BLACK & VEATCH

Site: MARTHA
ID #: MOD980633069
Break: 3.2
Other: AR
01/20/89

MEMORANDUM

CH2M HILL/EPA
REM IV
Martha C. Rose Chemical Company Site

B&V Project 64581
B&V File SITE
January 20, 1989

To: J.S. Waltrom/File

From: D.J. Munie
T.L. Shock

The following observations were made by REM IV Team oversight personnel during site visits on the indicated dates:

January 6, 1989 (David Munie)

- Observed Layne & Western crew drilling deep borings to bedrock, taking split spoon samples, and casing the boring 3 feet into bedrock. All boring equipment, sampling equipment, and casings were decontaminated before being used or reused. During the decontamination of the split spoon sampler, the drillers were using distilled water as a final rinse. The sampling plan stated that methanol should be used as the final rinse and the equipment air dried. Mr. Jerry Hollingsworth of CSI brought this to the attention of Burns & McDonnell and asked to have the drillers change their decontamination procedure.

- Shallow borings inside the warehouse were being drilled using a small drilling rig mounted on skids. All equipment was decontaminated prior to starting work and between each boring.

- A Burns & McDonnell crew was establishing grids on the ground near the South Warehouse before taking composite surface soil samples. At this time, about one-third of the grids were sampled.

January 10, 1989 (Teresa Shock, David Munie)

- Mr. Dick Cohen of Burns & McDonnell performed a dye test on the sewer line leading from the Main Warehouse at a point about 50 feet east of the southwest corner of the building. He placed dye, followed by water, into a shower drain located inside the warehouse about 10 feet from the south wall at the above mentioned point. The 4 inch clay tile sewer line had been cut and plugged (downstream side of cut) therefore, the dye water migrated through the soil to the drainage ditch leading to the lagoons (See attached Figure I-1).

40027436
SUPERFUND RECORDS

- Observed composite surface soil samples being taken from the gridded areas.

- Wipe samples were taken from the concrete floor of the Main Warehouse. A cardboard template with a 10cm x 10cm opening cut in it was used as a guide. A piece of filter paper was moistened with hexane and wiped on the floor with one side of the filter paper in one direction and then perpendicularly with the other side. The filter paper was then placed in a sample jar.

- The drillers were at well MW-110 reaming the inside of the casing to the point where the collar was set. During the reaming, the drilling water was being recycled.

January 11, 1989 (David Munie)

- A gas powered saw was used to cut the concrete floor of the warehouse in preparation for digging the trench located in grid area 3. The trench was laid out running east to west, 30 feet long by 2.5 feet wide. Water was applied to the blade while sawing. During the sawing, the water was swept away from the trench area.

- Surface soil samples have been collected from all but 3 of the grid areas. The 3 grid areas remaining are located on the east end of the warehouse in the gravel drive leading to the American Steel building entrance.

January 12 & 13, 1989 (Teresa Shock, David Munie)

- The 4"-6" thick concrete slab over the trench was removed using the backhoe bucket. The backhoe bucket and all sampling equipment had been decontaminated prior to starting the digging of the trench. After removing the slab, a gravel and tan clay fill about five inches thick was exposed. A sample of this material was taken. The trench excavation continued by removing two 5 linear foot sections to a depth of approximately five feet. The backhoe bucket was decontaminated prior to removal of the soil from each of these two sections. The bucket was decontaminated again, and the remaining length of trench was excavated to a depth of five feet. Excavation then proceeded in

approximately 2 to 2.5 foot lifts for the length of the trench. The backhoe bucket was decontaminated between each lift. Three samples were taken at a depth of 2.5 feet during excavation of the first five foot depth. Three samples were also taken at each of the following depths: 5 feet, 7.5 feet, 10 feet, 12 feet. At about 4 to 5 feet, a layer of gravel became exposed. Just below the gravel layer, three pieces of 2" x 4" wood were removed. See attached drawing for cross-section of trench prepared by Burns & McDonnell and made available to the REM IV Team. The HNu showed a reading of about 10 ppm throughout the trench sampling. No noticeable or unusual discoloration was observed in the soil from the trench.

- Burns & McDonnell's crew was taking wipe samples from the inside walls and the rooftop of the Main Warehouse.

- The backhoe was decontaminated before leaving the warehouse area to begin excavation of the test pits for sewer sampling. See attached drawings for cross-sections of the sewer test pits prepared by Burns & McDonnel and made available to the REM IV Team. See drawing of sanitary sewer system showing changes in the alignment of the sewer lines discovered during the test pit investigation.

January 17, 1989 (David Munie)

- Burns & McDonnell's crew took sediment samples and surface water samples from 2 locations on Pin Oak Creek. They also established the additional locations to be sampled on the creek.

rmc
Attachments:
Figure I-1 Realignment of Sewer Lines and Dye Testing
Figure III-5 Locations of Trench and Sewer Test Pits
Cross Section of Trench
Cross Sections of Sewer Test Pits No. 1 Through 5 (5)
Field Notes

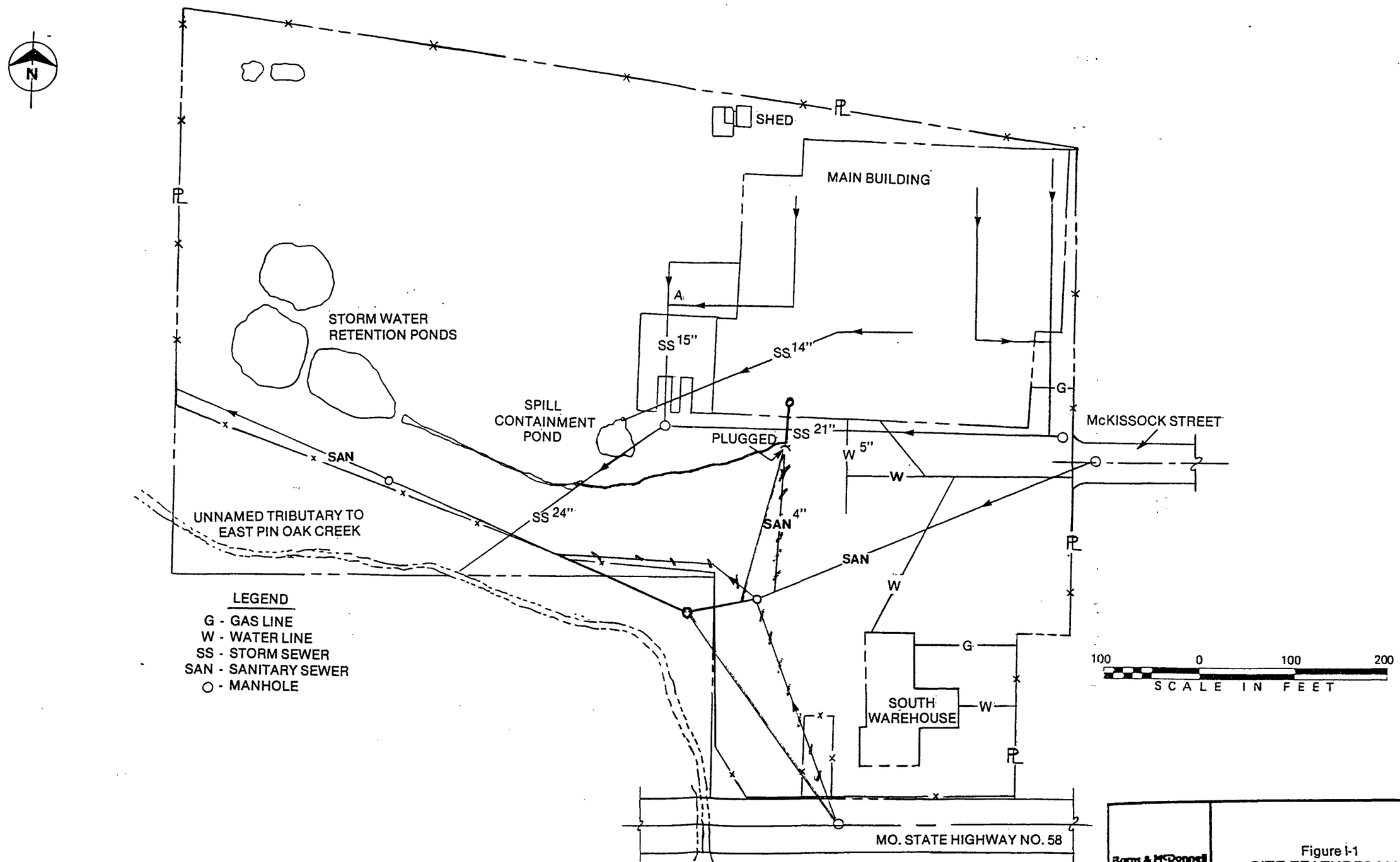
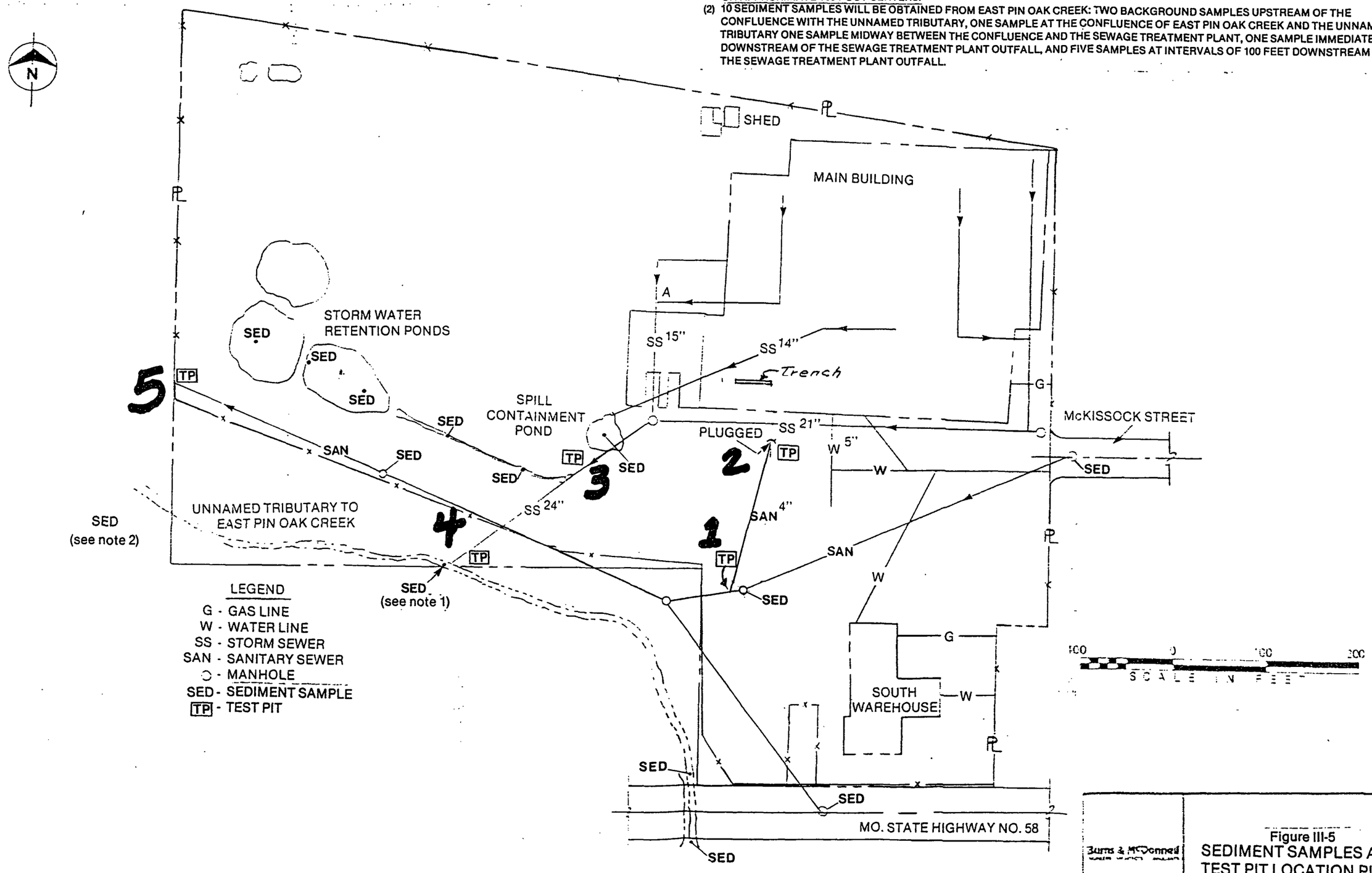


Figure I-1
SITE FEATURES MAP

NOTES:

(1) 13 SEDIMENT SAMPLES TO BE OBTAINED FROM THIS LOCATION ALONG TRIBUTARY TO CONFLUENCE AT EAST PIN OAK CREEK ON APPROXIMATE 100 FOOT CENTERS.

(2) 10 SEDIMENT SAMPLES WILL BE OBTAINED FROM EAST PIN OAK CREEK: TWO BACKGROUND SAMPLES UPSTREAM OF THE CONFLUENCE WITH THE UNNAMED TRIBUTARY, ONE SAMPLE AT THE CONFLUENCE OF EAST PIN OAK CREEK AND THE UNNAMED TRIBUTARY ONE SAMPLE MIDWAY BETWEEN THE CONFLUENCE AND THE SEWAGE TREATMENT PLANT, ONE SAMPLE IMMEDIATELY DOWNSTREAM OF THE SEWAGE TREATMENT PLANT OUTFALL, AND FIVE SAMPLES AT INTERVALS OF 100 FEET DOWNSTREAM OF THE SEWAGE TREATMENT PLANT OUTFALL.



Burns & McDonnell

Figure III-5
SEDIMENT SAMPLES AND TEST PIT LOCATION PLAN

Burns & McDonnell
ENGINEERS - ARCHITECTS - CONSULTANTS
Kansas City, Missouri

041581 Form CCO-29

TRENCH

Client ROSECHEM

Project No. 88-025-4

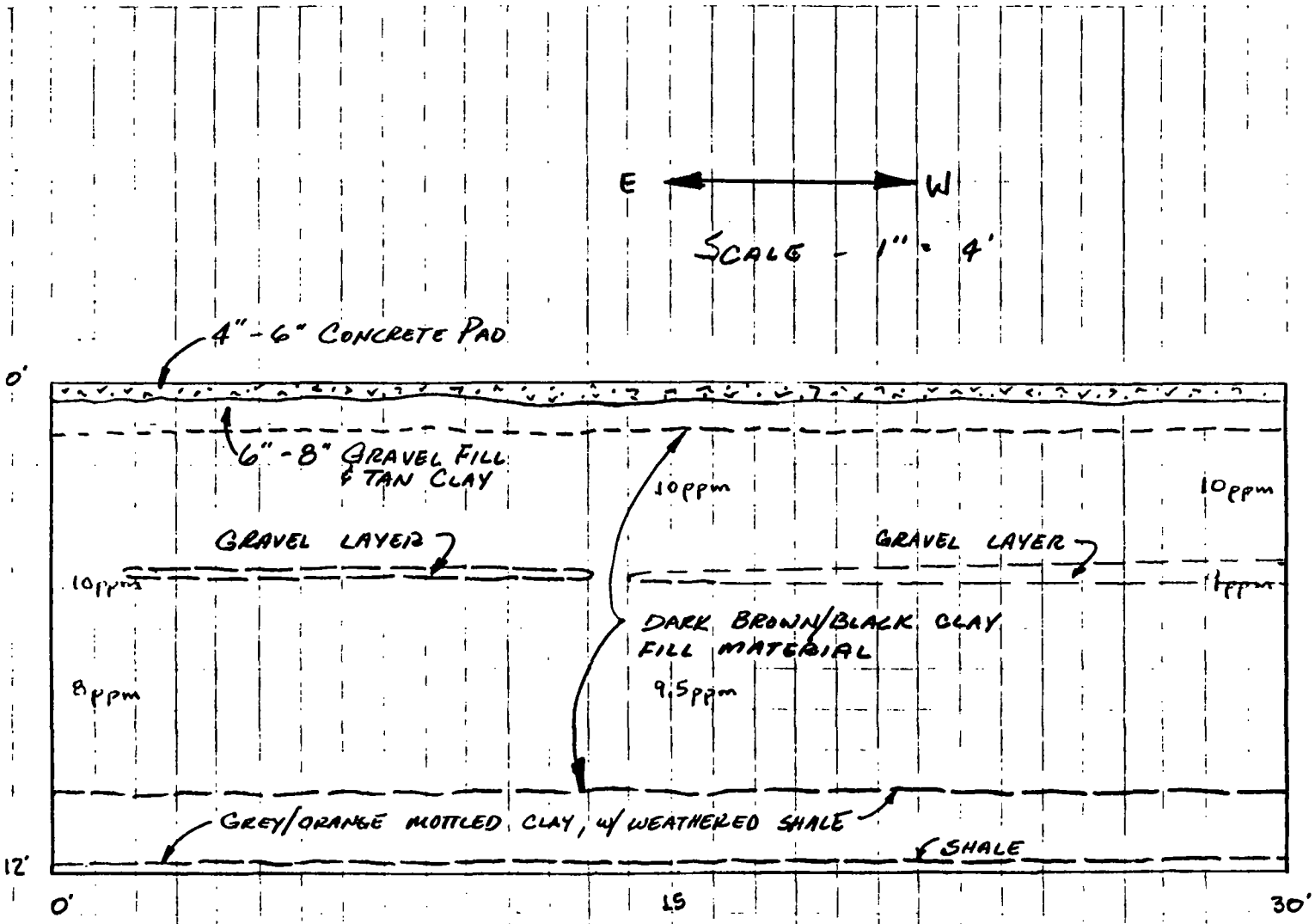
Date 1/13/89

Page 1 Of 1

Made By D. BALLARD

Checked By

Preliminary ____ Final ____



Burns & McDonnell
ENGINEERS - ARCHITECTS - CONSULTANTS
Kansas City, Missouri

Client ROSECHEM

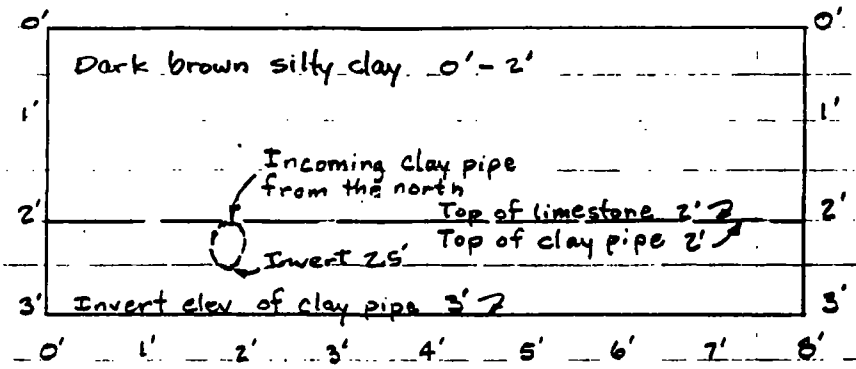
Page 1 Of

Project No. 88-025-4 Date 1/16/89 Made By D. BALLARD

TEST PIT # 1 Checked By G. NIEMAN

041581 Form GCO-29 Preliminary ____ Final ____

1



E ⟵ ⟶ W

HORIZ SCALE 1" = 2'

VERT SCALE 1" = 2'

NOTE: Clay pipe is set flush into limestone. Top of rock and top of clay pipe both at 2'0".
The incoming clay pipe is from the manhole on the south side of the main building and is a dead line.

Trench dry at completion.

Burns & McDonnell
ENGINEERS - ARCHITECTS - CONSULTANTS
Kansas City, Missouri

Client ROSECHEM

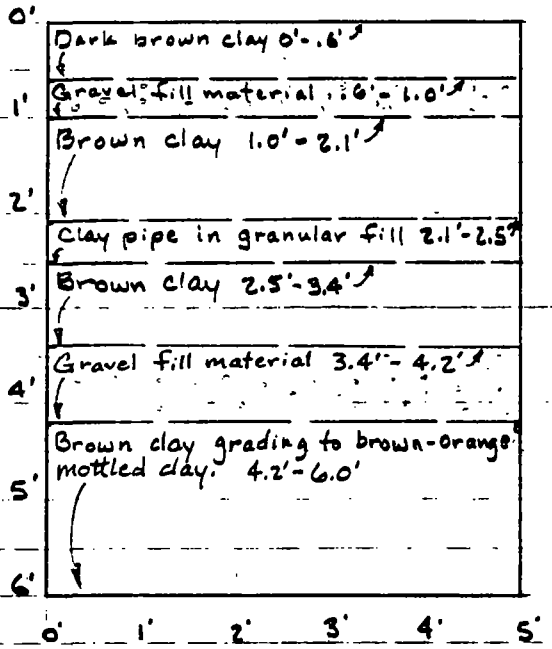
Page 2 Of

Project No. 88-025-4 Date 1/16/89 Made By D. BALLARD

TEST PIT # 2 Checked By G. NIEMAN

041581 Form GCO-29 Preliminary Final

2



N ⟷ S

HORIZ. SCALE 1" = 2'
VERT. SCALE 1" = 2'

NOTE: Trench dry at completion.

Burns & McDonnell
ENGINEERS - ARCHITECTS - CONSULTANTS
Kansas City, Missouri

Client ROSECHEM

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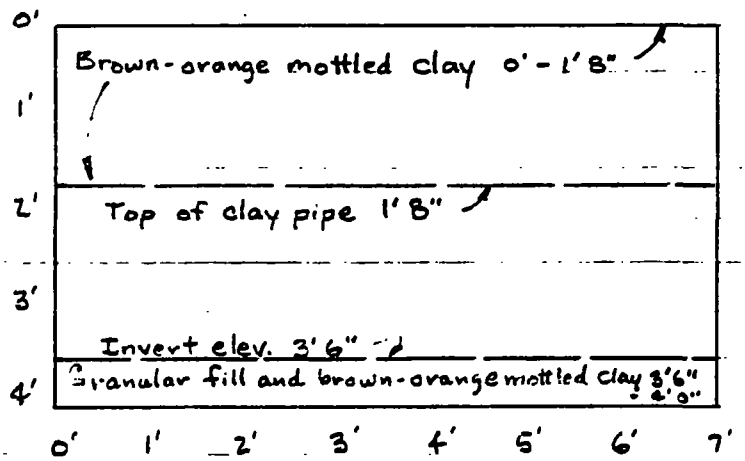
Project No. 88-025-4 Date 1/16/89 Made By D. BALLARO

TEST PIT #3 Checked By G. NIEMAN

041581 Form GCO-29 Preliminary Final

3



W ← → E

HORIZ. SCALE 1" = 2'
VERT. SCALE 1" = 2'

NOTE: 2" standing water in bottom of trench at time of completion.

Burns & McDonnell
ENGINEERS - ARCHITECTS - CONSULTANTS
Kansas City, Missouri

Client ROSECHEM

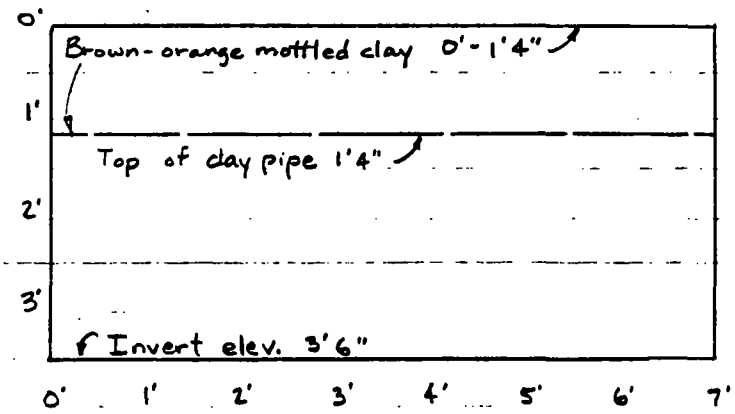
Page 4 Of

Project No. 88-025-4 Date 1/16/89 Made By D. BALLARD

TEST PIT #4 Checked By G. NIEMAN

041581 Form GCO-29 Preliminary Final

4



E ⟷ W

HORIZ. SCALE 1" = 2'
VERT. SCALE 1" = 2'

NOTE: Dry at time of completion

Burns & McDonnell
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Kansas City, Missouri

Client ROSECHEM

Page 5

Project No. 88-025-4 Date 1/16/89 Made By O.

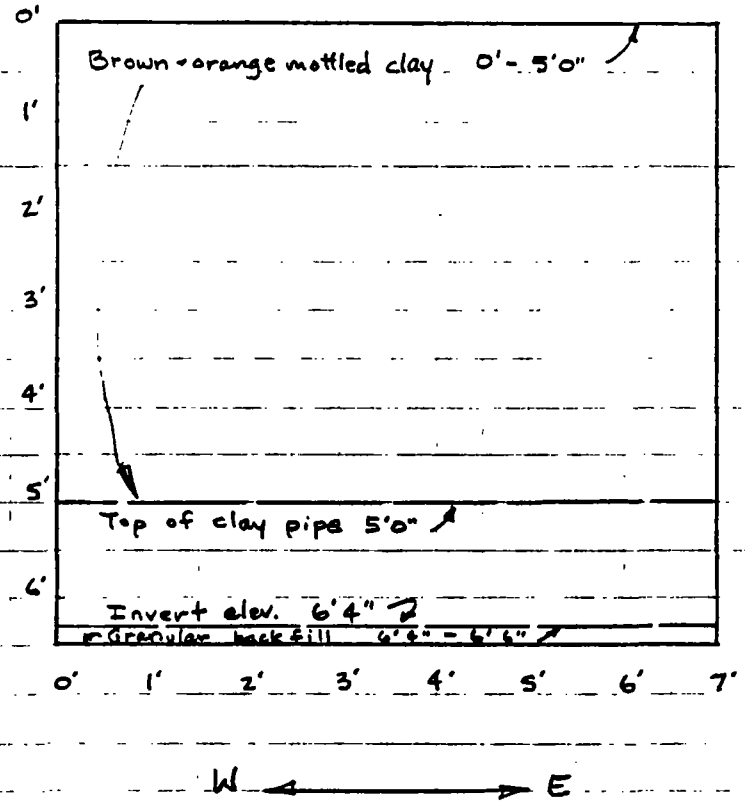
TEST PIT # 5

Checked By G. N

041581 Form GCO-29

Preliminary

5



HORIZ. SCALE 1' = 2"
VERT. SCALE 1' = 2"

NOTE: Water running through granular fill at completion. Approximately 3" of water standing at completion.

Index (continued)

Name

Address

Phone

8000 East 2
Kansas Cit
Phone (816

2895 West
Denver, CO
Phone (303

This book i
specially tr
a water re

6 Jan 89 Friday David J Munie
0907 Arrived at Rose Chemical Site
Dressed out in level "D"
Met Layne drilling crews
Rob Slayden } outside
Randy Crowl } crew

Rusty Bowles } Inside
Tom Butler } crew
0930 Crews working on equipment
Ceilings are not high enough
in warehouse to use derric
on rig.
Met - Greg Nieman Burns & McDonnell
Paul Clark Burns & McDonnell
These two people are
taking samples & site safety
For the outside drilling rig.
Deconning split spoon with
① alconox ② distilled water rinse
③ methanol ④ air dry
Working at well MW107 see
photo log pg. 158
David J Munie

6 Jan 89 (Cont) David J Munie
Temp. is about 38° F
Cloudy
1030 Jerry Hollingsworth (CSS) arrived on site
Drilled well MW110 Thur. Sel grout around casing.
1100 Out side drilling crew taking break. inside drilling crew waiting on a part for the drill rig. should arrive this after noon.
1120 Lunch
1200 Went to Jerry's office
1225 Returned to site
Martha Hidebrandt {Burns & McDonnell
Debbie Ballard
working with inside drillers.
1240 Dressed in protection "D"
1245 Drilling truck stuck in mud near south warehouse door.
1255 Pulled truck out of mud.

David J Munie

6 Jan 89 (Cont) David J Munie
1305 Drillers getting ready to drill well No. MW104
Taking samples ~~2'-4'~~ 0'-2'
with split spoon 2'-4'
Hit concrete at about 3'
Photovac TIP II being used to check VOC's.
During drilling hit limestone at 3½'.
1355 Entering the warehouse in level "C" Part came in for the rig inside.
1357 Took 3 photos of rig inside warehouse (see Photo Log)
Split spoon are deconned after use by washing in Alconox, water rinse, methanol rinse DI water rinse.
Spoke to Jerry about the extra water rinse after the methanol. This has been corrected.
1510 Drilling well MW106

David J Munie

6 Jan 89 (Cont) David J Munie

1610 Augars are being deconned with high pressure steam ~~rinse~~ DJM water.

1620 A ~~personnel~~ personnel/DJM decon station is set up on the west end of the office trailer. Tyvek or saranex, gloves and ~~[illegible]~~ boot covers if worn are bagged. Boots are washed and rinsed also.

1630 Leaving site; going to Jerry's office.

1655 Discussed todays work with Jerry. The only observations where correction could be made were:
① Methanol rinse is the last rinse on sampling equipment.
② HNU could be used ~~[illegible]~~ more often when drilling inside the building.

1705 ~~Leaving Office.~~ DJM

DJ Munie

6 Jan 89 (Cont) David J. Munie

Charlie Smith } Burns;
Steve Kidwell } McDonnell

These two people were laying out grids to be sampled outside (soil sampling) About 1/3 of the grids have been sampled.

1730 Leaving J Hollingsworth's office.

David J Munie
6 Jan 89

DJ Munie

10 Jan 89 (Tue) David J Munn
Teresa Shock

0840 Arrived at site
Met Jerry Hollingsworth
and Mary Erio (Barns
& McC) Safety
officer.
Todays schedule -
Wipe samples
Boring inside
Well boring outside
This afternoon the
wipe sample team will
switch to taking soil
samples.

0900 Dressing out in level
"c" personal protection.

0925 Entering warehouse.

0933 Observing sample wipe
crew.

0948 Took duplicate wipe
sample from floor
(see photo log Frame 6)
for EPA.
19 F/W - 25

David J Munn

10 Jan 89 David J Munn
Teresa Shock

1010 Observing boring activity
in the warehouse

1018 Leaving warehouse.
Crews taking break

1100 Deconning casing

1130 Dick Cohen with Barns & McC
showed up to do die test
of sewer line.

1145 Lunch

1300 At site
Methanol - Nanograde
Pesticide grade
Acetone Nanograde
Hexane Nanograde
Methyl Alcohol
From Methyl Alcohol Label:
"By electron capture detection,
no interfering G.C. peaks greater
than that given by 10 nanograms/
liter of heptachlor epoxide, or
100 nanograms/liter of parathion."
"Non-volatile matter ... 0.0005% Max."

1425 Observing surface soil sampling west
of warehouse loading dock. Took photo
of surface soil sampling. Took
(see log - Frame 8)
Teresa L Shock 01/10/89

TUESDAY
10 JAN 89

David J Munie
Teresa L Shock

25 digests from upper "2" soil with stainless steel knife & then composited ~~by~~ TLS 10/01 01/10/89 by stirring with knife

1505, observing coring ~~ob~~ TLS 1/10/89 of bedrock at well MW-110 Reamed out inside casing to where collar was set. Took photo (Roll 1 - Frame 10) of removing bit after reaming inside casing & see log in back of book - During coring - drillers are recycling drilling water - Took photo of coring (Roll 1 - Frame 11 - see photo log)

1610 Drillers having problems w/water line off drill rig site

1620 Deconned - had been in level D personel protection since approximately 1330

1645 Left site for the day

TLS
1/10/89

01/10/89 Teresa L Shock

11 Jan 89 Wed David J Munie

1100 Arrived at site
Observed soil sampling on south side of warehouse.

1145 Lunch

1215 Went to Jerry Hollingsworth's office - Discussed schedule

1245 Back on site.
Crews at lunch.

1350 Saw has arrived to cut concrete floor.
See photo log Roll 1 Frame 12

1511 Started cutting concrete

1515 See photo log
Dressed in level "C"
Water used for cutting is Holden City

1632 Cutting the concrete for the trench is ~~com~~ completed.

1700 Packing samples for shipping. All but 3 of the grids have been soil sampled. All wipe samples on the floor are completed.

1725 Left site

DJ Munie

10 THURSDAY
12 JAN 89 TERESA L. SHOCK
DAVID J MUNIE

0745 Arrived in Holden - obtained BAV supplies from Clean Sites office
0755 Arrived at site
David Langsford Burns & Mac and Mary-O TRS Erio / B & Mac all arrive onsite for the day
0835 Dressed out in Level C TRS 01/12/89 D personel protection
0845 Entered warehouse in level D
Took photo of trench - concrete floor cut. - Looking west - See log Frame 21
0847 Took photo of decon setup for Burns & MacD. See log (Roll 1 - Frame 22)
0856 Took photo of deconning backhoe bucket See log Roll 1 - Frame 23
0907 Donned level C
0910 Positioned backhoe over trench Began removing concrete
0919 Took photos of using backhoe to try to break through the concrete to open trench - See log in back Roll 1 - Frames 24 and 25
0930 Took photo of removing 1st pier
01/12/89 Teresa L Shock

THURSDAY TERESA L SHOCK
12 JAN 89 DAVID J MUNIE

concrete - See log Roll 2 Frame 1
0935 Took photo of removing concrete slab - See log Roll 2 - Frame 2
0952 Took photo of trench w/ concrete off - Roll 2 Frame 3
1000 Took photos of trench - see log Frames 4 & 5
1005 Took photo of taking a ~~dat~~ TRS 1/12/89 ~~replicate~~ TRS 01/12/89 sample out of the top of the trench - Roll 2 Frame 6 TRS 1/12/89
Filled three jars - one at a time
1010 Began removing soil from trench
1045 Took photo of taking sample from out of backhoe bucket Roll 2 - Frame 7 - sample from approx 5' - TRS 1/12/89 below concrete & within 1st 5' of trench
1050 Observed wipe sample of wall on south wall of room with pit
1052 Took photo of taking a wipe sample TRS 1/12/89 Roll 2 Frame 8
1200 Left warehouse
1201 Left site for lunch
1253 Returned to site
01/12/89 Teresa L Shock

THURSDAY
12 JAN 89

TERESA L. SHOCK
DAVID J. MUNIE

1315 Bill Crippen - with Burns & McDonald arrived at the site

1335 Re-entered warehouse in level C Resuming the trenching

1340 Took photos of digging trench approximately 1/2 - 3/4 down the length of the trench - See log - Roll 2 - Frames 9 & 10

1400 Resumed trenching after taking a sample from backhoe bucket - Sampler had obtained sample with hand - had worn new latex surgeon's gloves. Sampling plan required use of stainless steel knife. Samplers will be using knife to obtain sample but will still need to compact sample into jar with gloved hand.

1505 Took photo of taking sample from bucket of backhoe See log - Roll 2 Frame 11

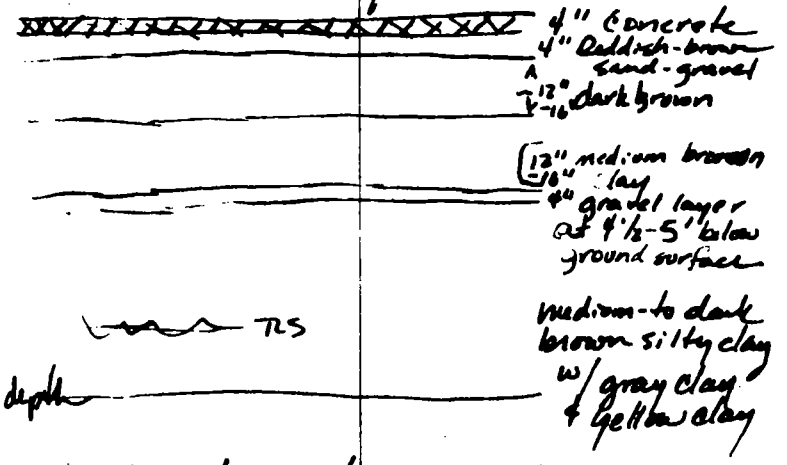
1605 TLS left warehouse to make phone call - Returning at 1600

01/12/89 Teresa L. Shock

THURSDAY
12 JAN 89

TERESA L. SHOCK
DAVE J. MUNIE

1610 Cross-section of trench:



The dark brown & medium brown layers appear to be some type of silty clay. The medium brown layer has some gray & yellow mottled clay. Above cross-section is only to 10' depth - all widths and depths are approximate.

TLS 1/12/89 Found 2"x4" boards in both ends of the trench just below the gravel layer

1625 left warehouse - decomned

1630 left site for the day

01/12/89 Dave J. Munie

13 Jan 69 (Fri) David Munie

0752 Arrived at CSI office
Met with Jerry Hollingsworth

0830 At Rose site
Dressed in level "C"
Mr Robin Robinson is on site.

0855 Entering warehouse
Trench is about 7.5 ft deep. They are now digging to 10 ft on the east end.

0945 Completed digging trench to 10' deep

1000 East end of trench 11.8' to bedrock

1030 Middle of trench 11.7' to bedrock

1050 West end of trench 12.3' to bedrock.

1100 Trench completed
See Photo log Roll 2 Frames 14-26

1150 Climbed on roof of warehouse to watch wipe test being performed

[illegible]

13 Jan 69 (Fri) David J Munie

1212 Returned for lunch

1250 Met with Jerry Hollingsworth at his office

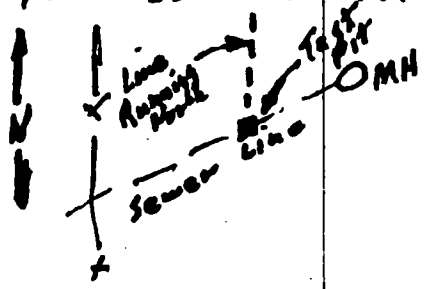
1320 Back at site

1330 Went to Jerry's office to zerox copy of cross-section drawing given to me by Burns & McDonnell (Greig)

1415 Back at site.

1510 Located sewer line to dig test pit.

1515 Digging test pit (See Photo log Roll 3 Frame 1) 10" west of manhole



While digging the test pit, a line running North and tying into the main sewer line got broken.

Covered broken tile with flashe and soil

1630 Took sample at invert level of main sewer tile.

1640 Decomed and leaving site.

David J. Munie

17 Jan 89 Tue David J Munie

0825 Arrived at site crew preparing to do water and sediment sampling today.

1030 Taking water sample 81' up stream of Fork on Pin Oak creek. Ice on surface of the water is about 1" thick and had to be broken. Water was sampled throug a hole in the ice, using a teflon sampler. See photo log Roll 3 Frame 4.

1048 Replicate is also being taken (water sample) at this point.

1055 Mike McKinly - Field auditor for Burns & McDonnell arrived at the site.

1225 Still at same location waiting on filtering of the water to be completed.

David J. Munie

17 Jan 89 (cont) David J Munie

1350 Finished water sample at this location
SW-6 SW-7 SW-8 SW-9

1400 Taking sediment sample from the same location.

1437 Taking soil sediment sample 2.00' up stream of Fork in Pin Oak Creek See photo log Roll 3 frame 13 R.

1525 Layed out sample points on Pin Oak Creek to a point 500' below outflow of sewerage plant.

Note: Asked Jenny to when dye test was done on the capped sewer line from the warehouse - 1/10/89 Tuesday.

1710 Received cross-section drawings of Test Pits leaving site for the day.

David J Munie