→ ~~Riesbeldt~~
→ ~~Zellmer~~
→ Evanson
→ File

HATCHER INCORPORATED

app. B & C not included in original submittal. 10/30/86

October 29, 1986

REO

Mr. Richard O'Hara
Chief
Department of Natural Resources
Hazardous Waste Management - Section GEF II
101 South Webster Street
Box 7921
Madison, Wisconsin 53707

Re: Groundwater Remediation
Saukville, Wisconsin
Job No. 0001-003

Dear Richard:

In further response to your May 12 directive (#4430) to Freeman Chemical Corporation, attached is a proposed scheme for remediation of the old "dry well" area, old farmhouse well, and buried tanks for your review.

We expect to begin this process on or about November 3, 1986. Please call Roger or myself at (804)794-0216 if you have any questions.

Sincerely yours,

HATCHER INCORPORATED

George L. Bain, P.G.

GLB/aam
Enclosure

cc: Terry Evanson
Cindy Slavick
Russell L. Cerk
R. Charles Ross
George H. MacDonald
Lee W. Barwick
Jean M. Nickel

HATCHER INCORPORATED

October 23, 1986

Mr. Russell L. Cerk
Vice President - Manufacturing
Freeman Chemical Corporation
P. O. Box 247
Port Washington, Wisconsin 53074

Re: Pollutant Source Remediation
Job NO. 0001-003

Dear Russ:

Attached is a proposed scheme for remediation of the old "dry well" area, old farm house well and buried tanks as required by O'Hara's directive of May 12. At least the old "dry well" area should be taken care of prior to construction of the remaining leg (EF) of RC-2.

We are required by Item 15 of the same directive to submit "details for removing and/or correcting .... contaminant sources ... for review ...." We will forward the attached proposed remediation plans to O'Hara's office on Monday, October 27. Please call if you have any questions.

Sincerely yours,

HATCHER INCORPORATED

George

George L. Bain, P.G.

GLB/aam
Attachment

cc: George H. MacDonald
R. Charles Ross
Lee W. Barwick
Jean M. Nickel
Gilbert O'Neal

1523 Huguenot Road, Midlothian, Virginia 23113 (804) 794-0216

PROPOSED EXPLORATION AND REMEDIATION OF OLD "DRY" WELL, FARMHOUSE WELL, AND BURIED TANKS

Background:

Richard O'Hara's (DNR) letter of May 12 states on page 5 ---

"In addition to the groundwater clean-up program, Freeman Chemical proposes to eliminate potential contamination sources by excavation, plugging, paying and reconstruction techniques. These include:

1. Removal of buried and unused tanks.
2. Exhumation and sealing of the old dry well area.
3. Reconstruction of all floor sumps.
4. Removal and reconstruction of the tank farm and removal or flushing of all buried raw material pipes.
5. Paving of active areas of the plant and a comprehensive surface water control program.
6. Construction of an enclosed truck unloading facility.
7. Locating and sealing an old farm well on the property."

and on page 10

"c. Documentation of the remedial actions taken to eliminate potential sources of contamination, including: removal of unused/buried tanks, exhumation of the "dry well", reconstruction of floor sumps, removal and reconstruction of the tank farm, surface water control measures, construction of the enclosed tank unloading facility, and location and removal of the old farm well."

and on page 11

"15. Details for removing and/or correcting other potential contaminant sources (section 6.2 of the report) on Freeman's property should be submitted for review by the Department."

Section 6.2 of the Hatcher Report referred to above is attached.

Old Farmhouse Well

The "old farmhouse well" refers to a well known to exist near the southwest corner of a farmhouse formerly located on the east side of the Saukville plant property. Extant aerial photos and slides indicate the house existed just off the northeast

corner of Building 45. One existing 135mm slide shows that the hand pump for this well was to the right of the backdoor to the house as one faced the west side of the house.

The probable location of the house and its outline have been reestablished by measuring its location on old aerials relative to landmarks still in existence, then replotting these measurements on to a modern plant map. See Attachment B. Confirmation of the existence of the foundation of the house at this location was also established during construction of leg AC of Ranney Collector RC-1.

It is not possible to resolve the location of the well relative to the house from the old vertical photo's. The 135mm slide indicates it certainly was within ± 20 feet of the house. The location (plotted as an "x" on Attachment "B") is likely within ± 10 feet. -- which places it either outside the east wall of the Building 45 foundation or just inside it. In either instance, it's casing is now under concrete.

In order to comply with the DNR directive to seal this well and thereby remove a potential pathway for shallow pollutants to move down and into the underlying Dolomite aquifer, we propose the following:

1. Interview any persons who may have better knowledge as to the precise location of the well relative to the house.
2. Interview any persons who may have witnessed the construction of Building 45 and covering or destruction of this well.
3. Exhumation of the remainder of the building foundation so that we have a more exact location for the well.
4. Use of Hatcher Incorporated metal detection equipment to attempt to map anomalies in the floor and attached slab that might be related to the old well head. This may not succeed because of the presence of rebar in the concrete slab and floor.

5. Removal of concrete slab and flooring to investigate likely magnetic anomalies in incremental fashion around the target location until the well bore is located.
6. The drilling out, once the well is found, of old debris, if present, and the grouting of the hole from the bottom up with a 4:1 Portland Cement to Bentonite grout.
7. In the event the well bore of the old farm well is not found, it is proposed that a 30-foot well into the upper part of the dolomite be constructed at the center of the most logical place for the well to determine from the chemistry of the groundwater at that point whether the old farm well bore is a likely conduit for shallow surface water.

Old "Dry" Well

The old "dry" well refers to pit or pits of unknown lateral and vertical dimensions possibly constructed of concrete, which may or may not have had gravel drainfield laterals, located in the vicinity of the west side of Building 5 and perhaps 20 (see Attachment C) into which acid reaction water was wasted. It is reported that this pit or concrete structure had a "sand and gravel base." Extant correspondence indicates that some type of ground absorbtion pit or pits was constructed about 1952 to receive acid reaction waste, was still in existence in 1958, and was condoned if not licensed by the state of Wisconsin. Information from other sources indicate that acid reaction water was also "evaporated" in a tank located behind Building 5. It is not known whether it was buried or above ground.

Repair of various plumbing lines and concrete by Miller Construction Company near the northwest corner of Building 20 have exposed gravel ditches which are water filled and exude "gooey" substances indicating that either:

1. Lateral drainage ditches containing resin wastes or an old seepage pit have been encountered or

2. local gravel filled sewer, gas, and water-line ditches are connected to and drain an old seepage pit(s) or
3. sufficient spilled materials have seeped through the badly cracked concrete in this area to produce resinous "goo" immediately below the concrete throughout this small area of the plant property.

Various plant personnel have pointed out the location of the "dry" well as being near

1. the southwest corner of Building 5
2. partially beneath a newer addition on the west side of Building 5 and south side of the boiler room and
3. just west of the boiler room (Building 1).

Mr. Paul Miller, retired and former President of Miller Construction Company, recalls building part of the foundations of the above addition to Building 5 on an older concrete structure at ± 5 foot depth. This is believed by some to be one wall of the seepage pit. Mr. Miller also recalls an access door in the top (or side) of this structure. In view of the above location uncertainties and in consideration of the need for sufficient data on which to plan and gear up for "dry" well remediations at the time the remaining leg EF of RC-2 is constructed, the following is proposed:

1. Accurate mapping and paint marking of all underground utilities in the area west of Buildings 1, 5, and 20 and east of the boundary fence with Hatcher Incorporated's combination metal detector, magnetometer, and conduit tracer.
2. Small diameter (4-inch) auger and split-spoon sample exploration of the non-utility occupied subsurface of the three areas described above plus two others identified on ground penetrating radar as being underlain by disturbed ground.

   These holes should be on close-spaced centers, be sampled continuously from top to bottom (0-20 feet) to determine:

a. the location of old concrete, brick, or tile structures and gravel
b. the vertical depth of contaminated and excavated (disturbed) soils
c. the existence (or absence) of a bottom in any concrete tanks or structures

These holes would be grouted as they are vacated.

3. Small backhoe exploration of any foundations, structures, or gravel filled pits not adequately defined by the above auger exploration program.
4. Evacuation to tankwagon of any liquid filled structures or ditches for subsequent testing and treatment/disposal.

Buried Tanks

Known buried tank locations are the following:

1. An underground gas tank at Building 9 which has been reportedly filled with sand.
2. A diesel fuel tank located just north of Building 33.
3. An abandoned concrete caustic tank on the south side of Building 47 or 55.

Hatcher Incorporated proposes the following activities for buried tank remediation.

1. Inspection of abandoned gas, diesel and existing tanks to verify nature and quantity of current contents.
2. Testing of such tanks to determine their integrity.
3. Exhumation of unused and leaking tanks and backfilling with clean soil and/or bentonite/cement slurry where appropriate.

ATTACHMENT A

6.2 Control of Present Contaminant Source

Hatcher Incorporated proposes that present potential sources of contamination and contaminant pathways be eliminated by a combination of exhumation, plugging, paving, and reconstruction techniques. The proposed actions:

1. Removal of the buried caustic tank, unused diesel and gasoline tanks, and any other unused tanks, with subsequent sealing with a bentonite/cement slurry.
2. Exhumation of and appropriate backfill sealing of the old "dry well" with a bentonite/cement slurry.
3. Reconstruction of all floor sumps to prevent inadvertent drainages of spilled process chemicals into the underlying glacial sediments and dolomite.
4. Removal of the existing tank farm, and removal or flushing of all buried raw material pipes.
5. Paving of the active areas of the plant site where material handling and product loading are most likely to cause spills. Additionally, a comprehensive surface water collection and conveyance system will be constructed with an appropriate holding facility. The precise plans for this work have been submitted for review to the Wisconsin DNR in connection with the WPDES permit for the plant.
6. Construction of an enclosed truck unloading facility for raw material deliveries.
7. Construction of a new tank farm with state-of-the-art spill prevention and control features.
8. Location of the top of the old farm well in Building 45A for appropriate sealing.

EVANSON
File

HATCHER INCORPORATED

November 4, 1986

RFW

Mr. Richard O'Hara
Chief
Department of Natural Resources
Hazardous Waste Management - Section GEF 11
101 South Webster Street
Madison, Wisconsin 53707

NOV 05 1986

Re: Groundwater Remediation
Saukville, Wisconsin
Job No. 0001-003

Dear Richard:

On October 29, 1986, Mr. George Bain of Hatcher Incorporated submitted some Remediation Plans for the Freeman Chemical site in Saukville, Wisconsin. It is possible that we inadvertently left Attachments B and C off of that submittal. Accompanying this letter, you will find these two attachments.

I regret any inconvenience this may have caused you or your staff. If you have any questions concerning these attachments, please call.

Sincerely,

HATCHER INCORPORATED

Roger F. Hatcher

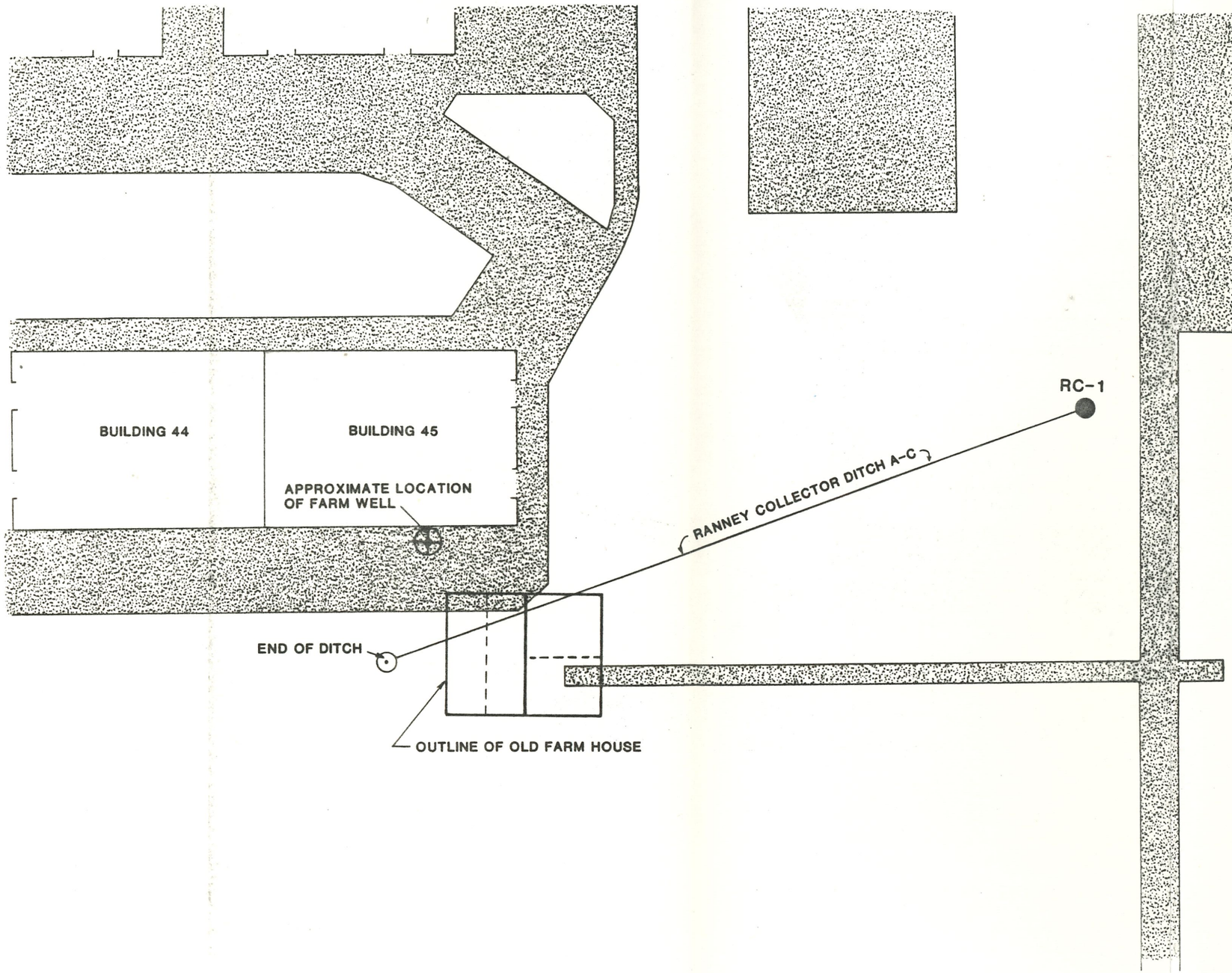
Roger F. Hatcher, Ph.D.
President

RFH/aam

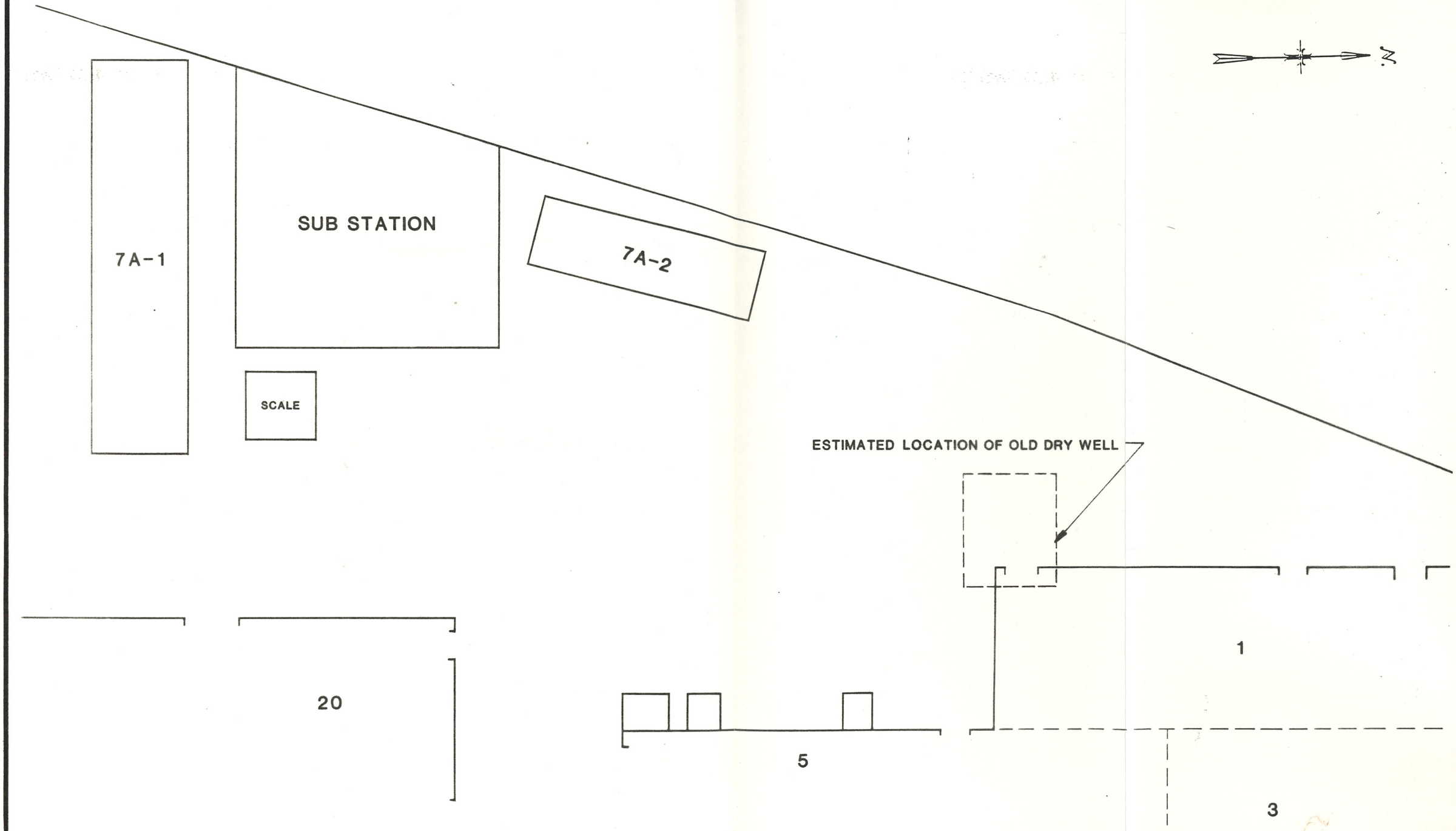
Enclosures: 2

cc: Terry Evanson
Cindy Slavik (2)
Jean Nickel

1523 Huguenot Road, Midlothian, Virginia 23113 (804) 794-0216



1″=30′ 30 0 30 60 scale feet	Job No.: 0001-003	Hatcher Incorporated	Date: October 28, 1986	Estimated Locations Of Farm House & Farm Well
	Freeman Chemical	RICHMOND, VIRGINIA	Scale: As Noted	Drawning No.: Attachment B



1"=10' scale: 10 5 0 10 20 feet	Job No.: 0001-003	Hatcher Incorporated	Date: October 28, 1986	Estimated Location Of Dry Well
	Freeman Chemical	RICHMOND, VIRGINIA	Scale: As Noted	Drawing No.: Attachment C