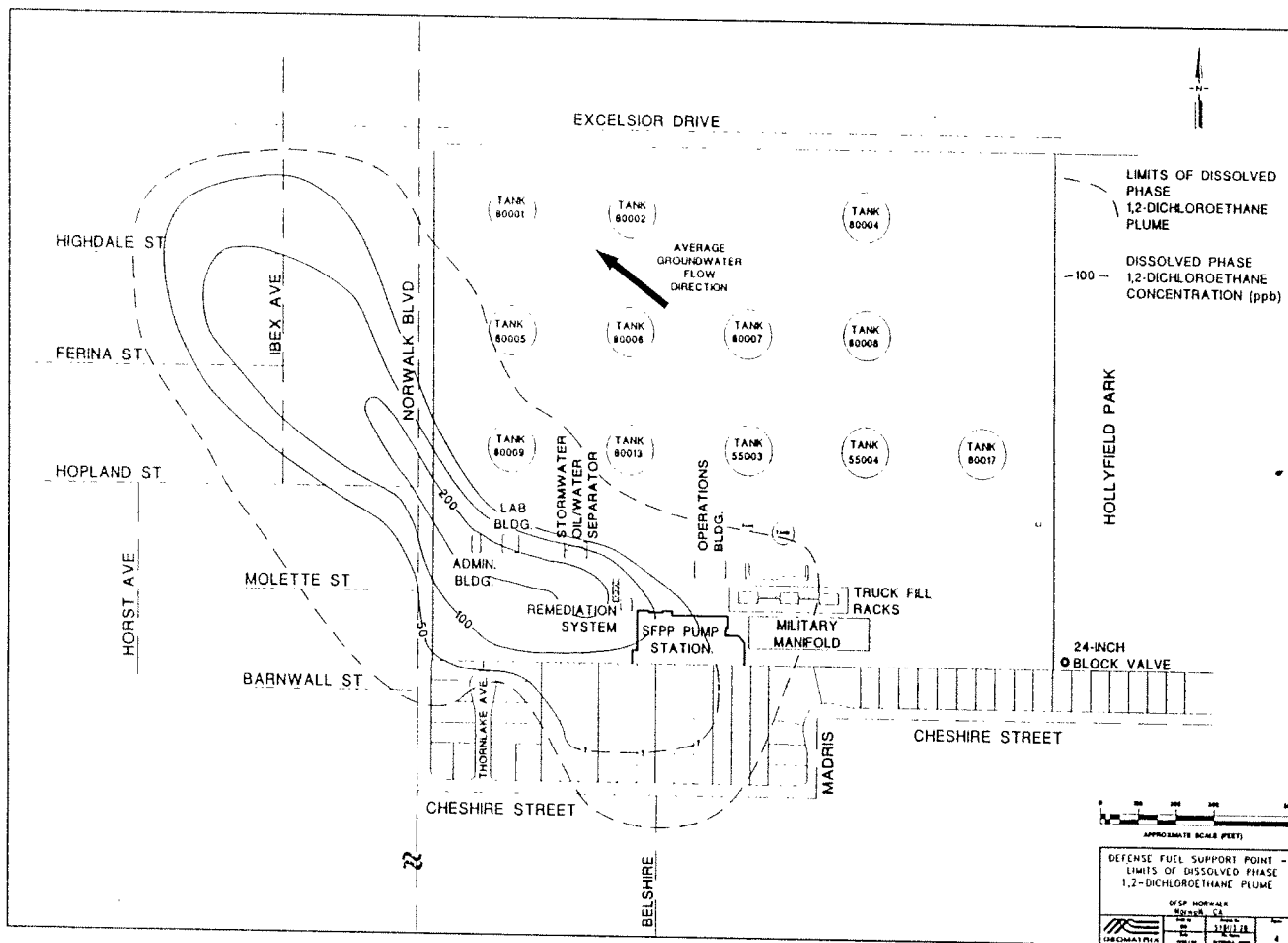
Groundwater Monitoring Update

- Field work conducted in late December
- Gauged 128 Wells
- Sampled 84 Wells
- Expect lab results by Jan 30, report drafted by mid-March
- Will share results by letter update or at RAB special RBCA meeting?

Groundwater Monitoring Update

- Of particular interest this event....
- Continued reduction of MTBE in 24" valve area
- Continued Reduction of DCA/MTBE in WSB area
- Areas of concern-Chang property, GMW-0-12
- Well GMW-12 in area of loading racks-
"spreading ?

Groundwater Plume-1,2 DCA



SFPP Remediation Update

- System has operated 13000 hours since September 15, 1995

Soil Vapor Extraction System Operations Summary

- 22 Vapor extraction wells online and in use
- Approximately 198,000 gallons of fuel removed from soil and destroyed
- Approximately 15,000 gallons of fuel removed since September RAB meeting

Product Recovery/West Side Barrier System Operations Summary

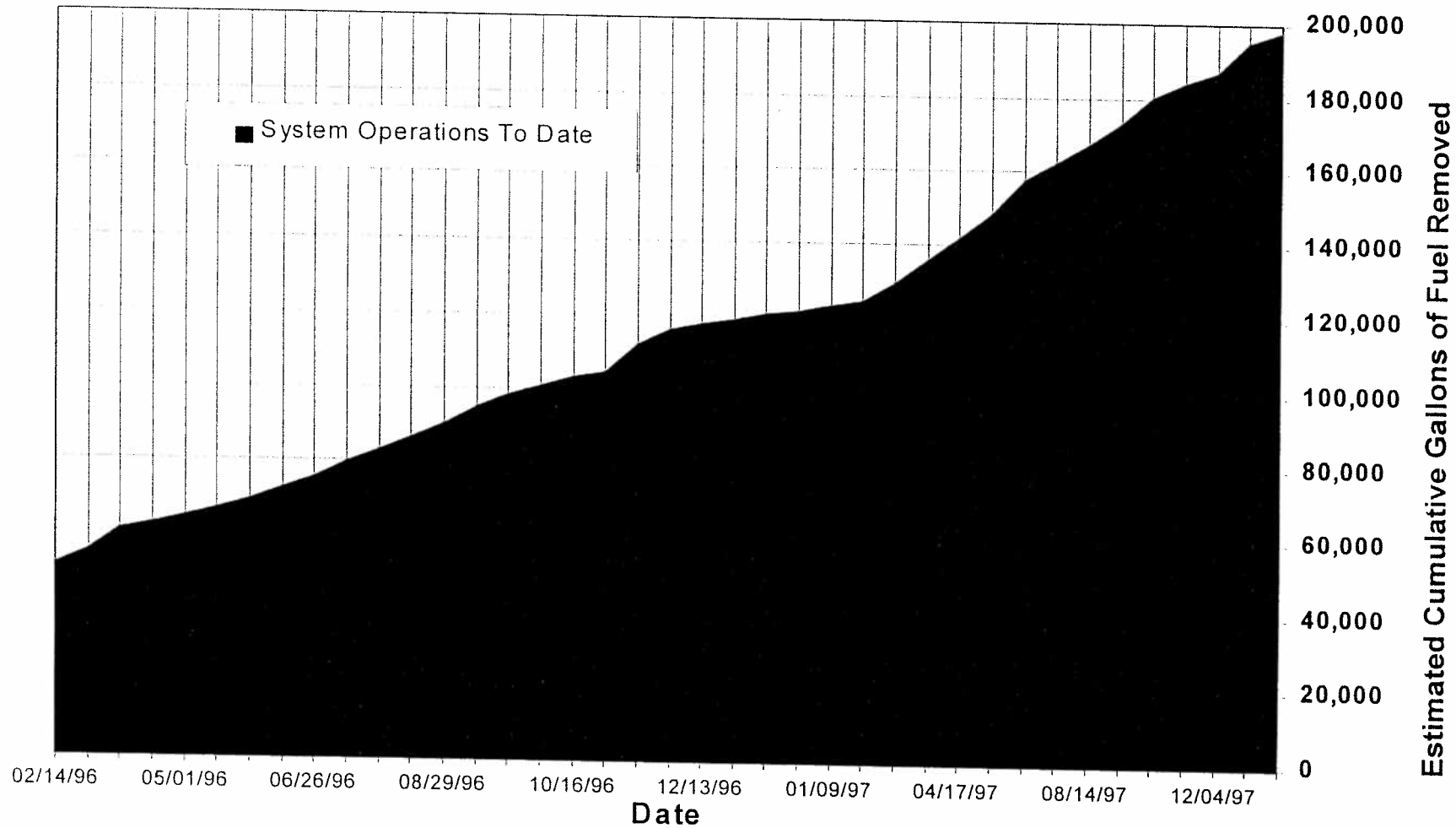
- 8 Product/groundwater extraction wells online in South/Central Plume area
- 9 West Side Barrier wells operating
- Approximately 9.1 million gallons of water pumped and treated (0.6 million gallons since September RAB meeting)
- Approximately 7,450 gallons of liquid fuel recovered
- Approximately 200 gallons of liquid fuel recovered since September RAB meeting

24-Inch Valve Plume System

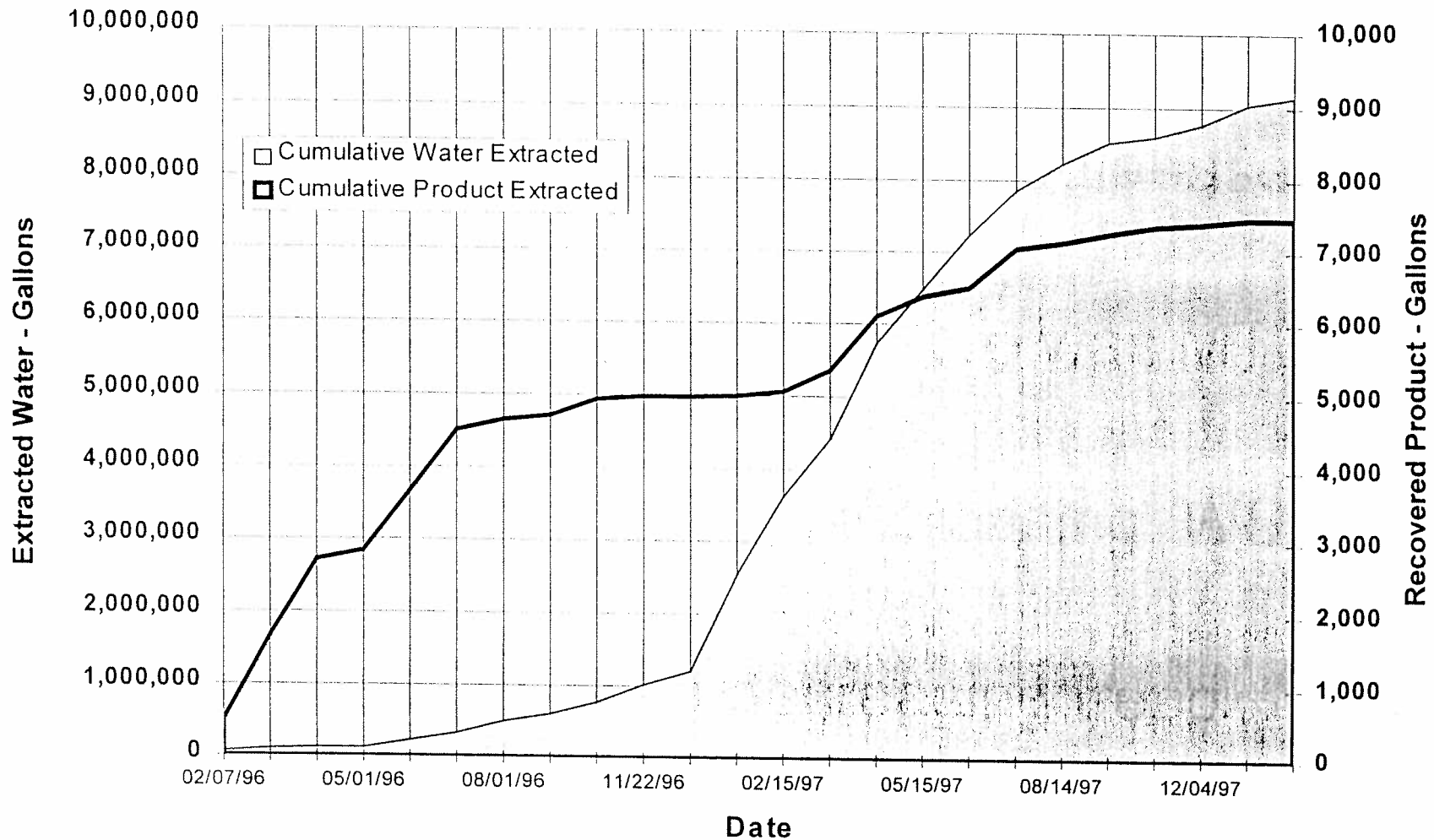
- System brought online in April - 30 air sparging point, 8 vapor extraction wells, and one product extraction well online and operating
- No product measured in GMW-36 during this sampling round

Vapors Extraction Progress

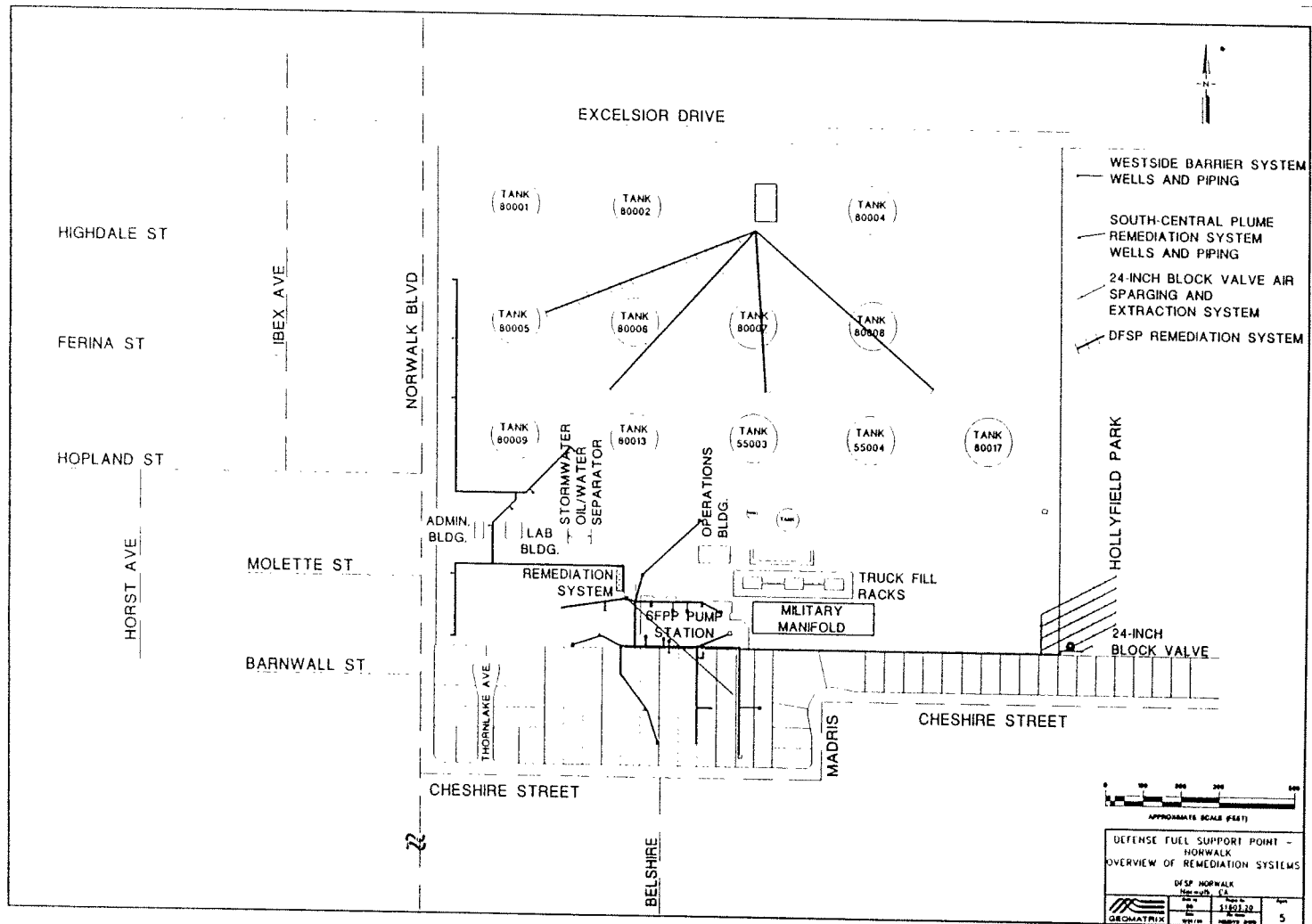
System Operations To Date



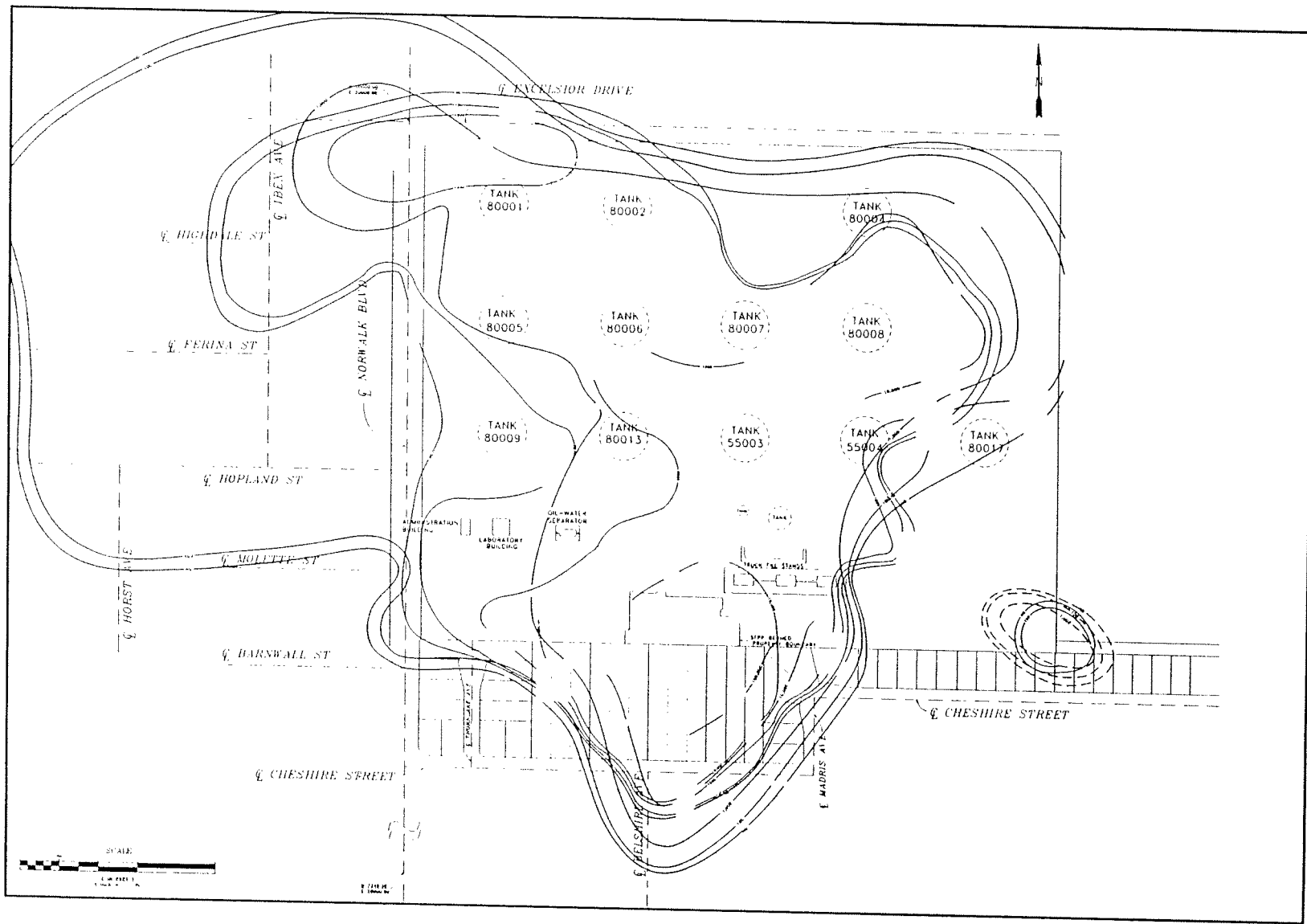
Groundwater/Product Recovered



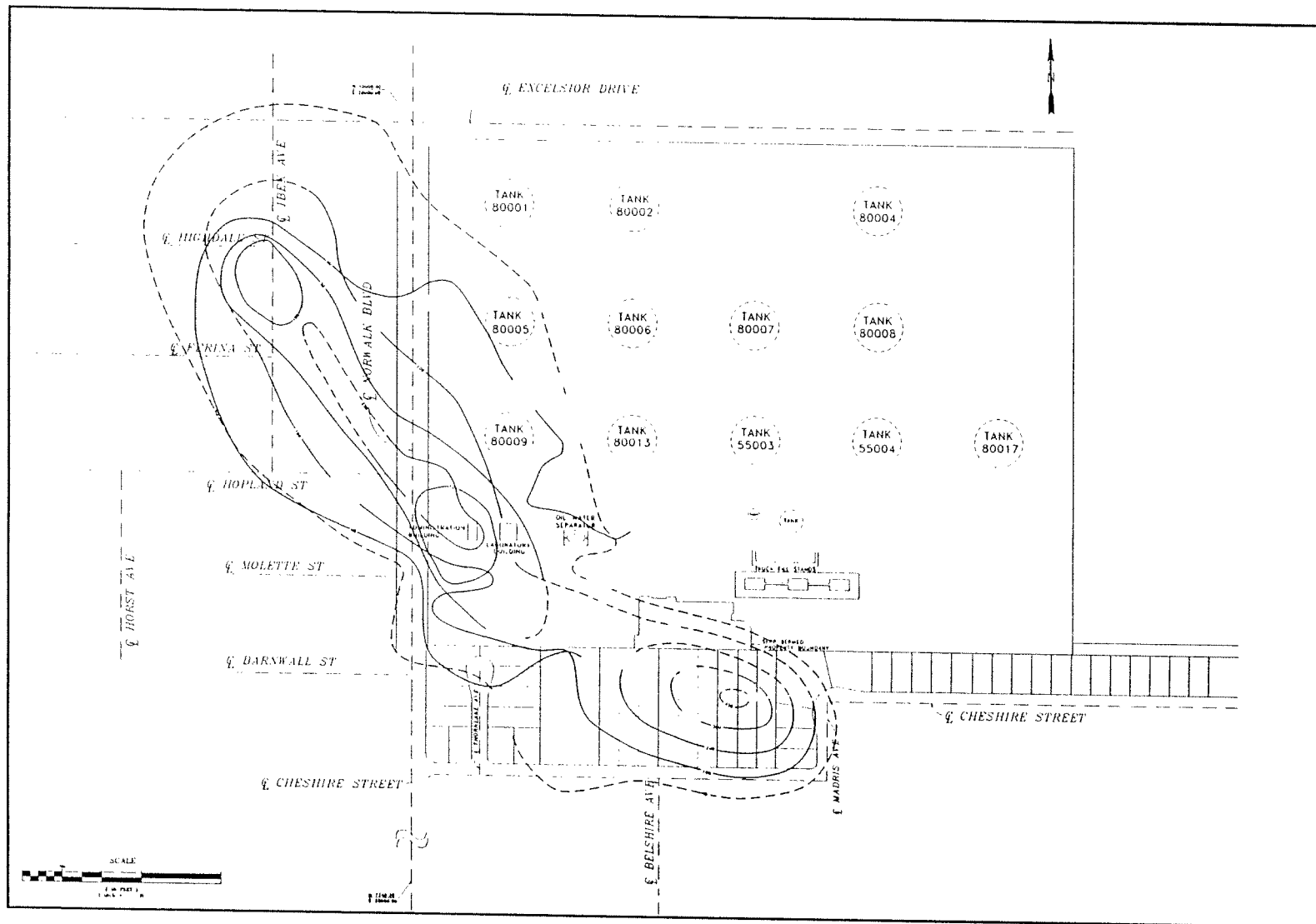
Map of Current Remediation Systems



COMPARISON OF NOVEMBER 1996 AND JULY 1997 TPH PLUMES (Outer = 1996)



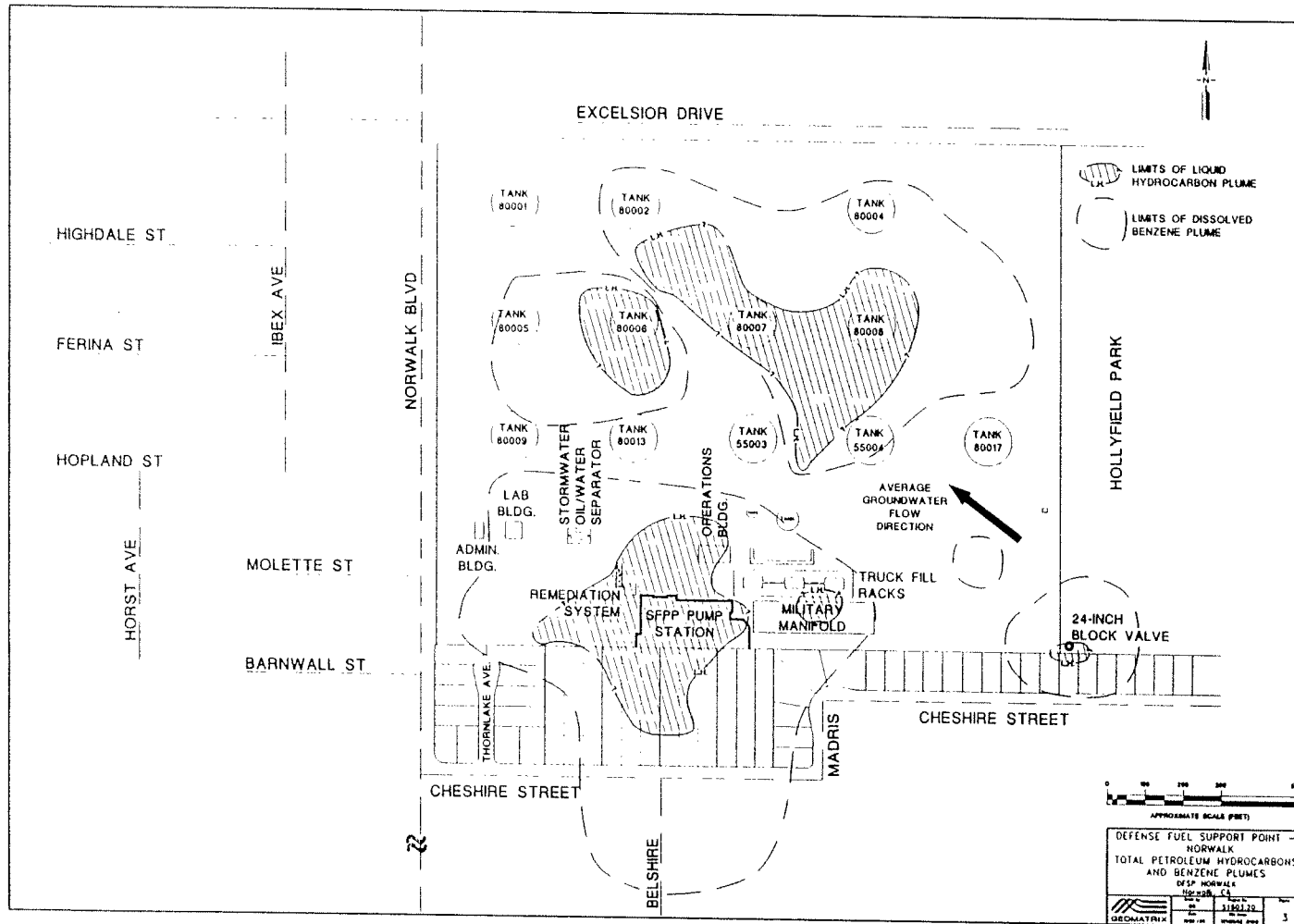
COMPARISON OF NOVEMBER 1996 AND JULY 1997 1,2-DCA PLUMES (Outer = 1996)



Well HL-4

- RAB requested HL-4 information
- A well located down-gradient of “waste-pit”
- Copy of all sampling data from database available at back
- There was a concern that there was MTBE movement past that well
- Data shows MTBE trend increasing, WSB is downgradient.
- Nearby wells show a decreasing trend

Groundwater Plumes-Free Product /BTEX



HL-4
All known DATA

MTBE
CONC.
PPM

CONC. PPM	DATE	WELL
1.5	7/16/97	HL-4
1.1	5/28/96	HL-4
1.2	11/25/96	HL-4
1.2	2/20/97	HL-4 *

Feb '97 DATA 1-2 ppm or 1200 ppb.
Same as November DATA of 1996.

1,2-DCA
CONC.
PPM

CONC. PPM	DATE	WELL
.1	6/15/91	HL-4
.38	6/15/91	HL-4
.635	12/15/91	HL-4
.41	5/15/92	HL-4
.42	1/12/94	HL-4
.34	6/24/93	HL-4
.42	1/12/94	HL-4
.41	9/15/92	HL-4
.38	6/15/91	HL-4
.635	12/15/91	HL-4
.36	6/15/91	HL-4
.36	6/15/91	HL-4
.34	6/24/93	HL-4
.26	5/28/96	HL-4
-.003	11/25/96	HL-4
-.003	2/20/97	HL-4

— Special Sampling event for West Side Barrier Check

BENZENE

CONC. PPM	DATE	WELL
-.0005	6/15/91	HL-4
-.0005	12/15/89	HL-4
-.0005	6/15/91	HL-4
-.0005	12/15/91	HL-4
-.0005	5/15/92	HL-4
.002	1/12/94	HL-4
.055	6/24/93	HL-4
.015	10/15/86	HL-4
.076	7/16/97	HL-4
.002	1/12/94	HL-4
.0017	9/15/92	HL-4
-.0005	6/15/91	HL-4
-.0005	12/15/91	HL-4
-.0005	6/15/91	HL-4
-.0005	6/15/91	HL-4
.015	10/15/86	HL-4
.055	6/24/93	HL-4
.027	5/28/96	HL-4
.41	11/25/96	HL-4
.0089	2/20/97	HL-4

TOLUENE

CONC. PPM	DATE	WELL
.0018	6/15/91	HL-4
.0018	12/15/89	HL-4
.0018	6/15/91	HL-4
-.0005	12/15/91	HL-4
-.0005	5/15/92	HL-4
.0006	1/12/94	HL-4
.0005	6/24/93	HL-4
-.003	10/15/86	HL-4
-.001	7/16/97	HL-4
.0006	1/12/94	HL-4
-.0005	9/15/92	HL-4
.0018	6/15/91	HL-4
-.0005	12/15/91	HL-4
.0016	6/15/91	HL-4
.0016	6/15/91	HL-4
.0005	6/24/93	HL-4
.015	5/28/96	HL-4
.0032	11/25/96	HL-4
.0027	2/20/97	HL-4

ETHYLBENZENE

CONC. PPM	DATE	WELL
-.0005	6/15/91	HL-4
.017	12/15/89	HL-4
-.0005	6/15/91	HL-4
-.0005	12/15/91	HL-4
-.0005	5/15/92	HL-4
.019	1/12/94	HL-4
.028	6/24/93	HL-4
-.001	7/16/97	HL-4
.019	1/12/94	HL-4
-.0005	9/15/92	HL-4
-.0005	6/15/91	HL-4
-.0005	12/15/91	HL-4
.017	8/15/90	HL-4
-.0005	6/15/91	HL-4
-.0005	6/15/91	HL-4
.028	6/24/93	HL-4
.029	5/28/96	HL-4
.35	11/25/96	HL-4
.0056	2/20/97	HL-4

XYLENE

CONC. PPM	DATE	WELL
-.001	6/15/91	HL-4
-.001	12/15/89	HL-4
-.001	6/15/91	HL-4
-.001	12/15/91	HL-4
-.001	5/15/92	HL-4
-.0005	1/12/94	HL-4
-.0006	6/24/93	HL-4
-.003	10/15/86	HL-4
.0165	7/16/97	HL-4
-.0005	1/12/94	HL-4
-.0005	9/15/92	HL-4
.078	6/15/91	HL-4
-.001	12/15/91	HL-4
-.001	6/15/91	HL-4
-.0006	6/24/93	HL-4
.068	5/28/96	HL-4
.0085	11/25/96	HL-4
.0079	2/20/97	HL-4

SFPP Pressure Testing

- Gave an overview of pressure testing at last RAB
- Requested to provide some follow up information
- Have provided copies of all records I can locate for station piping testing
- I think some of the records are missing, NOT on purpose
- We continue to look for them

SFPP Pressure Testing

- Not an expert of pipeline pressure testing regulation
- Made some mistakes in my talk last meeting
- Regulation is a lot more complex and confusing than I thought
- Federal regulations apply INTER-state portion of pipe (24" & 16")
- State regulations apply to INTRA-state portion of pipe (16" San Diego Line)

SFPP Pressure Testing

- Both Feds & State have different testing requirements
- Interpretation of Law indicates don't even need to pressure test within the Station itself !
- Verified by CSFM audits of our facilities and records that show compliance for NW
- THIS DOESN'T ANSWER RABS QUESTION
- IS THERE STILL LEAKING PIPE UNDER SFPP STATION ?

SFPP Pressure Testing

- Had a high level meeting on Monday of this week
- SFPP has made a commitment to Pressure Test ALL SFPP piping we feasibly can
- Big undertaking, but only way to answer RABS question

SFPP Pressure Testing

- *Proposed Schedule*
 - Update Station plans & Drawings (necessary) by 2/28/98
 - Schedule field work and fit between inter & intra state shipments by 2/28/98
 - Start Field work 3/9/98
 - Progress update to RAB -Next RAB meeting
 - Complete field work by 5/30/98
 - Prepare report and share with RAB by 6/30/98