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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET—SUITE 500
DENVER, COLORADO 80202-2405

Ref: 8HWM-ER

JAN 7 1987

ENFORCEMENT SENSITIVE

CONFIDENTIAL

Enforcement Section Removed ORG

MEMORANDUM

To: Robert L. Duprey, Director
Waste Management Division

From: Bennett H. Young, OSC
Emergency Response Branch

Thru: John R. Giedt, Chief
Emergency Response Branch

Subject: Removal Request for the Brookhurst subdivision, Natrona County, Wyoming. ACTION MEMORANDUM

PURPOSE

This memorandum is to request Removal Action funding necessary to eliminate the threat posed by contaminated groundwater used for domestic water purposes at the Brookhurst subdivision, Natrona County, Wyoming.

BACKGROUND

The Brookhurst subdivision is located in an industrial area four miles east of Casper, Wyoming in Natrona County (see Figure 1). Most of the lots in this rural subdivision have been developed and the subdivision now contains approximately 100 homes, the first of which was built around 1972 (see Figure 2). The Brookhurst subdivision is bordered by the North Platte River on the north, several industrial facilities on the east and south, and by the Little America Refinery on the west (see figure 1).

Groundwater contamination, consisting primarily of elevated levels of organic solvents, has been detected in private wells throughout the area (see figure 2). Water for domestic purposes such as drinking, cooking, washing, and bathing is supplied by private wells which tap into the unconsolidated groundwater aquifer directly beneath the subdivision. There is no public water supply system in the area.

Most of the wells in the subdivision have been completed into the base of the alluvial aquifer. The regional movement of groundwater in the aquifer is thought to flow north to northeast. The depth to groundwater is as shallow as 20 feet on the eastern side of the subdivision. The primary water-bearing formation generally consists of alluvial gravel and sands that are highly permeable, allowing the movement of volatile organics to the groundwater. Shale bedrock begins roughly at 55-60 feet. (The preceding observations have been made by EPA RCRA, Emergency Response, and Wyoming DEQ hydrogeologists who are familiar with the area and are also based upon review of numerous well logs maintained on Brookhurst wells).

The groundwater contamination may stem from several sources upgradient of the subdivision that use, or have used, solvents which are common degreasers used at many industrial and maintenance facilities. Furthermore, since the septic systems found in the area are shallow and directly connected with the water bearing aquifer, common chemicals and solvents discarded into these systems may also contribute to the groundwater contamination. In addition, unknown amounts of these solvents may have entered the groundwater through poor waste management practices.

As a result of a complaint from a Brookhurst resident, claiming that her horses were sick from drinking the water from Elkhorn Creek which runs through the subdivision, the Natrona County Health Department, the State of Wyoming Department of Environmental Quality, Water Quality Division (DEQ/WQD), and the Region VIII EPA Office of Drinking Water, sampled some of the wells and taps throughout the subdivision from August through October, 1986. The results of this sampling effort revealed the presence of organic contamination in both the well and tap water (see Attachment I for the sample results). The specific groundwater contaminants found in the water from the sampling effort include:

-Trichloroethylene (TCE)
-Tetrachloroethylene (PCE)
-1,1-Dichloroethane (DCA)
-1,1,1-Trichloroethane (TCA)
-Benzene

In addition, two of the wells sampled contained trace amounts of Toluene, and Xylene. Concentrations of TCE as high as 214 ppb and concentrations of PCE as high as 90 ppb have been detected in some of the private wells. The site is not currently on the National Priority List (NPL).

THREAT

The above listed volatiles are hazardous substances as defined under Section 104 (14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, and designated as such in 40 CFR, Parts 117 and 302. According to EPA's proposed weight of evidence scheme for the classification of carcinogenic potential, TCE and PCE are classified as probable human carcinogens. In addition, the EPA Carcinogenic Assessment Group (CAG) has established the carcinogenic potency of PCE and Benzene. EPA has proposed a maximum contaminant level (MCL) of 5 ppb for TCE (as a primary drinking water standard pursuant to the Safe Drinking Water Act). Proposed MCL's for other contaminants found in the Brookhurst wells include:

Proposed Maximum contaminant Level (MCL) (ppb)	
Trichloroethylene (TCE)	5
Tetrachloroethylene (PCE)	---
1,1-Dichloroethane (DCA)	---
1,1,1-Trichloroethane (TCA)	200
Benzene	5

The levels of TCE, PCE and Benzene found in the groundwater present a significant public health threat as potential carcinogens through ingestion and possibly inhalation when cooking or showering with the contaminated water.

The Public Health Service, Agency for Toxic Substances and Disease Registry stated in an attached letter (see Attachment II) that:

1.) An imminent and significant health threat exists because of the potential toxicity and increased cancer risk associated with the level of benzene.

2.) The present levels of PCE and TCE increase the lifetime cancer risk for those individuals drinking the well water from the area.

The data obtained to date has been analyzed by Dr. James Baker, EPA Region VIII Superfund Toxicologist. Dr Baker indicates that concentrations of the above contaminants found in the wells and taps in the subdivision, although highly variable, generally exceed the stated EPA 10-4 upper bound limit of carcinogenic risk (see Attachments I and II).

Beginning the first week of October, Wyoming Governor Ed Herschler authorized the use of disaster funds to provide free bottled water to the residents of the Brookhurst subdivision. Funding from the Governors disaster fund for the bottled water terminated Friday, October 17, 1986. The Natrona County Commissioners agreed to continue paying for the water through the end of October. Subsequenty, the residents of Brookhurst could purchase water from the City of Casper or from a private company at their own expense.

ENFORCEMENT (see attached)

PROPOSED PROJECT AND COSTS

The following Removal Actions are proposed to eliminate the immediate health risks associated with the current use of the contaminated groundwater:

1. Provide bottled water to the residents of the Brookhurst subdivision until a permanent alternate water supply can be provided. (Bottled water was provided starting 12/15/86 per verbal approval from Robert L. Duprey, Director, Waste Management Division, on 12/4/86.)

2. Install approximately twenty-five groundwater monitoring wells to help establish the aquifer characteristics and the extent of contamination.

3. Install a public water distribution system throughout the subdivision and connect to the Town of Evansville public water supply system (see Figure 3). The subdivision will require a peak water rate of about 1 GPM/unit or approximately 100 GPM. It is estimated that a 6-inch water main could be tied into the existing 12-inch water main near the Little America Refinery offices and supply the required amount of water (see figure 3). Sizing of the distribution system will be based on per capita domestic water use only.

Providing water to the subdivision from Evansville Water District will eliminate the immediate threat of exposing the Brookhurst residents to the contaminated groundwater in a timely, cost effective manner. It is important to note that the immediate threat can be removed by eliminating the current existing pathway of exposure (private wells accessing the contaminated groundwater source). However, this removal action may not eliminate the source of the contamination.

Therefore, further remedial action at the site may be necessary. This proposed removal action, to the extent practicable, has been designed and will be implemented to contribute to the efficient performance of possible long term remedial measures. Provision of bottled water will be discontinued after installation of the public water system and will not interfere with that portion of removal action or future remedial actions. Installation of the public water system is not inconsistent with possible future remedial actions including source and groundwater cleanup actions.

The following costs are estimated for these Removal Actions:

ERCS Contractor (10 hrs/day = 450 hours)		
Salaries		
Response Manager- $55/hr x 450 hrs	= 24,750	
Computer Tech - $33/hr x 450 hrs	= 14,850	
Per Diem - $66/day/person x 2 x 45 days	= 5,940	
Round Trip Airfare - $500/person x 2	= 1,000	
Passenger Sedan - $47/day x 45 days	= 2,115	
Response Trailer - $265/day x 45 days	= 11,970	
		$ 60,625
ERCS Subcontractors		
Cold water dispenser:		
$1.00/mo. x 100 homes x 6 months	= 600	
Bottled water:		
$3.75/bottle x 8 bottles/mo. x 100 homes x 6 mo.	= 18,000	
Groundwater monitoring wells:		
25 x $3,000/well	= 75,000	
Town of Evansville tap fee:		
$1000/home x 100 homes	= 100,000	
Engineering Costs	= 15,000	
Pipe laying	= 250,000	
		$458,600
Total ERCS and ERCS Subcontractor Costs		$519,225
Plus 15% contingency		77,884
		$597,109
TAT - $65/hr/person x 450 hrs		$ 29,250
EPA Intramural Costs		$ 15,000
	Subtotal	$641,359
Other costs (15% of all costs above)		$ 96,204
	Total	$737,563
Project Ceiling Estimate		$738,000

RECOMMENDATIONS

Above actions are based upon your verbal approval dated December 4, 1986. Please indicate your formal approval or disapproval by signing below. Because conditions at the Brookhurst subdivision meet the CERCLA 104(c) criteria, I recommend your approval of the removal request. The total estimated project cost is $738,000, of which approximately $597,000 is for extramural cleanup contractor costs.

Approve: _____ Date: 1/7/87

Disapprove: _____ Date: _____

(4552N)

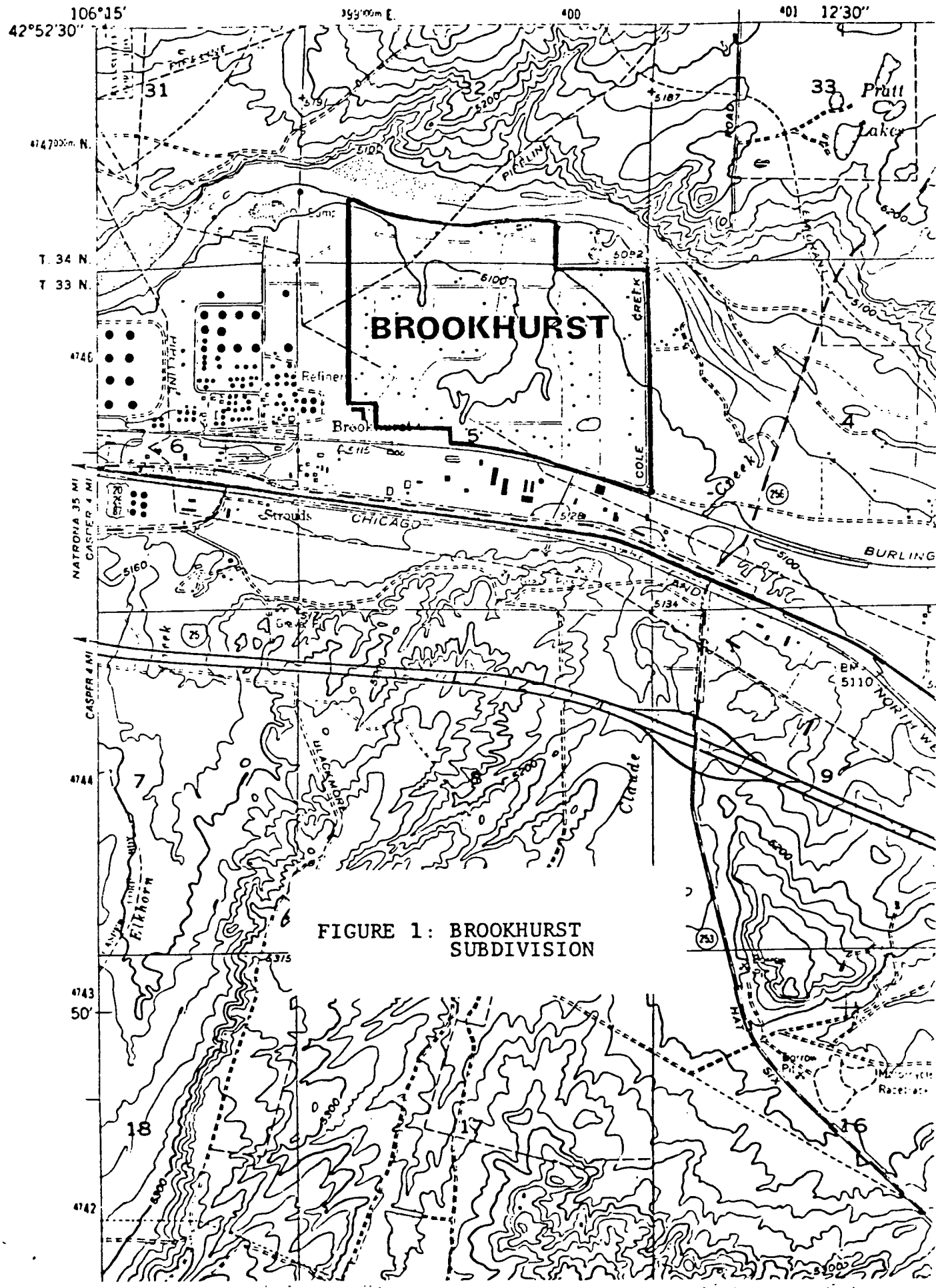


FIGURE 1: BROOKHURST SUBDIVISION

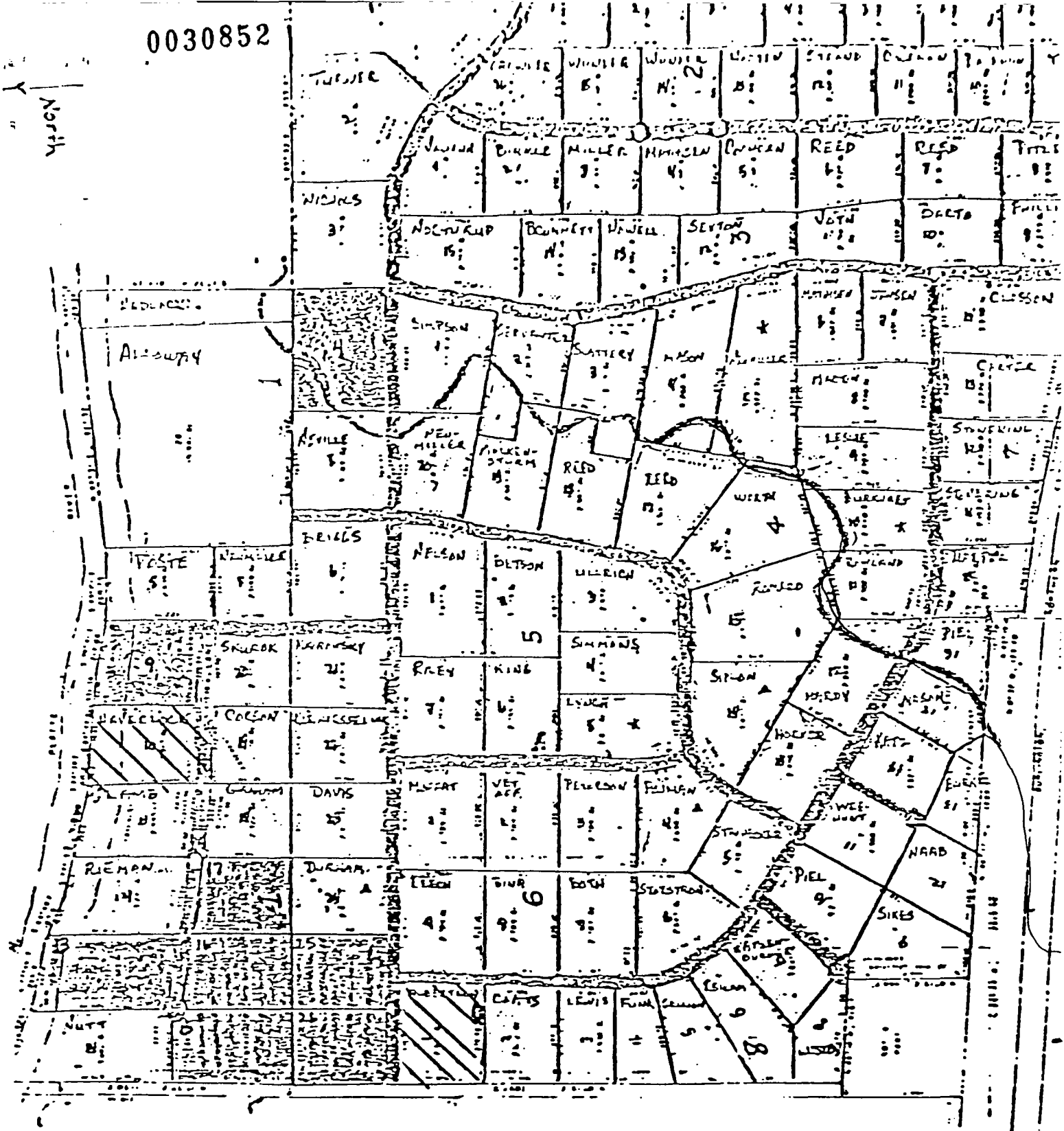


FIGURE 2 : BROOKHURST
SUBDIVISION

WESTON·SPIER

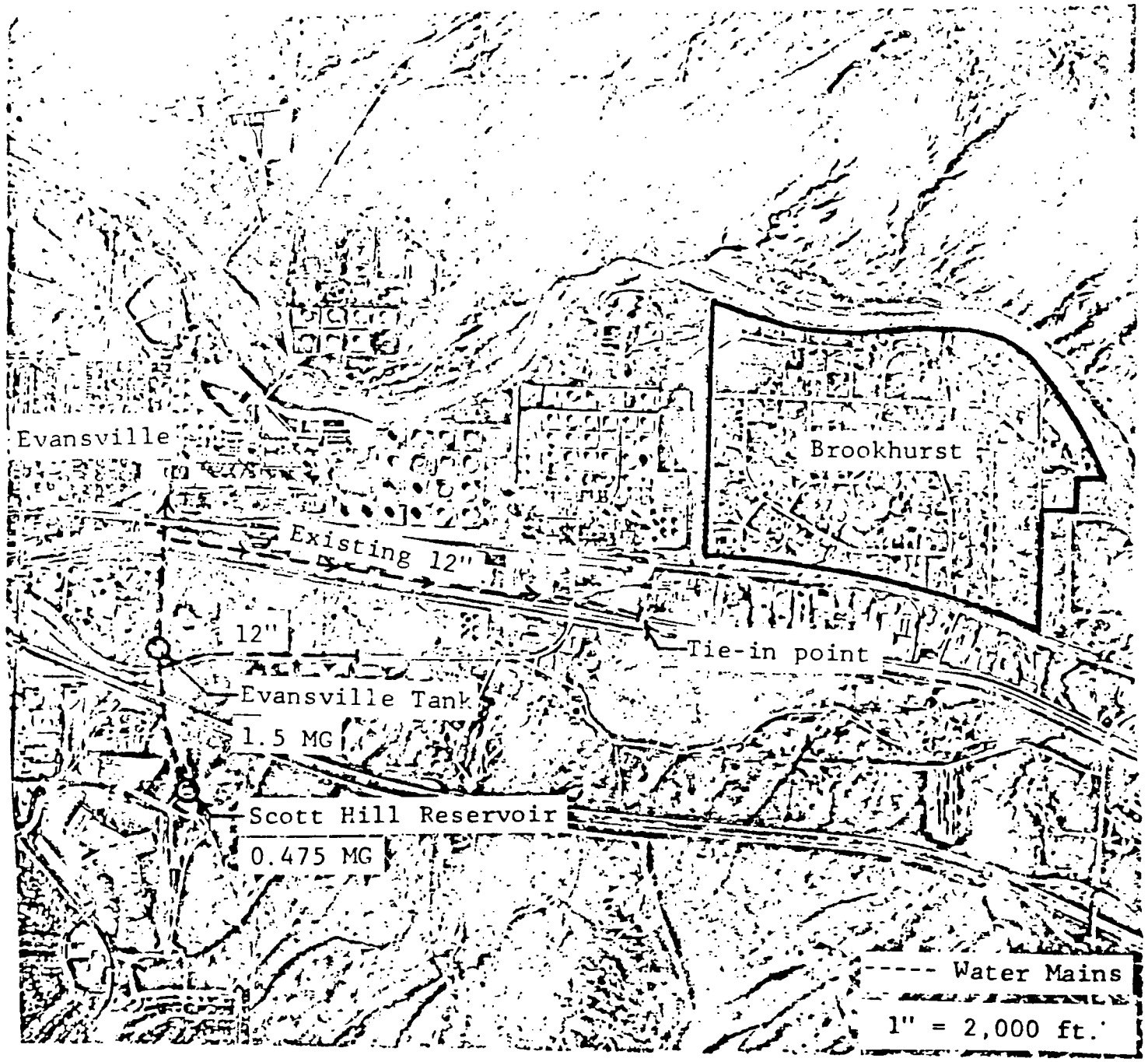


FIGURE 3: Evansville Water
Supply System

ATTACHMENT I

-SAMPLE RESULTS-

[illegible]

[illegible]

0 - None Detected

[illegible]	Blk	Lot	Sampler	Lab	Date	Source	Dbs	Benzene	Toluene	Xylene	PCE	TCE	1,1 Dichloro	1,1,1-[illegible]
## block 0														
LFCDD	0	0	DER	AgLab	10/21/85	MW-2	320	0	0	0	0	0	0	0
LFCDD (split)	0	0	LRC	WEST	03/26/85	MW-1	0	0	0	0	0	0	0	0
LFCDD	0	0	LRC	WEST	03/26/85	MW-2	0	4	9	38	0	0	0	0
LFCDD	0	0	LRC	WEST	03/26/85	MW-3	0	0	0	0	0	0	0	0
LFCDD	0	0	LRC	WEST	03/26/85	MW-4	0	0	0	0	0	0	0	0
LFCDD	0	0	LRC	WEST	03/26/85	MW-5	0	0	0	0	0	0	0	0
LFCDD	0	0	LRC	WEST	03/26/85	MW-8	0	0	0	0	0	0	0	0
LFCDD	0	0	LRC	WEST	03/26/85	MW-9	0	0	0	0	0	0	0	0
LFCDD	0	0	LRC	WEST	03/26/85	MW-10	0	0	0	0	0	0	0	0
LFCDD	0	0	LRC	WEST	10/03/86	MW-2	0	138	59	757	0	0	0	0
LFCDD	0	0	DER	WRI	10/21/85	MW-2	0	63	12	150	0	0	0	0
## block 1														
D[illegible]	1	24	Co.	AgLab	10/03/86	Tap	0	0	0	0	0	0	0	0
Boza	1	1	Co.	AgLab	10/03/86	Tap	0	0	0	0	22	2	3	9
Haverlock (split)	1	10	Co.	AgLab	10/22/86	Tap	0	0	0	0	0	0	0	0
Haverlock (split)	1	10	Co.	EPA	10/22/86	Tap	0	0	0	0	0	0	0	0
Lamb	1	11	Co.	AgLab	10/03/85	Tap	0	0	0	0	0	0	0	0
Nesmiller	1	7	DER	WRI	10/20/86	Well	0	0	0	0	0	0	0	0
Neville	1	5	Co.	AgLab	10/03/86	Tap	0	0	0	0	0	0	0	0
## block 2														
Baldwin	2	10	Co.	AgLab	10/20/86	Tap	0	0	0	0	0	0	0	0
Coleman	2	11	Co.	AgLab	10/15/86	Tap	0	0	0	0	0	0	0	0
Lake	2	8	Co.	AgLab	10/06/86	Tap	0	0	0	0	0	0	0	0
Miller (split)	2	5	Co.	AgLab	10/22/86	Tap	0	0	0	0	0	0	0	0
Miller (split)	2	5	Co.	EPA	10/22/86	Tap	0	0	0	0	0	0	0	0
Roth	2	7	Co.	AgLab	10/27/82	Tap	0	0	0	0	0	0	0	0
Scott	2	3	Co.	AgLab	10/15/85	Tap	0	0	0	0	0	0	0	0
Strand	2	12	Co.	AgLab	10/03/86	Tap	0	0	0	0	0	0	0	0
Under	2	2	DER	WRI	10/20/85	Well	0	0	0	0	0	0	0	0
## block 3														
Northrup	3	15	Co.	AgLab	10/20/85	Tap	0	0	0	0	22	10	4	17
Phillips (split)	3	9	Co.	AgLab	10/22/85	Tap	0	0	0	0	0	0	0	0
Phillips (split)	3	9	Co.	EPA	10/22/86	Tap	0	0	0	0	0	0	0	0
Pilser	3	8	EPA	EPA	03/13/86	Tap	0	0	0	0	0	0	0	0
Sexton	3	12	DER	WRI	10/20/86	Well	0	0	0	0	0	0	0	0
Smith	3	3	Co.	AgLab	10/15/86	Tap	0	0	0	0	25	24	2	18
## block 4														
Burkhart (split)	4	10	Co.	AgLab	10/22/86	Tap	0	0	0	0	40	7	12	29
Burkhart	4	10	Co.	AgLab	10/08/86	OStap	0	0	0	0	54	5	11	29
Burkhart	4	10	Co.	AgLab	10/08/86	RO	0	0	0	0	0	0	0	0
Burkhart	4	10	EPA	EPA	03/13/86	Tap	0	0	0	0	90	214	7	44
Burkhart (dup)	4	10	Co.	EPA	10/22/86	Tap	0	0	0	0	47	5	12	30
Burkhart (dup)	4	10	Co.	EPA	10/22/86	Tap	0	0	0	0	48	5	14	32

[illegible]

[illegible]

[illegible]

Name	Blk	Lot	Sampler	Lab	Date	Source	[illegible]	Benzene	Toluene	Xylene	[illegible]	TCE	1,1 Dichloro[illegible]	1,1,1-[illegible]
[illegible]	4	12	Co.	AgLab	10/13/86	Tap	0	0	0	0	24	51	1	[illegible]
[illegible]) split	4	13	DER	AgLab	10/21/86	Well	0	0	0	0	0	0	0	[illegible]
[illegible]	4	13	DER	LRI	10/20/86	Well	0	0	0	0	0	0	0	[illegible]
Leslie	4	9	Co.	AgLab	10/13/86	Tap	0	0	0	0	0	0	0	[illegible]
[illegible]	4	4	Co.	AgLab	10/03/86	Tap	0	0	0	0	65	100	6	[illegible]
[illegible]	4	5	Co.	AgLab	10/03/86	Tap	0	0	0	0	5	11	0	[illegible]
[illegible]	4	20	DER	LRI	10/20/86	Well	0	0	0	0	0	0	0	[illegible]
[illegible]	4	2	Co.	AgLab	10/13/86	Tap	0	0	0	0	39	65	2	[illegible]
Reed	4	17	Co.	AgLab	10/03/86	Tap	0	0	0	0	35	103	8	[illegible]
Fies	4	3	Co.	AgLab	10/13/86	Tap	0	0	0	0	61	69	2	[illegible]
[illegible]	4	15	Co.	AgLab	10/13/86	Tap	0	0	0	0	24	55	3	[illegible]
# Block 5														
[illegible]	5	2	Co.	AgLab	10/15/86	Tap	0	5	0	0	4	17	6	8
King	5	6	Co.	AgLab	10/03/86	Tap	0	0	0	0	4	2	1	2
King	5	6	Co.	AgLab	10/03/86	Tap	0	0	0	0	3	2	0	0
Lynch	5	5	DER	LRI	10/20/86	Tap	0	0	0	0	0	0	0	0
Riley	5	7	Co.	AgLab	10/20/86	Tap	0	0	0	0	0	0	0	0
# Block 6														
Leach	6	9	Co.	AgLab	10/15/86	Tap	0	0	0	0	0	0	0	0
Moffat) split	6	1	Co.	AgLab	10/22/86	Tap	0	0	0	0	0	0	0	0
Moffat	6	1	Co.	EPA	10/22/86	Tap	0	0	0	0	0	0	0	0
Pojman	6	4	Co.	AgLab	10/15/86	Tap	0	0	0	0	0	0	0	0
Pojman) split	6	4	DER	LRI	10/20/86	Tap	0	0	0	0	0	0	0	0
Pojman	6	4	DER	LRI	10/20/86	Well	0	0	0	0	0	0	0	0
# Block 7														
Carter) dup	7	13	DER	LRI	10/20/86	Well	0	0	0	0	0	0	0	0
Carter	7	13	DER	LRI	10/20/86	Well	0	0	0	0	0	0	0	0
Clemson) split	7	14	Co.	AgLab	10/03/86	Tap	0	0	0	0	0	0	0	0
Clemson	7	14	DER	LRI	10/20/86	Well	0	0	0	0	0	0	0	0
Harper	7	10	DER	LRI	10/20/86	Well	0	0	0	0	26	150	0	15
Sterling	7	11	Co.	AgLab	10/03/86	Tap	0	0	0	0	0	0	0	0
# Block 8														
Albertson	8	1	Co.	AgLab	10/03/86	Tap	0	0	0	0	0	0	0	0
Albertson) split	8	1	Co.	EPA	10/22/86	Tap	0	0	0	0	0	0	0	0
Albertson	8	1	DER	LRI	10/20/86	Tap	0	0	0	0	0	0	0	0
Burke	8	13	Co.	AgLab	10/13/86	Tap	600	0	0	0	0	0	0	0
Burke) split	8	13	DER	AgLab	10/21/86	Well	0	0	0	0	2	2	0	0
Burke	8	13	DER	LRI	10/20/86	Well	0	0	0	0	1	4	0	0
Coats) split	8	2	Co.	AgLab	10/20/86	Tap	0	0	0	0	0	0	0	0
Coats	8	2	Co.	EPA	10/22/86	Tap	0	0	0	0	0	0	0	0
Bellion	8	5	Co.	AgLab	10/08/86	Tap	8	0	0	0	0	0	0	0
Bellion) split	8	5	DER	AgLab	10/21/86	Well	380	0	0	0	0	0	0	0
Bellion	8	5	DER	LRI	10/20/86	Well	0	0	0	24	0	0	0	0
Katzenburger	8	7	Co.	AgLab	10/03/86	Tap	0	0	0	0	0	0	0	0

[illegible]

[illegible]

D - [illegible]

[illegible]	Blk	Lot	Sampler	Lab	Date	Benzene	Ethylbenzene	Toluene	Xylenes	MTBE	MIBK	1,1 Dichloroethene	1,1,1-Trichloroethane
[illegible]	B	7	[illegible]	AgLab	10/21/05	Well	0	0	0	0	0	0	0
[illegible]	B	9	[illegible]	ERI	10/20/05	Well	0	0	0	0	0	0	0
[illegible]	B	15	Co.	AgLab	10/20/05	Tap	0	0	0	0	3	10	0
[illegible]	B	12	Co.	AgLab	10/20/05	Tap	0	0	0	0	0	0	0
[illegible]	B	12	Co.	AgLab	10/20/05	Tap	0	0	0	0	0	0	0
[illegible]	B	12	[illegible]	ERI	09/25/05	Well	0	160	0	0	0	0	0
[illegible]	B	16	Co.	AgLab	10/03/05	Tap	0	0	0	0	86	67	2

block 0

[illegible]	0	0	AgLab	10/21/86 split sample
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	03/20/86
[illegible]	0	0	[illegible]ST	10/03/86
[illegible]	0	0	ERI	10/21/86 Also detected split sample

C5H10 (10 ppb)
C5H16 or C5H12 (15 ppb)
C5H14 (5 ppb)
C7H13 (methyl cyclohexene?) (4 ppb)
Cyclohexane (13 ppb)
Ethylbenzene (67 ppm)
Xylene is total xylenes.

block 1

Durham	1	24	AgLab	10/03/86
Goza	1	1	AgLab	10/03/86
Haverlock	1	10	AgLab	10/22/86 1,1 Dichloroethane detected Split sample
Haverlock	1	10	EPA	10/22/86 Tetrahydro-2,2,5,5-Tetramethyl Furan (3 ppb), Tetrahydro-2,5-Dimethyl-Trans-Thiophene (5 ppb), Tetrahydro-3-methyl-2H-Thiopyran (16 ppb), and C8 or C9 (29 ppb) also detected. Split Sample
Lamb	1	11	AgLab	10/03/86
Mercillier	1	7	ERI	10/20/86
Neville	1	5	AgLab	10/03/86

block 2

Baldwin	2	10	AgLab	10/20/86
Coleman	2	11	AgLab	10/15/86
Lake	2	8	AgLab	10/06/86
Miller	2	5	AgLab	10/22/86 Split Sample
Miller	2	5	EPA	10/22/86 Split Sample
Roth	2	7	AgLab	10/27/82
Scott	2	3	AgLab	10/15/86
Strand	2	12	AgLab	10/03/86
Vander	2	2	ERI	10/20/86

block 3

Northrup	3	15	AgLAb	10/20/86

[illegible]	3	9	[illegible] 10/[illegible]	Split Sample
[illegible]	3	9	EPA 10/22/86	Split Sample
Filser	3	8	EPA 08/13/86	
Sutton	3	12	KRI 10/20/86	
Smith	3	3	AgLab 10/15/86	
++ Block 4				
[illegible]hart	4	10	AgLab 10/22/86	Split Sample
[illegible]hart	4	10	AgLab 10/08/86	
[illegible]hart	4	10	AgLab 10/03/86	
[illegible]hart	4	10	EPA 08/13/86	
[illegible]hart	4	10	EPA 10/22/86	Duplicate analysis Split Sample
[illegible]hart	4	10	EPA 10/22/86	Duplicate analysis Split Sample
Handy	4	12	AgLab 10/13/86	
Horner	4	13	AgLab 10/21/86	Split Sample
Horner	4	13	KRI 10/20/86	Split Sample
Leslie	4	9	AgLab 10/13/86	
Mason	4	4	AgLab 10/08/86	
Meuiller	4	5	AgLab 10/06/86	
Meuiller	4	20	KRI 10/20/86	
Nemitt	4	2	AgLAb 10/13/86	
Reed	4	17	AgLab 10/03/86	
Sies	4	3	AgLab 10/13/86	
Suero	4	15	AgLab 10/13/86	
++ Block 5				
Ertson	5	2	AgLab 10/15/86	
King	5	6	AgLab 10/08/86	
King	5	6	AgLab 10/03/86	
Lynch	5	5	KRI 10/20/86	
Riley	5	7	AgLab 10/20/86	
++ Block 6				
Leach	6	9	AgLab 10/15/86	1,1 Dichloroethane detected
Moffat	6	1	AgLab 10/22/86	Split Sample
Moffat	6	1	EPA 10/22/86	Split Sample
Pojean	6	4	AgLab 10/15/86	Split Sample
Pojean	6	4	KRI 10/20/86	

[illegible]	6	4	HRI	10/20/86 Split Sample
** Block 7				
Carter	7	13	HRI	10/20/86 Duplicate Analysis
Carter	7	13	HRI	10/20/86 Duplicate analysis
Clesson	7	14	AgLab	10/03/86 Split Sample
Clesson	7	14	HRI	10/20/86 Split Sample
Harper	7	10	HRI	10/20/86 Also detected Trans-1,2-Dichloroethene (8 ppb)
Stocking	7	11	AgLab	10/09/86
** block 8				
Albertson	8	1	AgLab	10/03/86 Split Sample
Albertson	8	1	EPA	10/22/86 Chloroform (18 ppb) and Tetrahydrofuran (48 ppb) also detected. Split Sample
Albertson	8	1	HRI	10/20/86 split sample
Burke	8	13	AgLab	10/13/86
Burke	8	13	AgLab	10/21/86 Split Sample
Burke	8	13	HRI	10/20/86 Split Sample
Coats	8	2	AgLab	10/20/86 Split Sample
Coats	8	2	EPA	10/22/86 Split Sample
Eallion	8	5	AgLab	10/09/86
Eallion	8	5	AgLab	10/21/86 Split Sample
Eallion	8	5	HRI	10/20/86 Split Sample Also Detected Cyclohexane (28 ppb) Methyl Cyclohexane (28 ppb) Cyclohexene (5 ppb) Methylcyclopentane (6 ppb) C6H12 (6 ppb) C7H14 isomer (5 ppb)
Katzenburger	8	7	AgLab	10/03/86 Split Sample
Katzenburger	8	7	AgLab	10/21/86
Katzenburger	8	9	HRI	10/20/86 Split Sample

[illegible]

[illegible]	6	15	[illegible]	10/[illegible]/[illegible]	
[illegible]ab	8	12	[illegible]	10/20/[illegible]	Sample taken [illegible]diately from tap
[illegible]ab	8	12	[illegible]	10/20/[illegible]5	Sample taken after running tap for 20 minutes.
[illegible]ab	8	12	[illegible]	03/25/[illegible]5	
Fiel	6	16	[illegible]ab	10/03/86	

-ATTACHMENT II-

DEPARTMENT OF HEALTH & HUMAN SERVICES

Agency for Toxic Substances and Disease Registry

Memorandum

Date 12/2/86

From ~~Acting~~ Director
Office of Health Assessment

Subject Site Certification Brookhurst, Wyoming

To Mr. Michael McGeehin
Public Health Advisor
EPA Region VIII
Denver, Colorado

BACKGROUND

The U.S.Environmental Protection Agency (EPA), Region VIII has requested the assistance of the Agency for Toxic Substances and Disease Registry (ATSDR) in assessing the public health risk posed by volatile organic compounds (VOCs) identified in groundwater. More specifically, the EPA requests a recommendation on the possibility of restricting the use of contaminated wells at the subdivision.

The aquifer is the primary source of potable water for a subdivision of eighty homes located near Casper, Wyoming. Each of the homes is located on 2 to 3 acres of land. Septic tanks are used by all homes in the area. The subdivision is bounded by the North Platt River to the north, the Little America refinery to the west, and six to eight industrial firms to the south. Groundwater samples have been taken at various locations throughout the subdivision and these data serve as the basis for this health consultation. At present, an alternative drinking water supply is being provided to the residents of this subdivision.

DISCUSSION

Site specific results were provided for the various volatile organic compounds (VOCs). Upper level results were given in well and tap water for the following substances:

Trichloroethene (TCE)	214 ppb
Tetrachloroethylene (PCE)	90 ppb
Gasoline	800 ppb
1,1 Dichloroethene	14 ppb
1,1,1 Trichloroethane	44 ppb
Benzene	138 ppb

CONCLUSIONS

Based on the data provided being inconclusive and the difficulty in establishing a pattern of contamination, we conclude the following:

1. An imminent and significant health threat exists because of the potential toxicity and increased cancer risk associated with the level of benzene.

2. The present levels of PCE and TCE increase the lifetime cancer risk for those individuals drinking well water from the area.

RECOMMENDATIONS

Based on the provided data, we recommend that:

1. Contamineted waters should not be used for drinking. An alternative water source for drinking and cooking should be maintained.

2. Additional sampling and testing should be conducted to characterize the contamination within the subdivision.

3. Quarterly sampling of all contaminated wells should be performed to determine if other domestic uses should be continued.

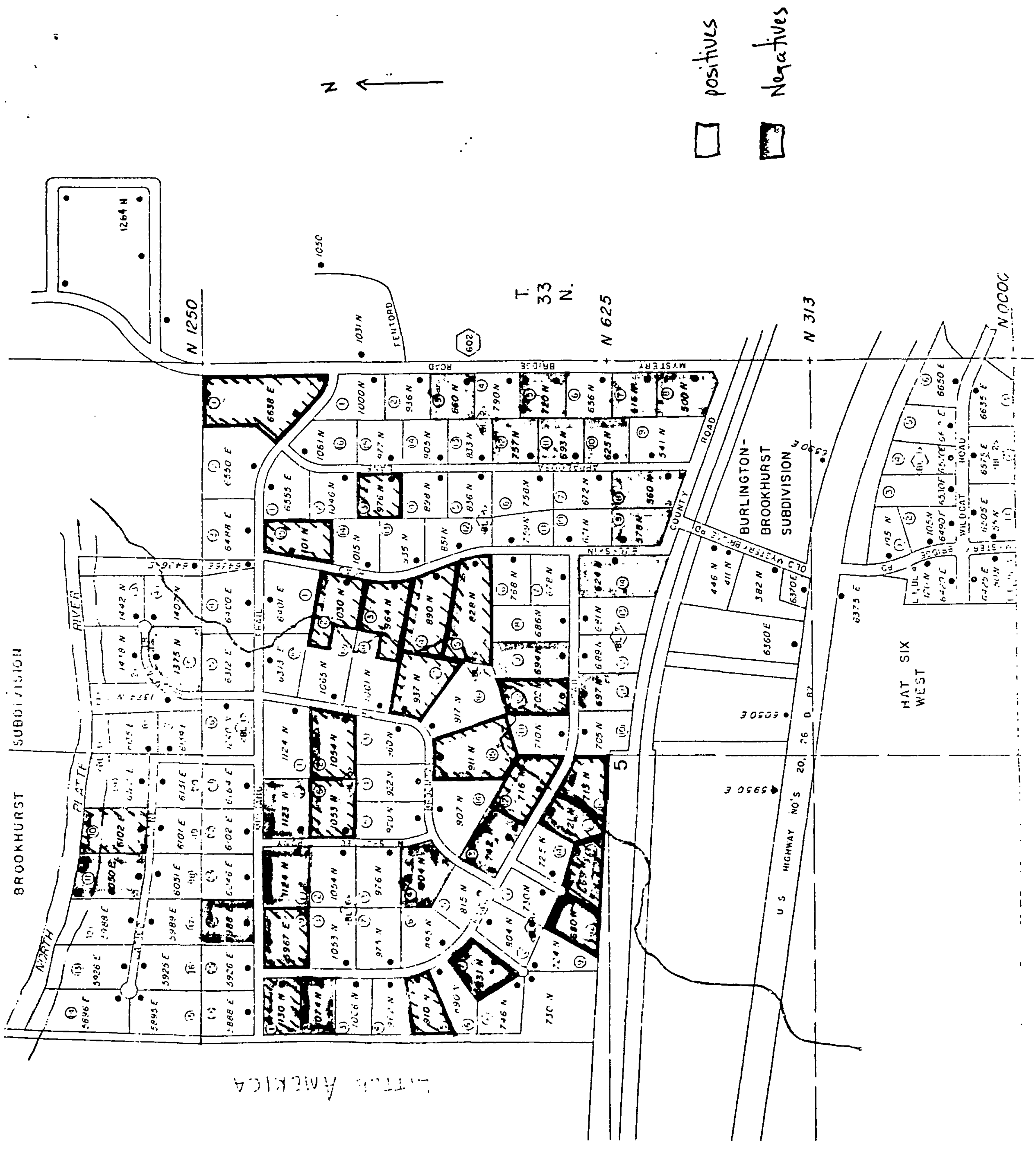
4. Quality assurance and quality control information should be provided when it becomes available.

5. A permanent alternative water supply should be installed within the next year.

We will be happy to review the additional data as it becomes available.

Jeffrey A. Lybarger, M.D.

Exhibit "A"



positives
Negatives
N
T. 33 N.
N 1250
N 625
N 313
MYSTERY BRIDGE ROAD
COUNTY ROAD
BURLINGTON-BROOKHURST SUBDIVISION
HAT SIX WEST
BROOKHURST SUBDIVISION
NORTH PLATTE RIVER
U S HIGHWAY NO'S 20, 26 & 87
WILDCAT ROAD
5

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

MEMORANDUM

TO: File

FROM: Thomas S. Norman, P.E., Southeast District Engineer Supervisor TSN

DATE: October 30, 1986

SUBJECT: Brookhurst Subdivision

On October 20, 1986, Tom Williams, Matt Langenfeld, and myself left Cheyenne to go perform on-site inspections and groundwater monitoring at the Brookhurst Subdivision. We met with Mike Young from Lander and Kurt King from Sheridan. Larry Robinson was on-site late Monday and early Tuesday.

Langenfeld and Norman met with Mrs. Burkhart to determine if permission had been granted to sample some of the wells in the Brookhurst area. The specific sites were given to Burkhart previously. Two out of the fifteen sites would not be available for access.

Williams, Langenfeld, and Young proceeded to sample. Details on the groundwater sampling will be provided later.

King and Norman proceeded to perform on-site inspections of the commercial facilities which are adjacent to and south of Brookhurst. The following is a description of those on-site investigations.

Dowell - Schlumberger (9:33 - 10:43 am)

Contact: Andy Theisen, employee for 11 years

Facility type: Oil field service company with five full time employees and four part-time employees.

Water: 40-50 foot well not used for human consumption, used for truckwash down water and toilets. Hillcrest bottled water used for potable water.

Disposal practices: Domestic sewage is disposed of in a septic tank/drainfield (ST/DF).

A floor drain in the storage/mix area goes to a holding tank which is pumped by Coleman. A pump out could not be located.

Safely kleen recycles their solvent. Used Safety Kleen for last five years. Solvent is located in vehicle-maintenance shop.

Coleman cleans sand trap once per week out of truck washing bay. The wash water goes to a separate ST/DF.

Chemicals on-site:

Bulk: Cement, 36% hydrochloric acid, sand.

Drums: organic polymer ("Gasblok" Dowell D126), hydrogen peroxide, amino acid salt (Vetran 700 Chelant V700), diethylene glycol, chlorothene NU, organic polymer, antifreeze, bactericide, solvent, organic acids, acetic acid, triethanolamine, sodium aluminate, formic acid, oil gel, dilute parafin.

Fuel Tanks: 1.5 year old tanks (4000 gallon gasoline and diesel), 2000 gallon kerosene tank which is nine years old.

The gasoline and diesel tanks were replaced because they relocated the fuel island. Old tanks have been pulled.

Marland Trucking (10:52 - 11:14 am)

Contact: Mr. Markland

Facility type: trucking operation. Bought facility two years ago from Red Nickerson of Industrial Electric who built it in 1976. Markland only hauls dry bulk material.

Water: Well is 70 feet deep. Water was drank up until Brookhurst problem arose. No taste and odor problems. Water softener is being used. Old water well on north end of property which is not being used.

Disposal practices: Domestic waste to ST/DF. Floor drain in maintenance shop goes to sump and then to a separate ST/DF. Markland was removing sludge from sump at time of inspection and dumping it out on his lot. Markland was informed that this was a violation.

Safety-Kleen recycles the solvents.

Used oil is being stored on-site. Approximately 24 drums of used diesel oil were found.

Fuel Tanks: 6000 gallon underground diesel tank installed in 1979-1980.

Permeam Corporation (11:15 - 11:49 am)

Contact: Roger Wortham, Marshall Bevans.

Facility type: Oil field service. Buy, haul, and sell crude oil by truck. Started in 1977.

Previous owner was Ray Dowler who owned as an asphalt plant.

Water: Well water used for toilets and to wash trucks. Hillcrest used for potable water.

Waste disposal: No wastes as there are no liquids generated. Enclosed circuit of steam is used to melt sulfur.

Chemicals:

Bulk: HCL (tank car), Sulfur (tank car), sulfuric acid in large tank (abandoned, built in 1981), hydrochloric acid (storage tank).

Drums: caustic soda

CE Natco

Contact: Melvin Hinchey

Facility type: Steel tank manufacturer from 1980 to present. Warehouse from 1962-1980. Six employees.

Water: Well for toilets. Bottled water for drinking.

Waste Disposal: Currently no wastes generated. Approximate one year ago, they stopped steam cleaning tanks. At that time, wastewater was just disposed onto the ground.

A small area was found where used oil was being dumped. Told Hinchey to clean up area.

Johnson Fuel Liner (3:33 pm)

Contact: Bill Morrison, Weldon _____,
6375 East Yellowstone, P. O. Box 1048
Evansville, WY 82636

Facility type: Trucking operation - mostly fuels and cement.

Water: Well for toilets and shop area. Line was leaking near well. Bottled water for drinking.

Waste Disposed:

A truck was being steam cleaned (placard 1840) and waste was being discharged into the ground. Zinc chloride corresponds to placard number.

No disposal practice for solvents. Goes to floor drain and then to ST/DF. Use about 55 gallons every 7-8 months.

Used motor oil goes to a 500 gallon storage tank. Tri-state Oil Reclaimers (Newcastle) has picked up the oil for the past two years. Unknown disposal before that.

Fuel Tanks: 2 - 10,000 gallon diesel tanks, six years old.

Van Waters and Rogers

Contact: Ken Clifton

Facility type: Chemical Distributor, 8-9 years old.

Water: Hat Six Water system - non potable. Bottled water for drinking.

Waste Disposal: No wastes are generated. Approximate 600 empty drums stored outside north of building. The Denver office has had on-site waste problems and will not take drums until resolved.

Chemicals: Numerous dry and wet storage - ethylene glycol, trichlorethylene, glycol, chlorothene, hydrazine solution, toluene, xylene, methanol, methyl ethyl ketone, isopropyl alcohol, etc.

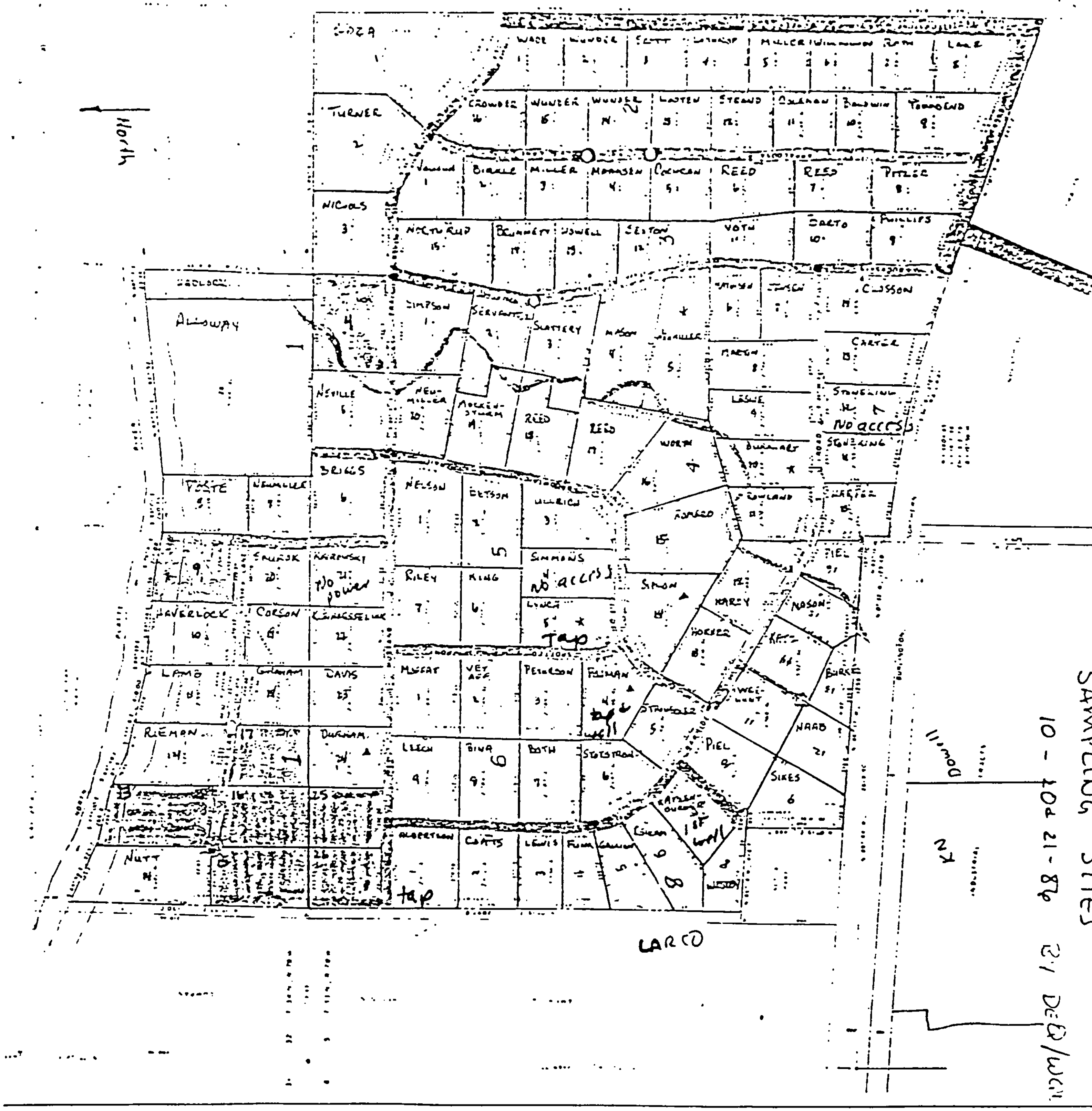
Brookhurst Groundwater Sampling

The following wells were sampled in the Boorkhurst Subdivision on October 20 and 21, 1986. On October 20, 1986, the sampling was performed by Williams, Langenfeld, and Young. On October 21, 1986, King and Norman also assisted.

Name	Blk	Lot
Neumiller	1	7
Wunder	2	2
Sexton	3	12
Horner	4	13
Neumiller	4	20
Lynch	5	5
Pojman	6	4
Harper	7	10
Carter	7	13
Closson	7	14
Albertson	8	1
Galion	8	5
Katzenburger #1	8	7
Burke	8	13

Little America MW2 (split samples)

mad


North
SAMPLING SITES
10-20-21-86
TURNER
NICOLS
ALLOWAY
SIMPSON
NEVILLE
BRIGGS
NELSON
RILEY
KING
SIMMONS
No access
LYNCH
Tap
SIMON
HAVERLOCK
CORSON
LAMB
DAVIS
RIEMAN
DURHAM
NUTT
ALBERTSON
COATS
LEWIS
LEECH
BOTH
PETERSON
PIEL
SIKES
NAAB
ROMERO
WORTH
REED
LESLIE
CARTER
CLASSON
PHILLIPS
VOTH
SEXTON
PITZER
TOWNSEND
BALDWIN
CROWDER
WUNDER
MILLER
WADE
SCOTT
LAKE
No access
No power
18F well
tap
LARCO

10-31-86 Fleischli Oil

Frank

Obtained 3 vials & 2 mason jar samples from pond

grading work being done around tanks.

Bulk gasoline, diesel, solvents, Kerosene.

10-31-86 Newman

Inspected site

more soil has been removed

west side is OK

last side by 84 — found pocket of oil on North side of hole

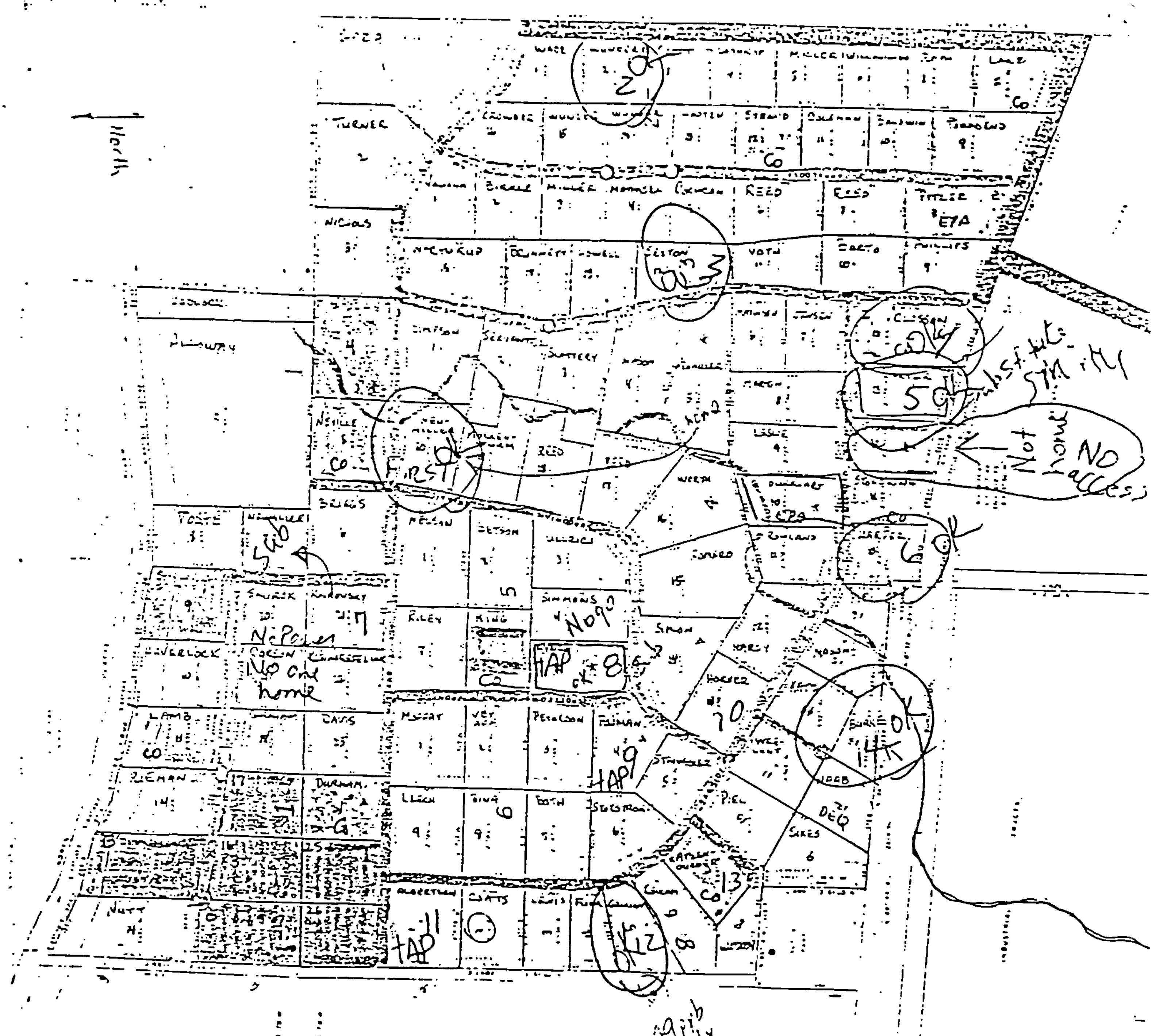
10-11-56 [illegible]

REQUESTS B.C.C. TO NOTIFY [illegible]
FOR 10-20-56 & 10-21-56 [illegible]
MON. TUES.

BLOCK	LOT	RESIDENT	PHONE #	NOTES
1	21	KOSIRUCKY ✓	577-5013	
2	2	WUNDER ✓	235-6655	
3	12	SEXTON ✓	577-1061	
4	7	JENSEN ✓	265-0230	
4	20	NEUMILLER ✓		
4	13	HERNOR ✓	234-7589	
5	4	SIMMONS ★	FILLED	
6	4	POTMAN ✓	265-3349	
7	14	CLOSSON ✓	234-5145	
7	12	STONEKING ★		
7	10	HARPER ✓		
8	1	ALBERTSON ✓	577-0462 WK 235-3132 HM	
8	5	GALLION ✓	265-5570	
8	7	KATZENBERGER ✓	234-9377 WK 235-7901	
8	13	BURKE ✓	266-2357	

NOTIFY RESIDENTS.
OBTAIN PERMISSION FOR DIRECT WELL TESTING.
NO-ONE HOME, MARK WELL FOR VISIBILITY.
PLASTIC PIPE, CASING ETC. CAN ABSORB VOC'S -
H.D. PRELIMINARIES UNSATISFACTORY.
T.N. WILL CONTACT L.B./FOR CONFIRMATIONS
MONDAY MORNING.

(TEL [illegible])



CONTAMINATION ...

CLEAN

Wyoming Department of Environmental Quality
Water Quality Division Laboratory

October 16, 1986

Sampling Requirements for Brookhurst Subdivision, Casper, Wy

Sample Collection

Purge at least three well volumes from each sampling point prior to sample collection. Following well purging, remove the cap from each well and collect the water sample from the upper three feet of the water column with a bailer.

1. Collect water samples starting in the area that is suspected as being outside the zone of contamination and finishing in the area that is suspected as being inside the zone of contamination.

2. Collect three septum vials and one quart unpreserved sample from all well locations. Preservation for all samples shall be cooling to 4 deg. C.

3. Transport one trip blank sample from the Water Quality Laboratory to the site and back again to Cheyenne to determine the prescence of glassware contamination.

4. Collect one field blank sample following sampling and collection of all well samples by filling three septum vials with deionized water using the collection instrument.

Equipment Decontamination

1. Clean and decontaminate sampling equipment following each well sampling by detergent washing followed by rinsing with deionized water. DO NOT RINSE WITH ACETONE UNLESS ABSOLUTELY NECESSARY TO REMOVE CONTAMINATION.

Chain of Custody

1. All water samples are to remain in the physical custody of the designated field custodian until they are transferred over to the Cheyenne laboratory.

Wyoming Department of Environmental Quality
Water Quality Division Laboratory

October 16, 1986

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Names	Blk	Lot	Well Depth	
Kasrowsky	1	21	55'	
Wunder	2	2	60'	6
Sexton	3	12	60'	4"
Jensen (alt. to Closson)	4			
Neumiller	4	7	80'	
~~Horner~~	4	20	60'	5"
Simmons	4	13	60'	5"
Pojman	5	4	60'	6"
	6	4	64'	6"
			60'	5"
Closson	7			
Stoneking	7	14	60'	5"
Harter	7	12	60'	6"
		10	80'	6"
Albertson	8			
Gallian	8	1	55'	5"
Kartzenburger	8	5	60'	
Burke	8	7 (1st well)	56'	5"
		13	60'	5"
				6"

Little America (MW2)
Septic Manufacturer

New Hill

Neumiller Blk 1 Lot 7 (sub for Karowsky)

43' deep

~~Ulfrick Blk 5 Lot 3 (Sub for Lynch)~~

Katzenberger - bail

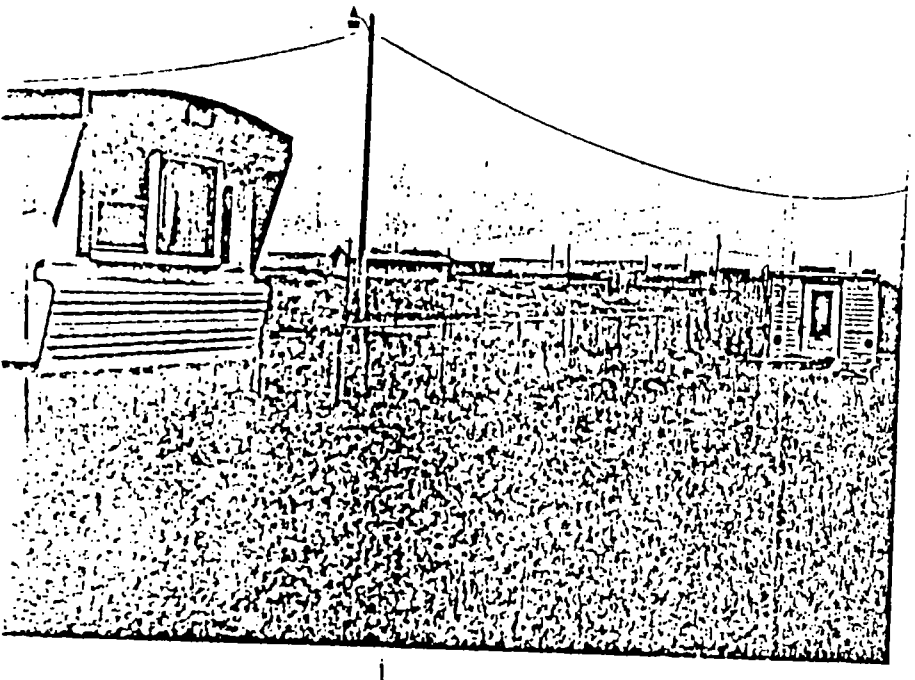
~~Horner~~

Little America

try to pull Albertson (last thing)

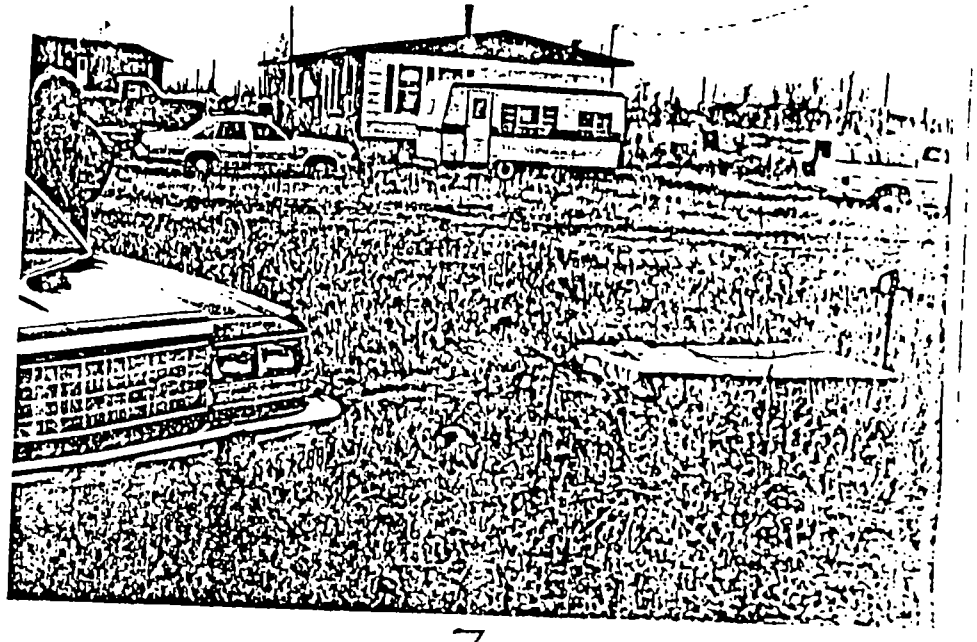
~~Lynch~~

0030877



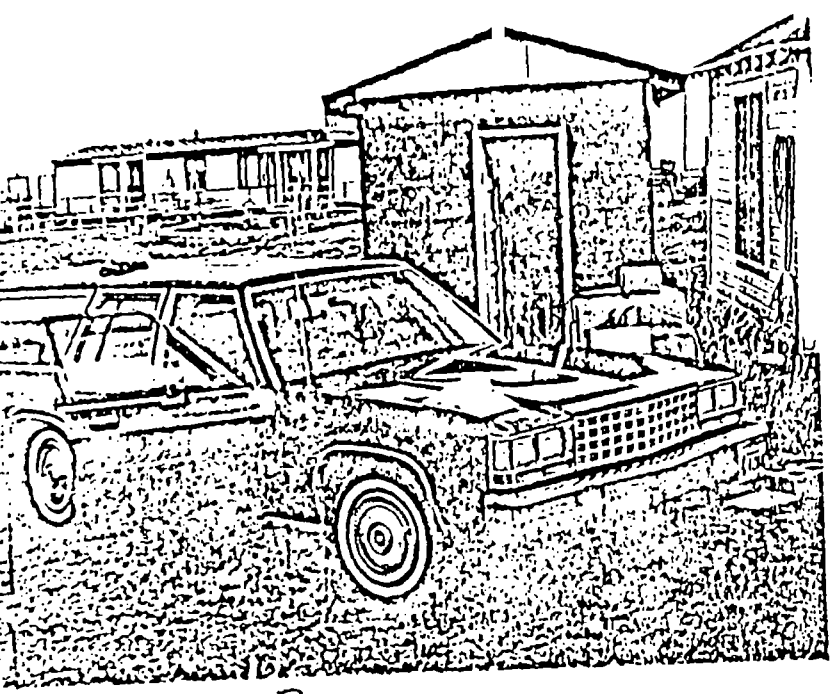
1

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
Subject: WELL AT WELLMILLER RESIDENCE
WELL IN CONCRETE VAULT TO RIGHT
Location: BROOKHURST SUBDIVISION
6313 MUSTANG County: NATRONA
Date: 10/20/86 Time: 10:00AM
Photographer: TOM WILLIAMS
Witness:
Position of Photographer and Camera Direction: FACING SOUTHEAST
Identifying Objects/People, etc.:



2

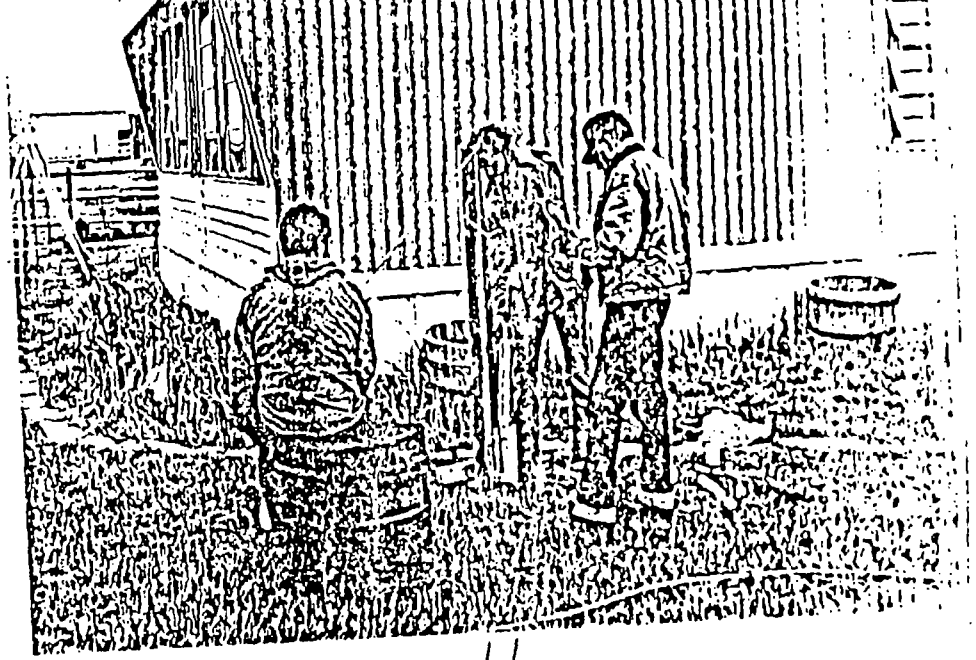
OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
Subject: WELL AT WUNDER RESIDENCE
Location: BROOKHURST SUBDIVISION
860 MYSTERY BRIDGE County: NATRONA
Date: 10/20/86 Time: 10:50AM
Photographer: TOM WILLIAMS
Witness: MATT LANGENFELD
Position of Photographer and Camera Direction: FACING SOUTH
Identifying Objects/People, etc.: MATT LANGENFELD TO LEFT



3

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

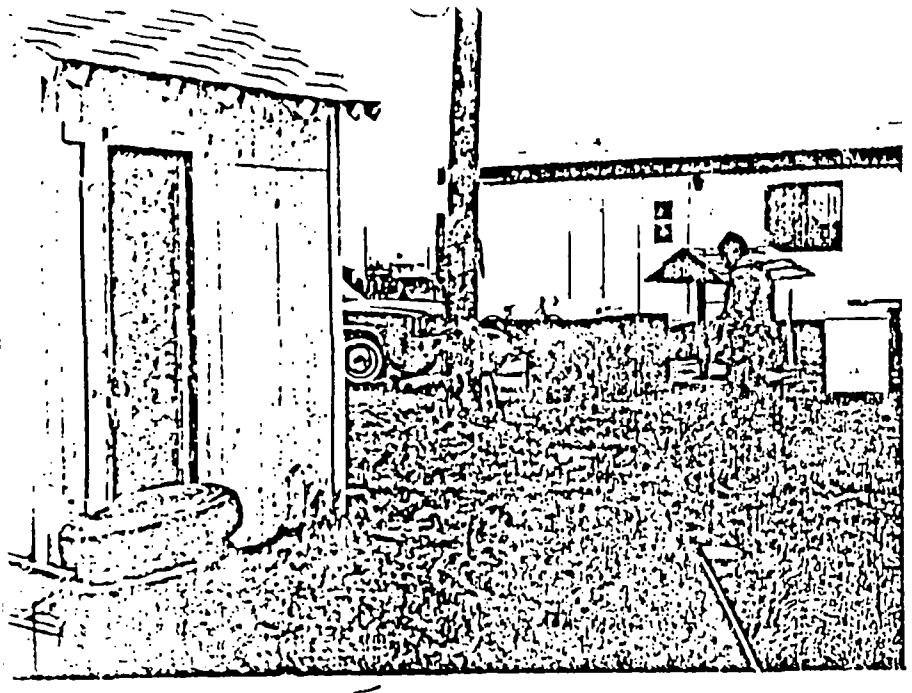
Subject: WELL AT SEXTON RESIDENCE
WELL IN BROWN SHED
Location: BROOKHURST SUBDIVISION
851 BUCKSKIN County: NATRONA
Date: 10/20/86 Time: 11:30AM
Photographer: TOM WILLIAMS
Witness:
Position of Photographer: FACING NORTH
Compass Direction: Weather Conditions:
Identifying Objects/People, etc.:
Location of Negative: DEQ/WQD PHIL PUCEL FILE



4

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

Subject: WELL AT CLOSSON RESIDENCE
Location: BROOKHURST SUBDIVISION
624 BUCKSKIN County: NATRONA
Date: 10/20/86 Time: 11:45 AM
Photographer: TOM WILLIAMS
Witness: MATT LANGENFELD MIKE YOUNG
Position of Photographer: FACING SOUTHEAST
Compass Direction: Weather Conditions:
Identifying Objects/People, etc.: MATT LANGENFELD, MIKE YOUNG AND MR. CLOSSON IN PHOTO
Location of Negative: DEQ/WQD PHIL PUCEL FILE



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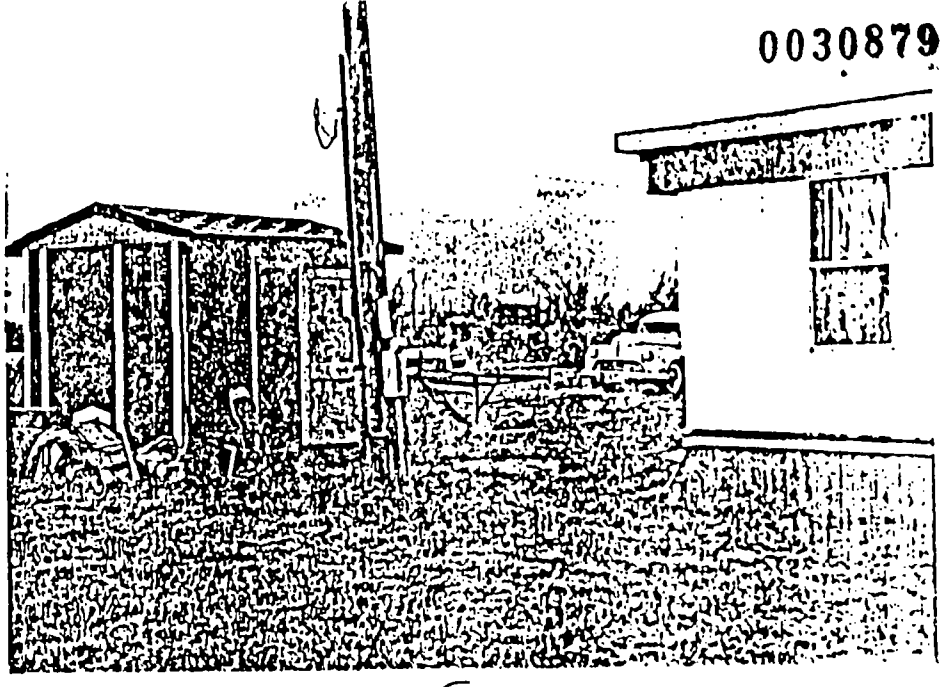


6

...TAL QUALITY

Subject: WELL AT CARTER RESIDENCE.
WELL IN WHITE SHED TO LEFT

Location: BROCKHURST SUBDIVISION
681 RAWHIDE County: NATRONA

Date: 10/20/86 Time: 12:05 PM

Photographer: TOM WILLIAMS

Witness: MIKE YOUNG

Position of Photographer FACING NORTHWEST

Weather Conditions

Identifying Objects/People, etc. MIKE YOUNG IN PHOTO

Location of Negative DEQ/WQD PHIL PUCEL FILE

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

Subject: WELL AT HARPER RESIDENCE
WELL IN BROWN SHED TO LEFT

Location: 697 RAWHIDE County: NATRONA

Date: 10/20/86 Time: 2:10 PM

Photographer: TOM WILLIAMS

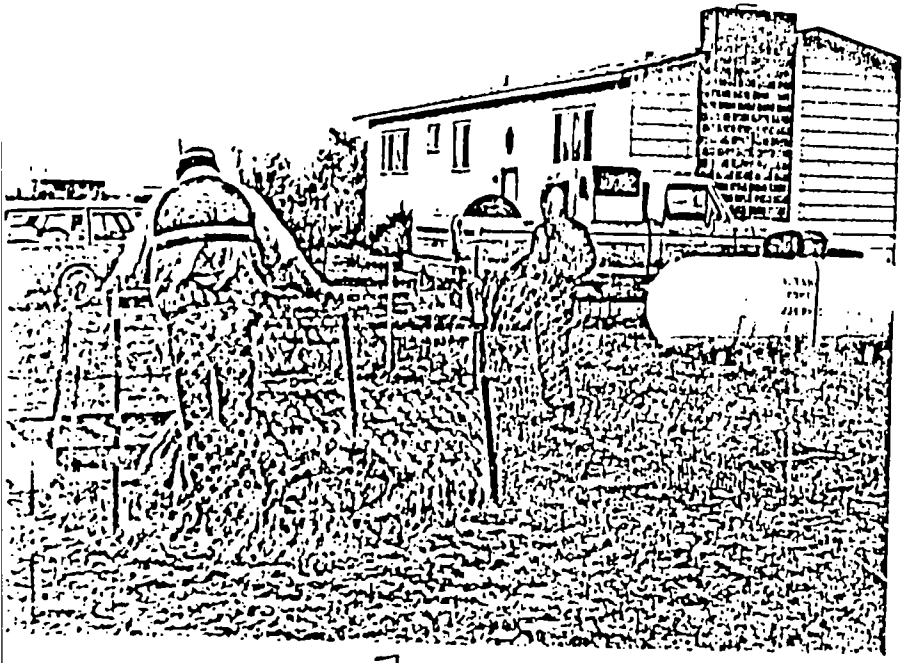
Witness:

Position of Photographer FACING NORTHWEST

Compass Direction: Weather Conditions:

Identifying Objects/People, etc.:

Location of Negative DEQ/WQD PHIL PUCEL FILE



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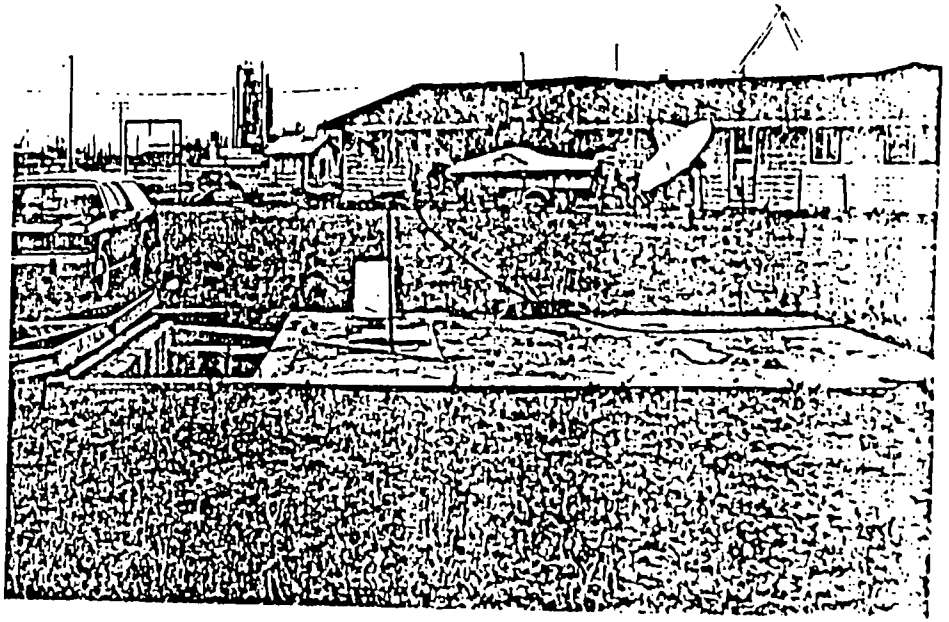


8

WELL AT LYNCH RESIDENCE

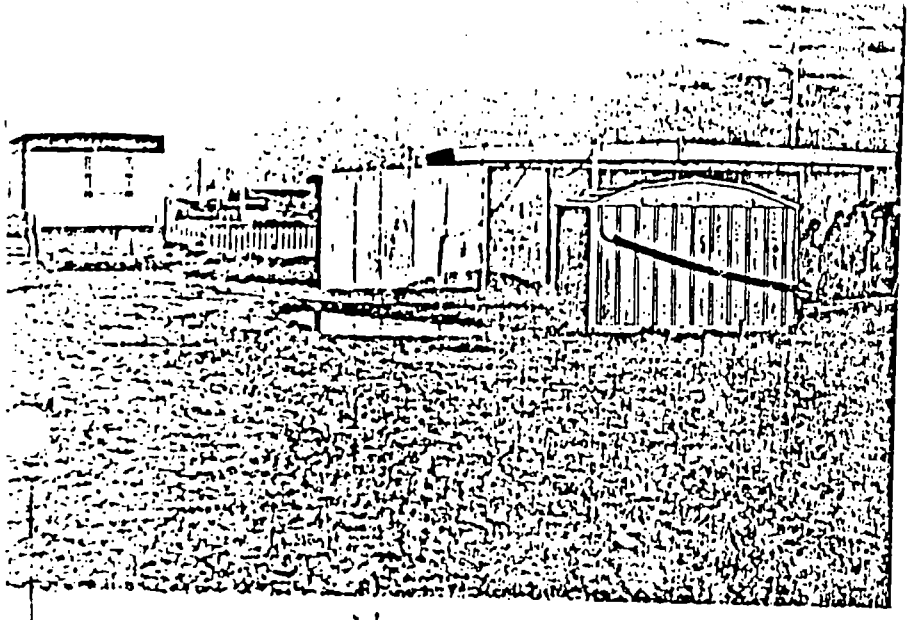
BROOKHURST SUBDIVISION
920 BRUNTAIL NATRONA
10/20/86 2:40 PM
TOM WILLIAMS
MATT LANGENFELD
FACING WEST

MR & MRS LYNCH AND MATT LANGENFELD IN PHOTO
DEQ/WQD PHIL PRICE FILE

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

Subject: WELL AT BURKE RESIDENCE. WELL IS IN CONCRETE VAULT IN FOREGROUND
Location: BROOKHURST SUBDIVISION
669 RAWHIDE County: NATRONA
Date: 10/20/86 Time: 3:10 PM
Photographer: TOM WILLIAMS
Witness:
Position of Photographer FACING WEST
Compass Direction Weather Cond
Identifying Objects/People, etc.

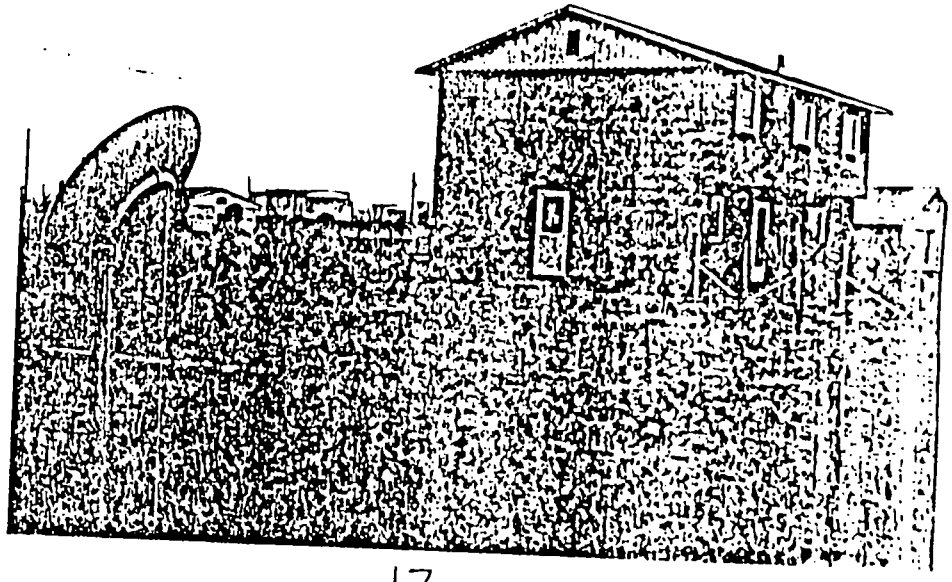
Location of Negative DEQ/WQD PHIL PRICE FILE



11

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

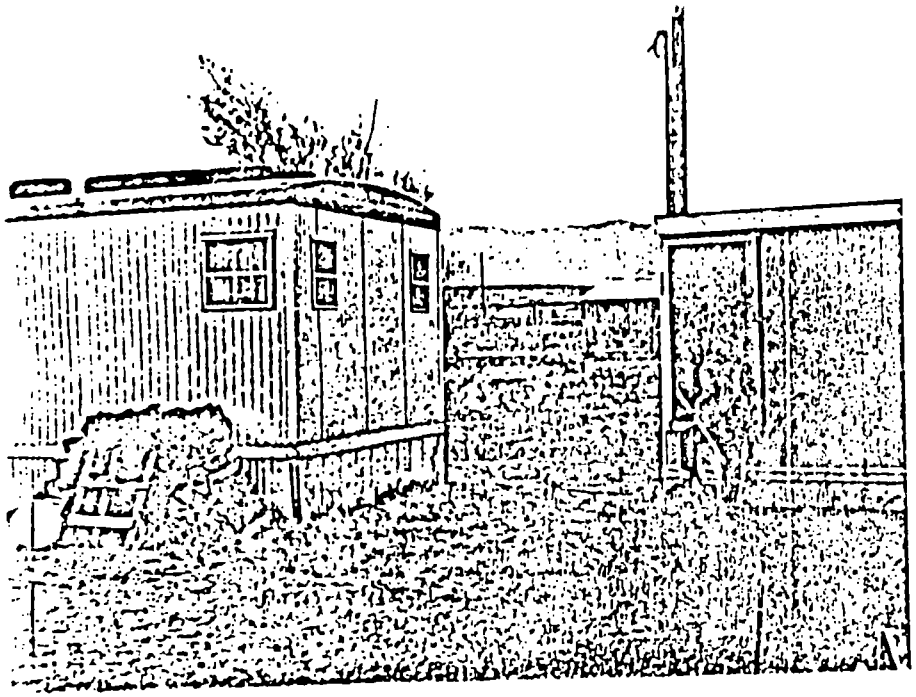
Subject: WELL AT GALLION RESIDENCE
WELL IS IN JAN SHED TO RIGHT
Location: BROOKHURST SUBDIVISION
910 RAWHIDE County: NATRONA
Date: 10/20/86 Time: 4:45PM
Photographer: TOM WILLIAMS
Witness: LARRY ROBINSON, KURT KING
Direction of Photographer: FACING EAST
Compass Direction: Weather Conditions:
Identification Objects/Persons: LARRY ROBINSON, KURT KING TO RIGHT
Location of Negative: DEQ/WQD PHIL PLICEL FILE



12

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

Subject: WELL AT KATZENBERGER RESIDENCE
WELL IS IN CONCRETE VAULT TO LEFT
Location: BROOKHURST SUBDIVISION
831 RAWHIDE County: NATRONA
Date: 10/20/86 Time: 5:35PM
Photographer: Tom WILLIAMS
Witness: MIKE YOUNG, KURT KING, LARRY ROBINSON, TOM WILLIAMS
Direction of Photographer: FACING WEST
Compass Direction: Weather Conditions:
Identification Objects/Persons: LEFT TO RIGHT: MR KATZENBERGER, MIKE YOUNG, KURT KING, LARRY ROBINSON, MR KATZENBERGER, TOM WILLIAMS
Location of Negative: DEQ/WQD PHIL PLICEL FILE



13

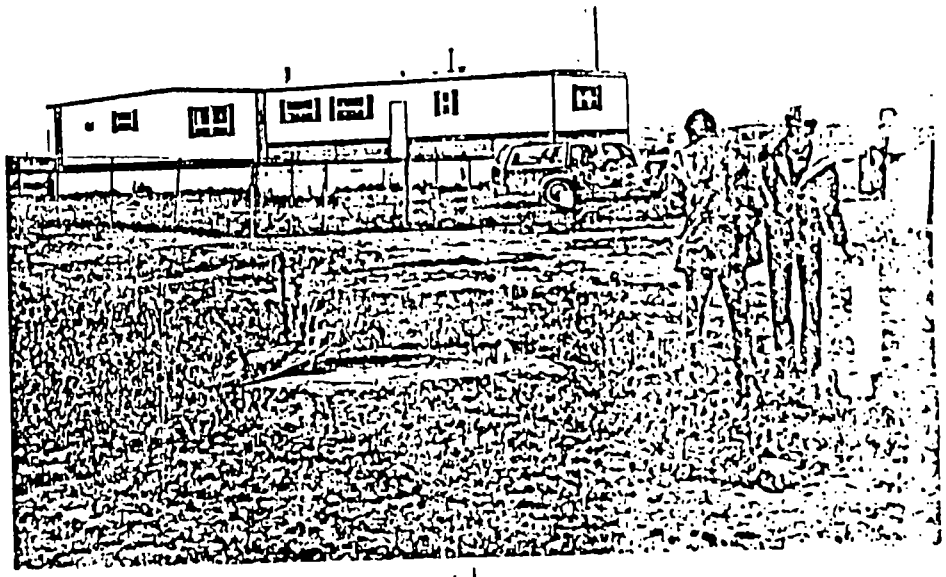
OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

WELL AT HORNER RESIDENCE
WELL IN WHITE SHED TO RIGHT
BROOKHURST SUBDIVISION
742 RAWHIDE NATRONA
10/21/86 9:10AM
TOM WILLIAMS

FACING SOUTH

MR HORNER IN PHOTO

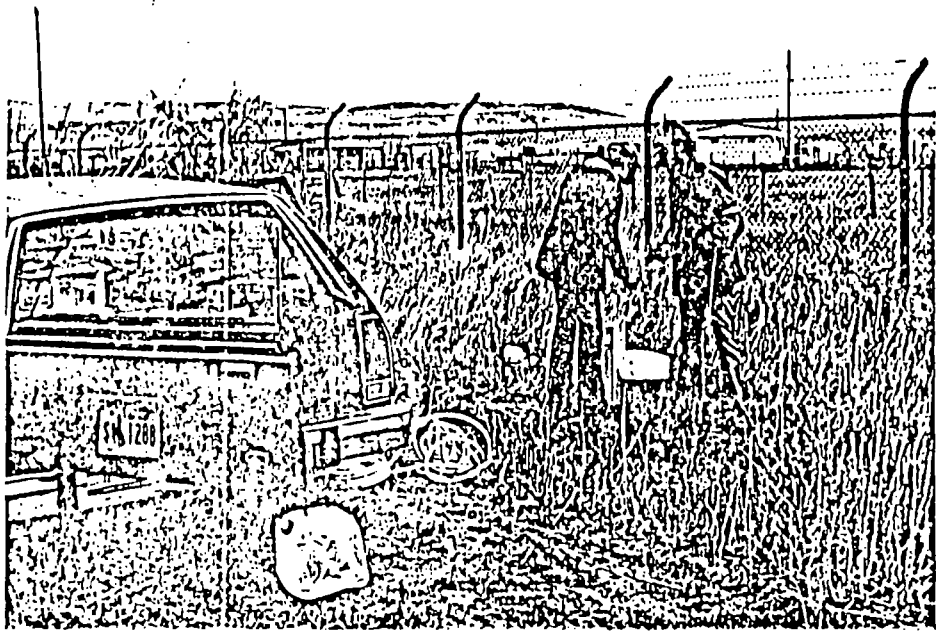
DEQ/WQD PHIL PUCEL FILE



14

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY

Subject: WELL AT NELMILLER RESIDENCE. OLD WELL IS IN CONCRETE VAULT TO LEFT. NEW WELL IS PVC PIPE TO RIGHT
Location: BROOKHURST SUBDIVISION
@139 LATIGO County: NATRONA
Date: 10/21/86 Time: 10:00 AM
Photographer: TOM WILLIAMS
Witness: MATT LANGENFELD TOM NORMAN
Direction of Photographer FACING WEST
Compass Direction Weather Condition
Identifying Objects/People etc. MATT LANGENFELD, TOM NORMAN IN PHOTO
Location of Negative DEQ/WQD PHIL PUCEL FILE



15

OFFICIAL PHOTOGRAPH
WATER QUALITY DIVISION
DEPARTMENT OF ENVIRONMENTAL QUALITY

Subject: MW-2 AT LITTLE AMERICA REFINERY ALONG EAST PROPERTY LINE
Location: LITTLE AMERICA REFINERY
County: NATRONA
Date: 10/21/86 Time: 11:40AM
Photographed by: TOM WILLIAMS
Witnesses: MATT LANGENFELD TOM NORMAN
Direction of Photo: FACING NORTHEAST
Weather Conditions:
Description of Photo: MATT LANGENFELD, TOM NORMAN IN PHOTO
DEQ/WQD PHIL PILLEL FILE

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

TRIP REPORT

TO: File

FROM: Thomas S. Norman, Chris Norman

DATE: September 26, 1986

SUBJECT: Brookhurst Subdivision

General

On September 24, 1986, Tom Norman and Chris Norman of the WQD performed an on-site inspection and evaluation of the complaint at Brookhurst Subdivision, east of Evansville.

The WQD personnel met with Ken Crowl of the Natrona County Health Department and drove around the Brookhurst Subdivision. Crowl familiarized the WQD with the area explaining where the complaints were originating and explaining the type of commercial operations in the area. Crowl departed.

The WQD personnel then met with Linda Burkhart and Anna Neumiller from Brookhurst and Bob Stone of EPA RCRA at Burkhart's home. Burkhart showed pictures of the area and potential sources of pollution. Stone explained the situation as he saw it. Since the WQD's time was limited, Stone suggested we perform on-site visits at Neuman Trucking, Fleischli, Kansas-Nebraska and Little America.

WQD explained that their plans were to obtain an overall picture of the area, visit specific commercial sites that are suspected of having problems, follow-up on complaints concerning unauthorized ponds and discharges, and take a well sample from the "worst" area. The well sample will provide the WQD with data as to whether or not there is a contamination problem.

Sivalls

WQD personnel proceeded to Sivalls and met with Mike Donathon. Sivalls is an oil tank distributor with a manufacturer in Texas. The previous owner used the facility to manufacture tanks on-site up until November 1984 at which time the place was shut down. Sivalls bought the property in January 1986 and only uses it for distribution purposes. A well is located on-site but the water is only used for the toilets. Bottled water is used for potable use.

Neuman

The WQD personnel then proceeded to Neuman Trucking, 6050 E. Yellowstone (82602) and met with Phil Hanford. Burkhart had stated previously that Neuman was discharging into a pond that was located on 84 Lumber. 84 Lumber is closed down. Newman Trucking services their vehicles at this site. Waste oil is recycled and burned in their heating unit. Solvents are handled by a recycler. Floor sumps are cleaned by Coleman, a local septic hauler.

We proceeded to inspect the outside of the building and Mr. Hanford did not accompany us. An area was found in the NE corner along the 84 Lumber fence where dumping of waste oil had occurred. Runoff appeared to carry the oil over to a storm runoff pond that is located on 84 Lumber's property. The pond had a little water in it with some oil staining and floating oil.

Another oil saturated area was located in the NW corner of Neuman's property.

Hanford was notified of the violations and Tom stated a letter of violation would be coming requiring clean-up of the area. Hanford said he was unaware of the oil problem.

Neuman has a well on-site that is used for toilets. Bottled water is used for drinking.

Fuel for their trucks is located above ground.

Tom and Chris feel that the present violations are not of the magnitude that would cause a problem in the Brookhurst area. However, any past spills, discharges, or underground facilities could be causing a problem.

Fleischli

WQD personnel investigated Fleischli Oil which is immediately west of Neuman Trucking. We met with Frank Cushatt (6000 E. Yellowstone, 82636). Cushatt showed us their building which is used for servicing their trucks and also for storing their bulk products (oil, grease, anti-freeze). Waste oil is picked up by a recycler. Coleman cleans the sump pits. Solvents are managed by a recycler. Water from the sumps are disposed in a septic system that is separate from the domestic wastes. The bulk storage area has no drains.

The exterior of the facilities found a storm drainage system going into a storm pond. (Drainage is a common problem for these commercial facilities on the south side of the railroad.) The storm pond was also receiving fuel spillage for a fuel loading dock. The pond had diesel in it. The fuel tanks are above ground. The pond also was designed as a SPCC facility. Cushatt was informed of the violation and WQD stated a letter would be coming. The pipe entering the pond did have a gate valve which could be closed to prevent immediate discharges. Cushatt requested what his options were. Tom stated that a tank for containment is recommended or else an oil/water separator with a discharge permit.

A well is located on site for toilet flushing. Bottled water is used for potable purposes.

site that could either be leaking, spilled, or dumped in the past which an on-site visit would not detect. A partial listing is as follows:

Cameo Construction
Nalco Chemical Co.
Wyco Pipe
Dowell Chemical
Markland Trucking
Permean Corp.
Septic Co.
84 Lumber
CMS
Natco
Burke
Abbot
Van Water & Rogers
Univar
Johnston's Fuel Liners
Filling Station

Well Sample

A well sample was taken at Mr. Naab's residence which is located along the BNRR in the SW corner of the subdivision. This sample along with the wells tested at Pitzers, Burkharts, and Little America should give a good cross-sectional view of the area.

Naab stated that he uses his well only for toilets and washing. Bottled water is used for potable purposes. Naab has a softner and a GAC filter (?) and the water is still undrinkable.

The water samples out of the well have heavy odors of sulfates and would be difficult to drink from the odor stand point.

Six samples were taken from Naab's well for VOC and extractables. The well was baled. The baling disturbed the well casing and caused some "rusting" to enter the well and samples. The well was PVC and enclosed in a shed. The well did not have a sanitary cap.

nc

THE STATE OF WYOMING

ED HERSCHLER
GOVERNOR

Department of Environmental Quality

Water Quality Division

HERSCHLER BUILDING CHEYENNE, WYOMING 82002 TELEPHONE 307 777-7781

MEMORANDUM

TO: File

FROM: Chris Norman, Engineering Evaluator

DATE: October 3, 1986

SUBJECT: Trip to Brookhurst Subdivision, Evansville, Wyoming

On September 24, 1986, Tom Norman and I traveled to the Brookhurst Subdivision, Evansville, Wyoming. Residents of the subdivision have complained about water quality and the activities of business establishments in the area.

At 8:30 am, Tom and I met with Ken Crowl, Natrona County Environmental Health. Mr. Crowl described the situation and gave us a tour of the area. After the tour, Tom and I proceeded to meet with Linda Burkhart, resident, and Bob Stone, EPA. Mrs. Burkhart and Mr. Stone gave an update of the situation and showed pictures of the area businesses.

Several area businesses were then visited.

Nuemann Transit: Nuemann Transit was visited and the site inspected. Nuemann Transit is dumping oil and asphalt residue into a drainage which flows onto an adjoining property. It appears that Nuemann is also dumping used crankcase oil on their back lot. Although a threat to groundwater is present, it is not felt that this problem is major. An LOV is to be sent regarding cleanup and halting the activity.

Fleischli Oil Company: Fleischli Oil Company was visited and the site inspected. Fleischli Oil Company has a storm water retention pond behind its fuel storage tanks. A drain from the loading rack pad drains to the pond causing a scum layer and a product layer on the water surface. Again, a threat is present but it is not felt that the threat is major. An LOV will be written to address cleanup of the pond. An alternate spill plan will be requested.

KN Energy, Inc.: KN Energy is a gas cleaning plant. Outside is an oil storage pond. This pond holds any oil captured in the cleaning process. The present pond was constructed in late 1984. Previously KN Energy disposed of this waste in an unlined soil pond (1965-1984). When the new pond was constructed, the old pond was filled in with soils. An LOV will be sent to KN Energy regarding construction without a permit and threat to groundwater.

Little America Refining Company: LARCO was visited and a short meeting was held with Larry Thomas, Sid Anderson, and Jim Limes. The meeting centered around the groundwa-

ter investigation being conducted at the LARCO site. Concerns were expressed regarding the migration of dissolved organic constituents toward the Brookhurst wells. A short tour of the facility followed. LARCO has subsequently sampled (9/25/86) the perimeter monitor wells and will analyze the samples using EPA Methods 624 and 625.

Well sampling: Following the site tours a domestic well sample was taken. The well sampled was from Dennis Naab's well. The bailer was washed with acetone followed by soap, then rinsed with well water from an outside tap. The well was then evacuated by running water out of the tap. The water had an H2S odor and had iron particles. Samples were then bailed out and collected in 30 ml septom bottles. A base neutral sample (EPA 625) was collected from the outside tap. The samples were placed in a cooler, chilled and delivered to the Water Quality Lab at 1:22 pm 9/25/86.

pjb

cc: Tom Norman

N. Oakhurst Subdivision 9-28-88

Linda Burkhart, Anna Mountler, Bob Stone, Chris Norman

84 Lumber pond Tom Norman
Neuman Trucking

KN Energy - pond

Dowell Sc
Dow Chem. - Drainage ditch
oil field chemicals

Fleschly Oil Pond

Permean Corp
pipe on markland

Suvallas (new owner) - Oil & Gas Processor
barrels & spills

- Katzenburger

9-24-86

Sivalls

Mike Donathan

Bought 1-86

Old comp. shut down Nov 84

only use water for toilets
& haul water

Chris checked wells
no odors

oil field tank distributor
used to manufacture

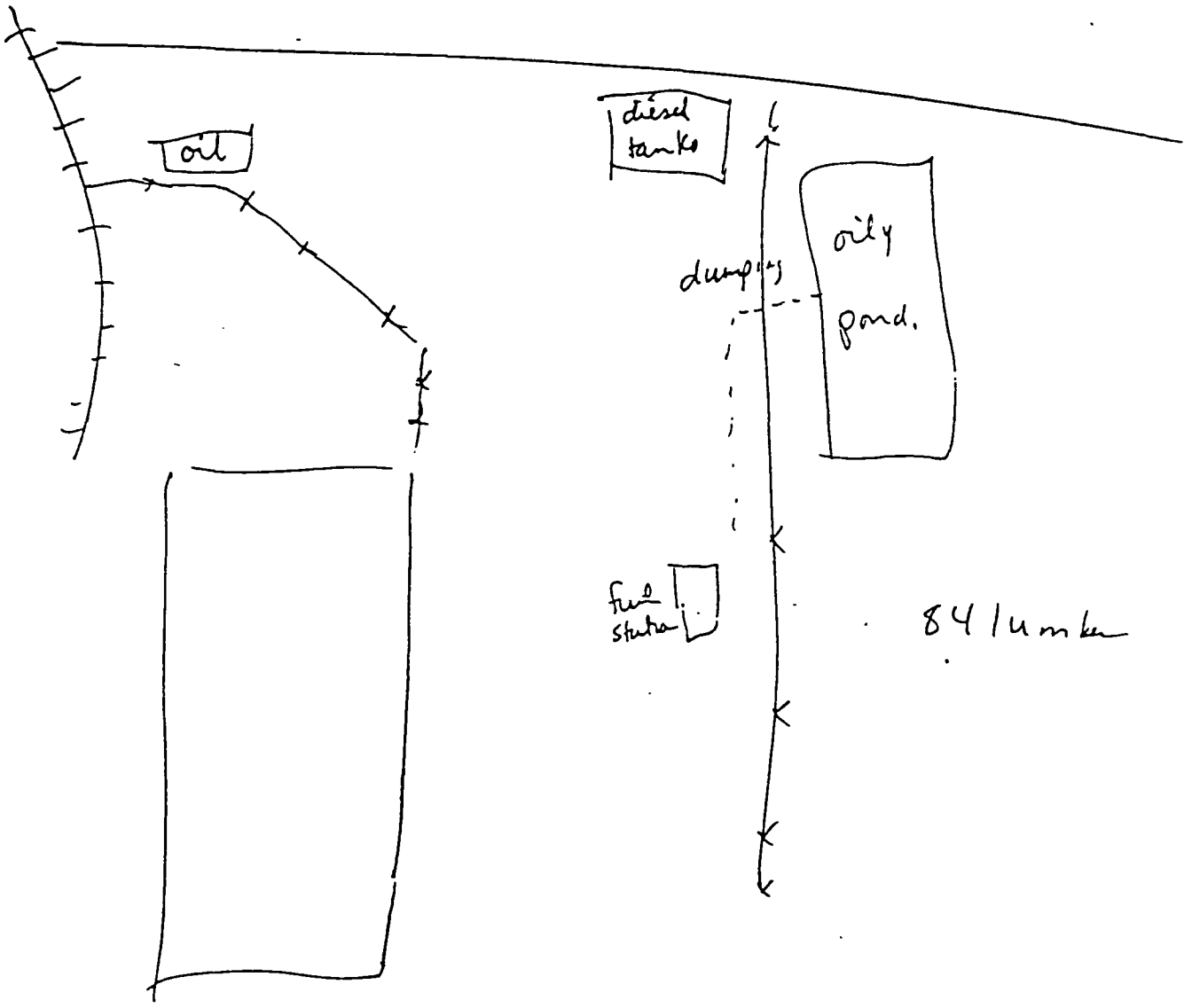
9-24-86

Phil Hanford

Neuman Trucking

6050 E. Yellowstone

Casper. 82602



Frank Cushatt

Fleischli

6080 E. Yellowstone / Casper 82634

pond with a pipe from
fuel loading dock

S.T/DF unknown status
use for wash water

Kansas - Nebraska 9-25-84

1965 plant start Old earth pond

Dec. 1984 Concrete pond
8" water scrubber water coil

ethylene glycol to Underground storage tank
Wash " " "

septic system

9-25-86

Lithic America

Lime - softener water
land application

Land application - road application
tank bottoms - heavy oil
asphalt pits

DUST CONTROL

- fuels

-