

WVA

SIBERIA SOIL BIOREMEDIATION 3 OCT 02

WEATHER: 65°F OVERCAST, SLIGHT BREEZE

SETUP DECON PAD @ 1400

WORK AREA 1: SAMPLE NUMBERS  
CORRESPOND TO NUMBER ON FENCE  
(PT.)

AREA 1 <sup>NEST</sup> EAST: GRAB SAMPLE USING  
EXCAVATOR BUCKET DUE  
TO CONFINED SPACE

A-1-RS-W20:

SOIL DESCRIPTION:

DARK GRAY CLAY WITH SOME GLEYING  
WITH COARSE SHALE FRAGMENTS, WET AND  
COMPACTED, CONTAINS SHEEN ON SURFACE,  
STRONG PETROLEUM ODOR.

1455 - SAMPLE COLLECTED (SOIL)

- SOIL SAMPLE A-1-WS-W20 COLLECTED  
L WALL SAMPLE

A1-RS-W17 AND A1-WS-W17:

SOIL DESCRIPTION: SAME AS ABOVE (SAA)

1535 - SAMPLES (SOIL) COLLECTED

1:00 - FIELD BLANK COLLECTED

② ~~AT~~

7 OCT 02

WEATHER: 69° F, OVERCAST SLIGHT BREEZE

LOCATION: AREA 1 WEST

COLLECTION METHOD: GRAB - USE OF EXCAVATOR  
BUCKET DUE TO CONFINED SPACE.

SET UP DECON PAD: 0845

TYPE OF SAMPLE: SOIL

SAMPLE DESIGNATION: A1-B5-W14/2 BOT.  
A1-BWS-W14/2 BOT.

B5 = BOTTOM SOIL  
WS = WALL SOIL

DEPTH OF SAMPLE: APPROX. 8' (AT) BS, 6' (AT) WS

ANALYSES REQUIRED: SVOC  
METALS

STRATIGRAPHY/OBSERVATIONS: 2  
DEPOSITS (NOT NOTING) SOME  
WITH SHEEN.

1000 - SOIL SAMPLES C

AT

7 OCT 02

SIBERIA AREA 301C  
WVA - BIOREMEDIATION

WEATHER: 69° F, OVERCAST SLIGHT BREEZE

LOCATION: AREA 1 WEST

COLLECTION METHOD: GRAB - USE OF EXCAVATOR  
BUCKET DUE TO CONFINED SPACE.

SET UP DECON PAD: 0845

TYPE OF SAMPLE: SOIL

SAMPLE DESIGNATION: A1-B5-W14/2 BOT.  
A1-BWS-W14/2 BOT.

B5 = BOTTOM SOIL  
WS = WALL SOIL

DEPTH OF SAMPLE: APPROX. 8' (AT) BS, 6' (AT) WS

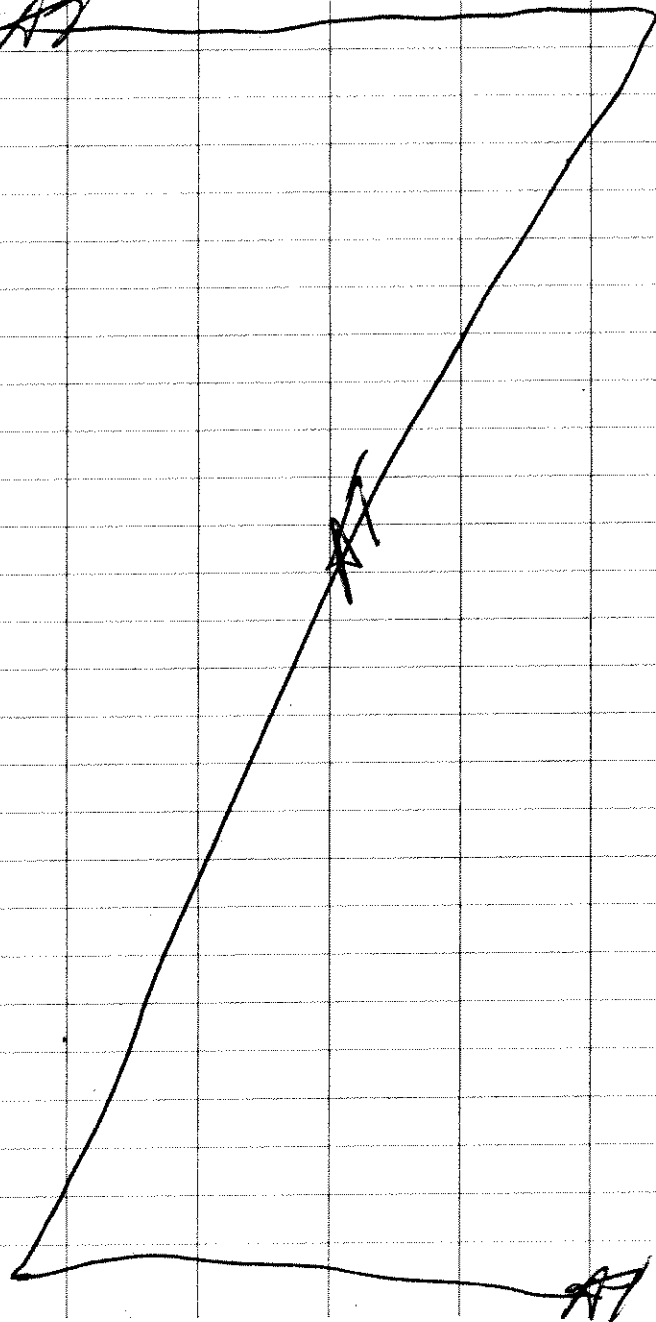
ANALYSES REQUIRED: SVOC  
METALS

STRATIGRAPHY/OBSERVATIONS: 2  
DEPOSITS (NOT NOTING) SOME  
WITH SHEEN.

1000 - SOIL SAMPLES C

AT

90 AT



53

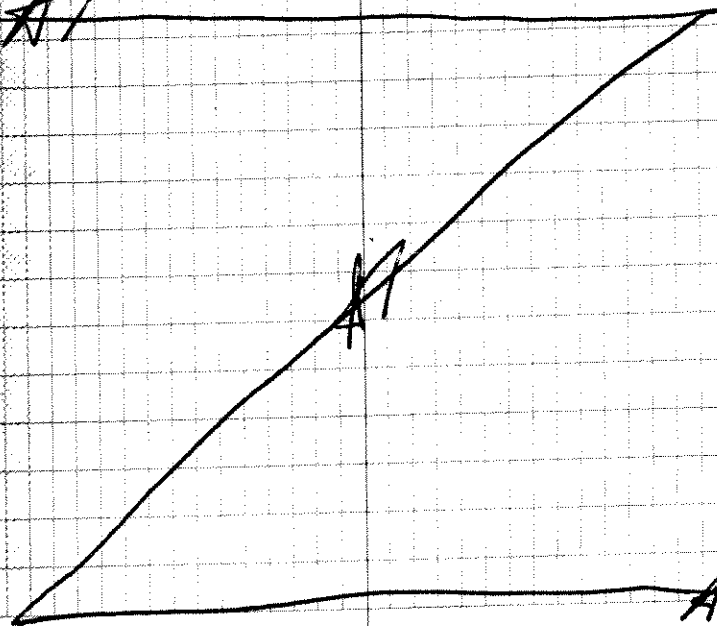
7 PGT 02

SAMPLE DESIGNATION: A1-B5-W11 / P2  
A1-W5-W11 / X2

DEPTH OF SAMPLES: APPROX. 7'

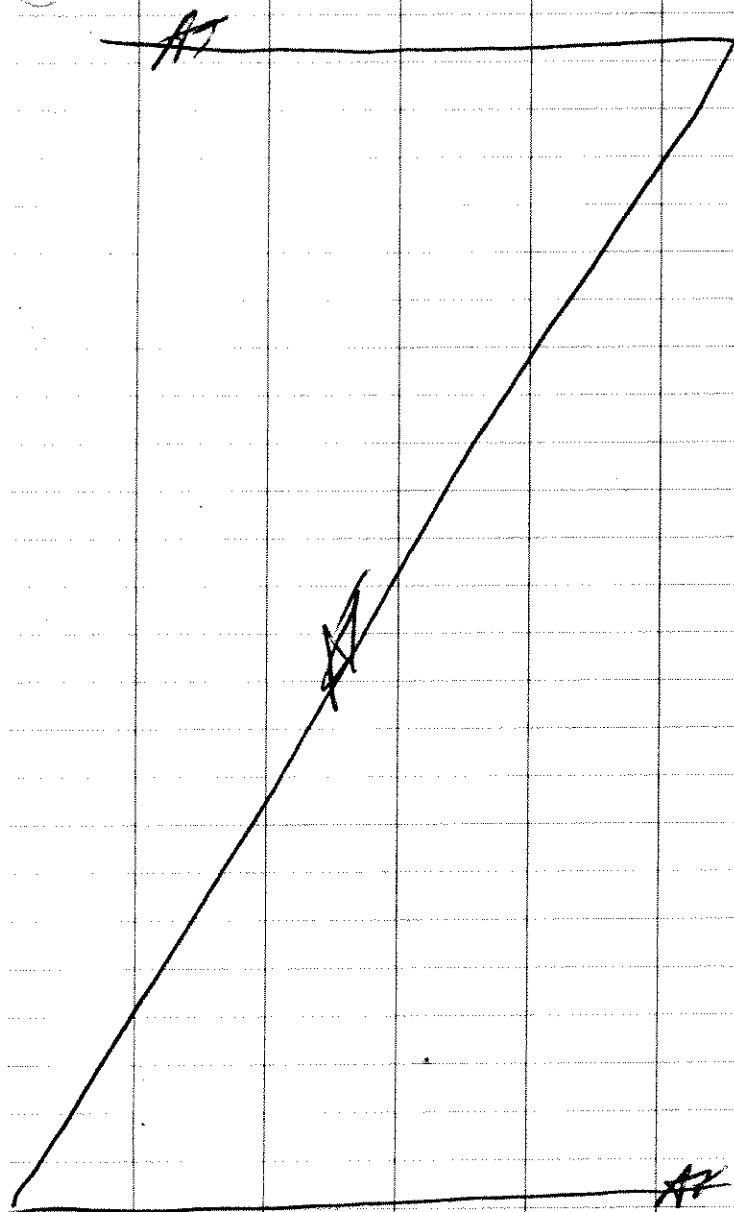
STRATIGRAPHY/OBSERVATIONS: Light Grey CLAY  
WITH MANY FINE YELLOWISH BROWN MOTTLES  
MOIST - SOIL FROM WALL WAS DARK GRAY  
CLAY W/STRONG ODOR (PETROLEUM)  
WHS - COLLECTED SOIL SAMPLES

AT





6



8 OCT 02

WVA - SIBERIA AREA  
SOIL BIOREMEDIATION

7

WEATHER: 75° F SUNNY

LOCATION: AREA 1 WEST

COLLECTION METHOD: GRAB - USE OF EXCAVATION  
BUCKET DUE TO LIMITED  
SPACE

TYPE OF SAMPLE: SOIL

SAMPLE DESIGNATION: AI-BS-WS  
AI-WS-WS

DEPTH OF SAMPLE: 7'

ANALYSES REQUIRED: SVOC  
METAL

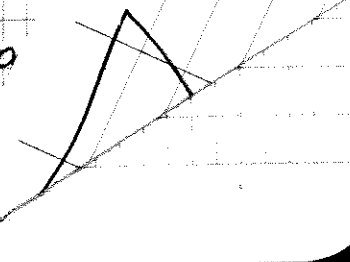
STRATIGRAPHY/OBSERVATIONS:

AI-BS-BS = DARK GREY CLAY WITH (AT) WITH  
YELLOWISH MOTTLES - FEW MOTTLES

AI-WS-WS = LIGHT GRAY CLAY  
MOTTLES

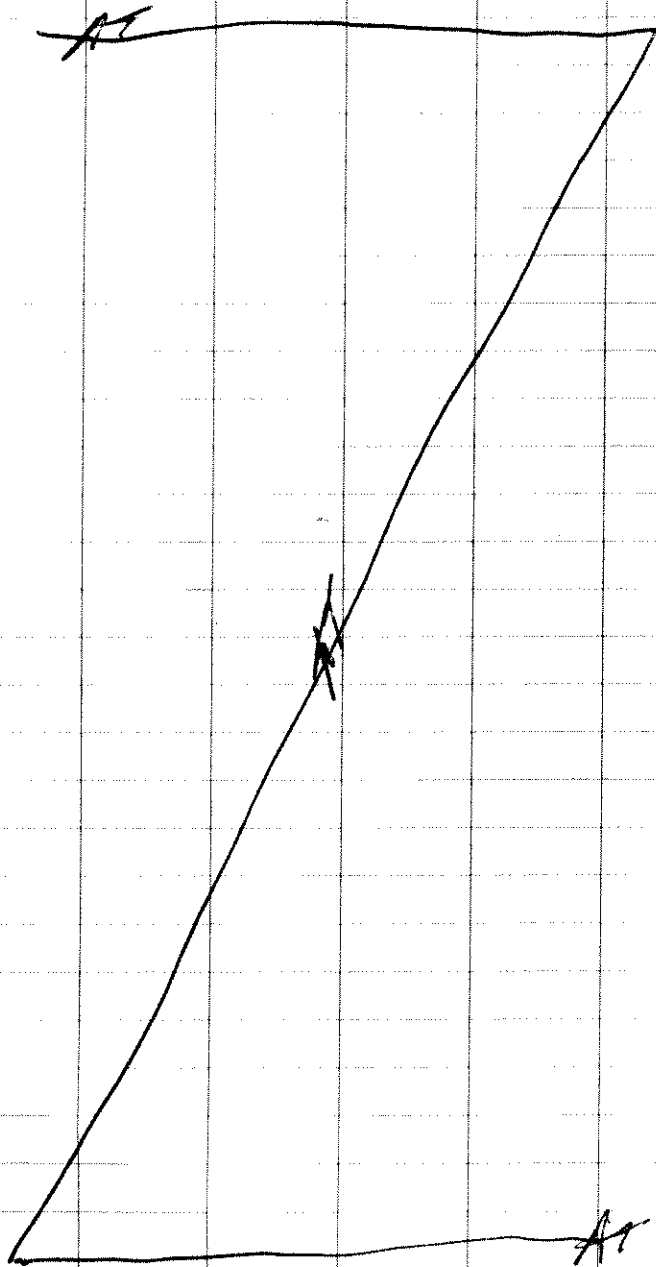
FAINT PETROLEUM OD

1510 COLLECTED SOIL SAM





8



9

9 OCT 02

SAMPLE DESIGNATION:

A1-BS-W2 1 & 2

A1-WS-W2 1 & 2

DEPTH OF SAMPLE: 4'

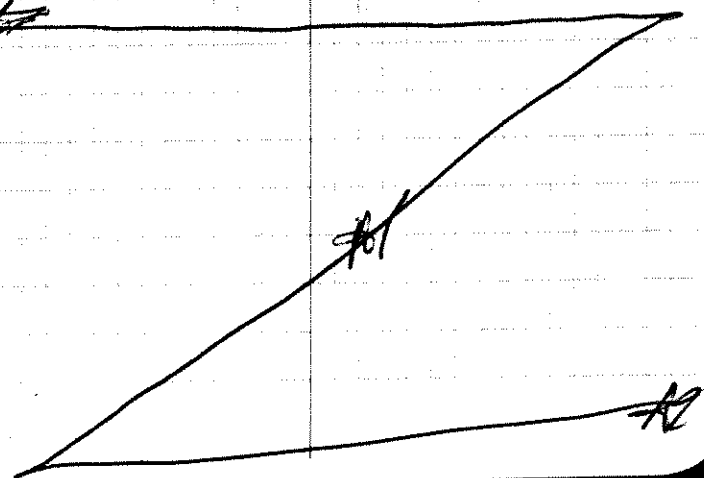
ANALYSES REQUIRED: SVOL  
METALS

STRATIGRAPHY/OBSERVATIONS:

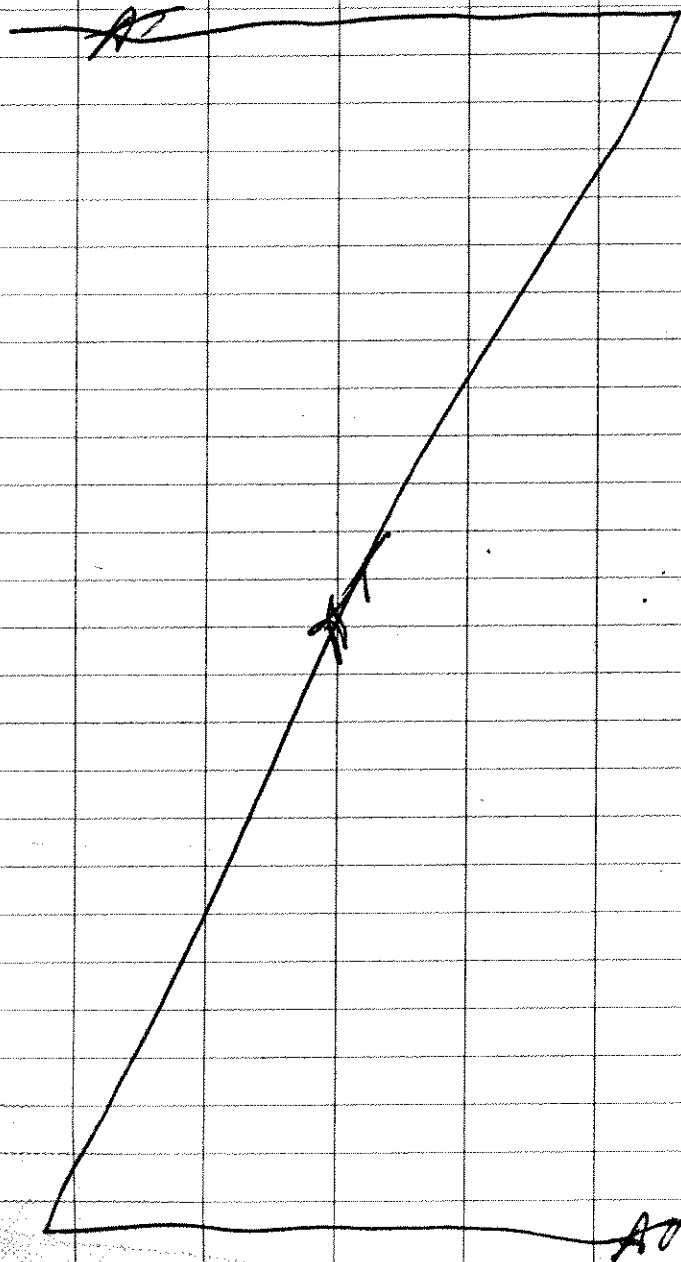
BOTH SAMPLES DARK BROWN <sup>(AT)</sup> SAND SILT  
LOAMS WITH MANY COARSE SHALE  
FRAGMENTS - NO ODOR OR STAINING  
WALL SAMPLE TAKEN TOWARDS AREA 3

<sup>(AT)</sup>  
1415 - SOIL SAMPLES COLLECTED

1635 - COLLECTED FIELD BLANKS



(10)



9 OCT 02

SIBERIA AREA SOIL  
WVA-1310-REMEDIATION

(11)

WEATHER: 60°F PARTLY OVERCAST

LOCATION: AREA 1

COLLECTION METHOD: GRAB w/ SPOONS

TYPE OF SAMPLE: SOIL

SAMPLE DEPTH: 5'

ANALYSES REQUIRED: SVOC, METALS LEAD, ARSENIC,  
CHROMIUM (COLOR)

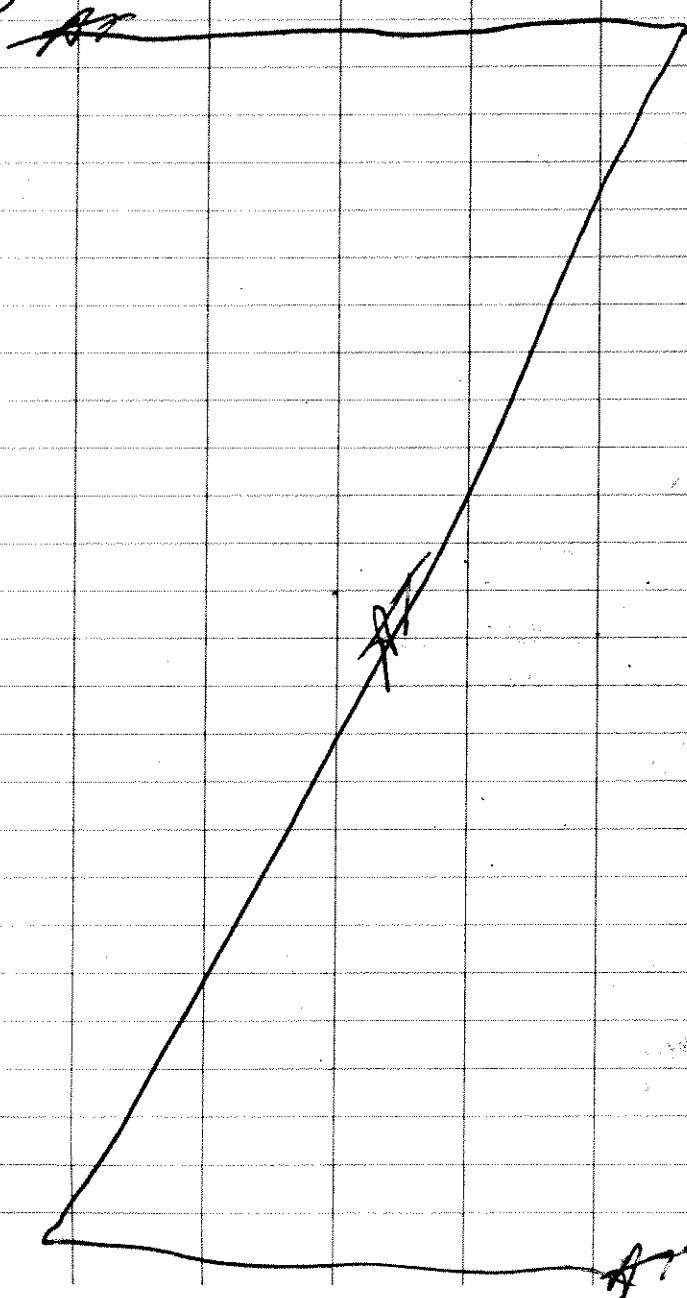
STRATIGRAPHY/OBSERVATIONS:

FAINT PETROLEUM ODOR, LIGHT GRAY  
SILTY CLAY WITH MANY COARSE SHALE FRAGMENTS

SAMPLE DESIGNATION: A1-B5-1

1000 - COLLECTED SOIL SAMPLE

(12)



9 OCT 02

SAMPLE DESIGNATION: A1-WS-1A

TYPE OF SAMPLE: SOIL

METHOD: GRAB

SAMPLE DEPTH: 4' NORTHERN WALL

ANALYSES REQUIRED: <sup>(AT)</sup> ~~ANALYSES~~ SVOC, METALS (SAA)

STRATIGRAPHY/OBSERVATIONS: SAA

1100 - COLLECTED SOIL SAMPLE

1105 - COLLECTED DUPLICATE SOIL SAMPLE  
DESIGNATION: X-1

<sup>(AT)</sup>  
GOOD

SAMPLE DESIGNATION: A1-BS-2

TYPE OF SAMPLE: SOIL

METHOD: GRAB

SAMPLE DEPTH: 5'

ANALYSES REQUIRED: SVOC, METALS (SAA)

STRATIGRAPHY/OBSERVATIONS: (SAA)

12:15 - COLLECTED SOIL SAMPLE

(13)



14

*[Handwritten signature]*

9 OCT 02

(65)

SAMPLE DESIGNATION: A1-B5-3

TYPE SAMPLE: SOIL

METHOD: GRAB

SAMPLE DEPTH: 4<sup>(5)</sup> 5'

ANALYSES REQUIRED: SRA

STRATIGRAPHY/DESCRIPTION: SAR.

1300 COLLECTED SOIL SAMPLES

SAMPLE DESIGNATION: A1-BS-4

TYPE SAMPLE: SC16

METHOD: GRAB

SAMPLE DEPTH: 5'

ANALYSIS REQUIRED: SAA

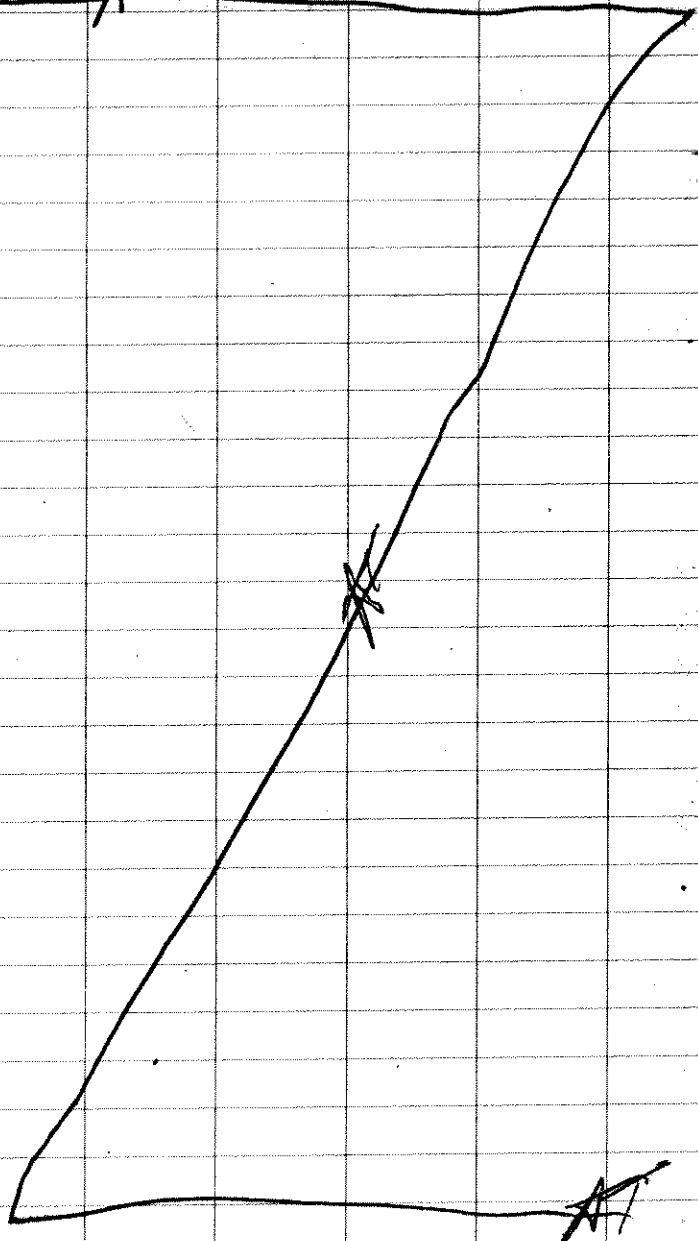
### STRATIGRAPHY / OBSERVATIONS:

SAA - EXCEPT NOTICABLE ODOR, SOILS STAINED  
BLACK. WALL PROFILE (SOUTH WALL ADJACENT  
AREA FOR 10) CONTAINS OIL LAYERS.

1430 COLLECTED SOIL SAMPLE

16

AI



UVA-SOIL BIOREMEDIATION (M)  
SIBERIA AREA

10 OCT 02

SAMPLE DESIGNATION: AI-WS-5 (SOUTH WALL)

TYPE SAMPLE: SOIL

METHOD: GRAB

SAMPLE DEPTH: 4' (WALL)

ANALYSES REQUIRED: SRA ODOR

STRATIGRAPHY/OBSERVATIONS: SAME AS AI-BS-4  
- GRAY SANDY MATERIAL - DARK BROWNISH BLACK COLOR  
WITH FEW BRICK FRAGMENTS

1530 - COLLECTED SOIL SAMPLE

10 OCT 02 SIBERIA AREA SOIL BIO-REMEDIATION

WEATHER: 72°F - OVERCAST

LOCATION: AREA 1 EAST (AT)

SAMPLE DESIGNATION: AI-BS-6

COLLECTION METHOD: GRAB

TYPE OF SAMPLE: SOIL

SAMPLE DEPTH: 5'

ANALYSES REQUIRED: SVOC, METALS - LEAD, ARSENIC (LOI00), CHROMIUM

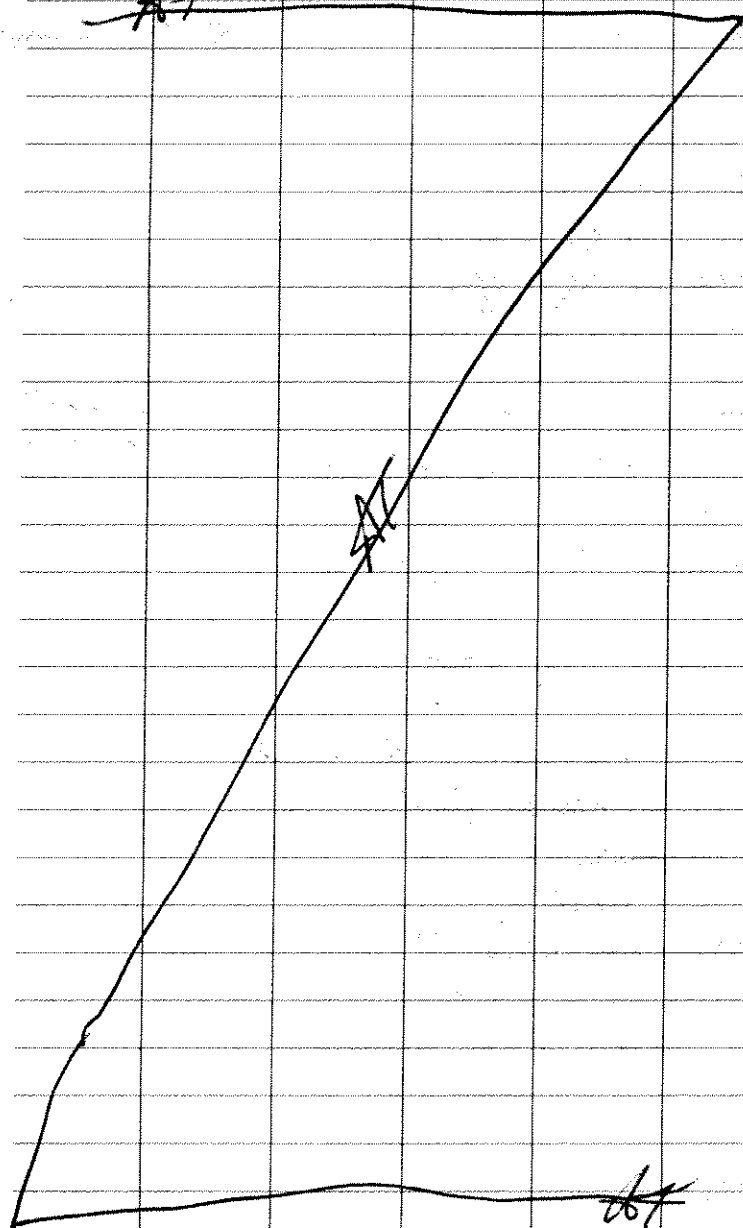
STRATIGRAPHY/OBSERVATIONS: LIGHT GRAY CLAY w/  
COARSE SHALE FRAGMENTS (MANY)

1145 - COLLECTED SOIL SAMPLE

1200 - COLLECTED MS/MSD FOR AI-BS-6

(18)

A1



(19)

10 OCT 02

1400 - COLLECTED GROUND WATER SAMPLE FROM HOLDING TANK USING METAL BAILER.

ANALYSIS: SVOC

SAMPLE DESIGNATION: <sup>PT.</sup> W-10 A1-BS-W10

COLLECTION METHOD: GRAB w/ EXCAVATOR BUCKET (CONFINED SPACE)

TYPE SAMPLE: SOIL

SAMPLE DEPTH: 5'

ANALYSES REQUIRED: SVOC, METALS  
LEAD  
ARSENIC  
CHROMIUM  
COBALT

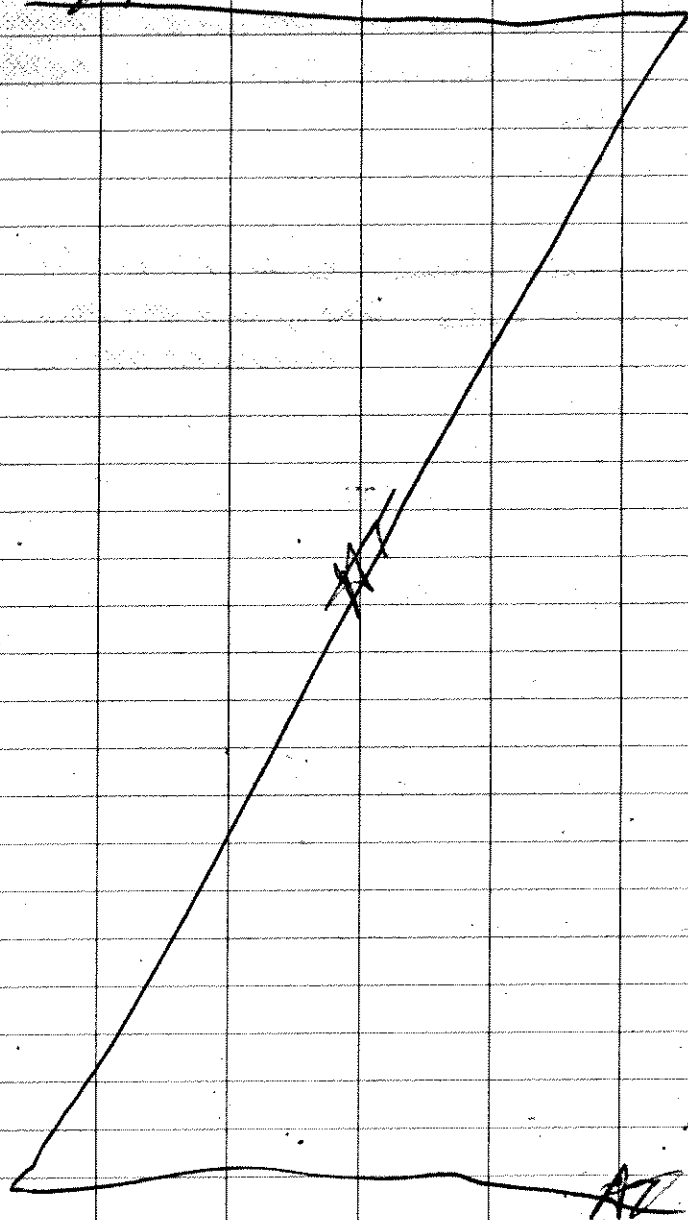
STRATIGRAPHY: DARK CLAY - WITH SOME COARSE SHALE FRAGMENTS. HEAVY COATING OF WHAT APPEARS TO BE OIL. STOPPED EXCAVATION DUE TO GROUND WATER AND WEATHERED SHALE. STRONG PETROLEUM ODOR.

1520 COLLECTED SOIL SAMPLE.



20

AT



10 OCT 02

(21)

SAMPLE DESIGNATION: A1-BS-7

COLLECTION METHOD: GRAB

TYPE SAMPLE: SOIL

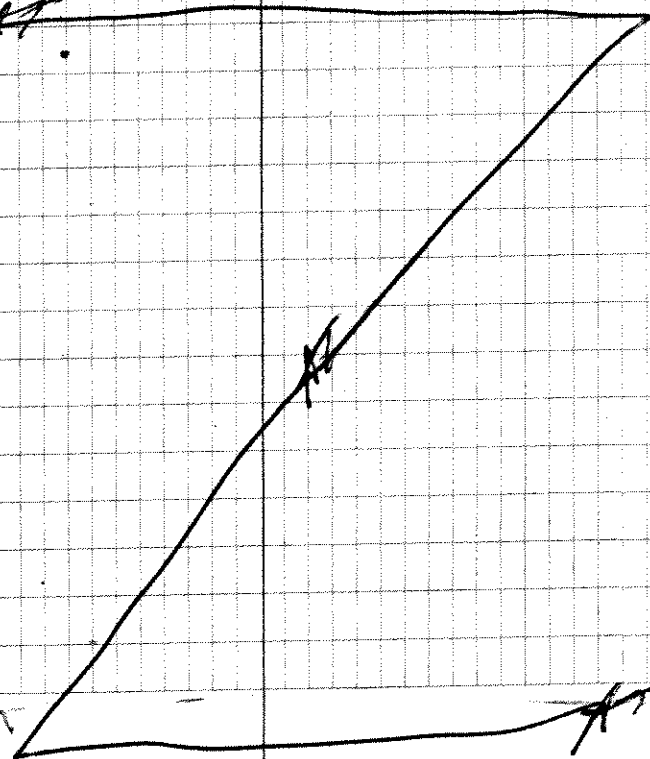
SAMPLE DEPTH: 5'

ANALYSES REQUIRED: SVOC, METALS (SMA)

STRATIGRAPHY/OBSERVATIONS: LIGHT GRAY CLAY  
WITH COARSE SAND FRAGMENTS

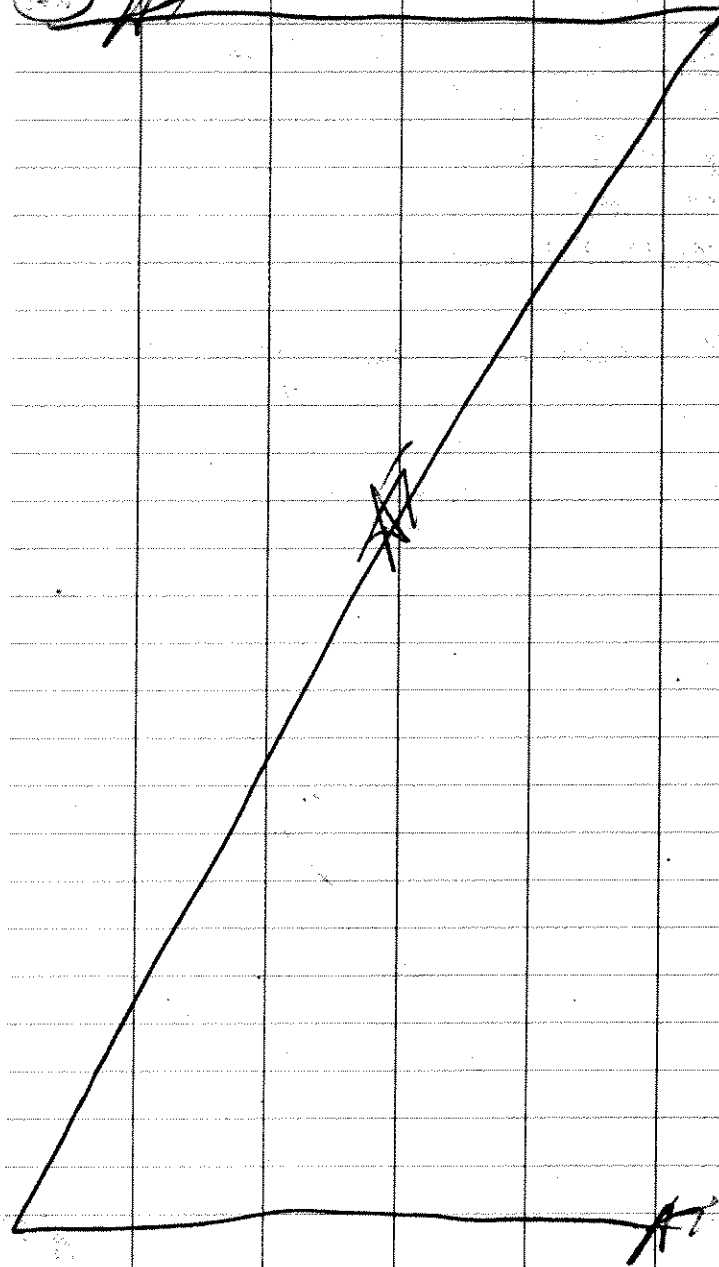
1620 COLLECTED SOIL SAMPLE

AT



22

AT



WVA-SIBERIA AKGM  
SOIL BIOREMEDIATION

(23)

NOV 02

WEATHER: 50°F CLEAR, SUNNY

LOCATION: AREA 1

COLLECTION METHOD: GRAB

TYPE OF SAMPLE: SOIL

ANALYSES REQUIRED: SVOC, METALS - LEAD, ARSENIC, CHROME  
COBALT

SAMPLE DESIGNATION: AI-WS-8

STRATIGRAPHY/OBSERVATION: SILTY CLAY LOAM  
WITH MANY COARSE SHALE FRAGMENT

SAMPLE DEPTH: APPROX. 3'

0915 COLLECTED SOIL SAMPLE:

0920 COLLECTED FIELD DUPLICATE: X-2

SAMPLE DESIGNATION: AI-BS-9

COLLECTION METHOD: GRAB

TYPE OF SAMPLE: SOIL

ANALYSES REQUIRED: SAA

STRATIGRAPHY/OBSERVATIONS: SILTY CLAY LOAM WITH  
MANY COARSE SHALE FRAGMENTS

SAMPLE DEPTH: 5'

0945 COLLECTED SOIL SAMPLE

(24)

NOCT 02

(25)

1000 COLLECTED FIELD RINGS BLANK

~~AREA 1 STOCKPILE - APPROXIMATELY  
300 CU YDS FOR  
POTENTIAL RE-USE~~

~~COLLECTION METHOD COMPOSITE~~

~~TYPE OF SAMPLE SOIL~~

~~ANALYSES REQUIRED:~~

~~AS~~



Watervliet Arsenal  
Res. Eng. Sampling Notes  
10/21/02 - 10/24/02

21 Oct. 02

Weather: Sunny 50°

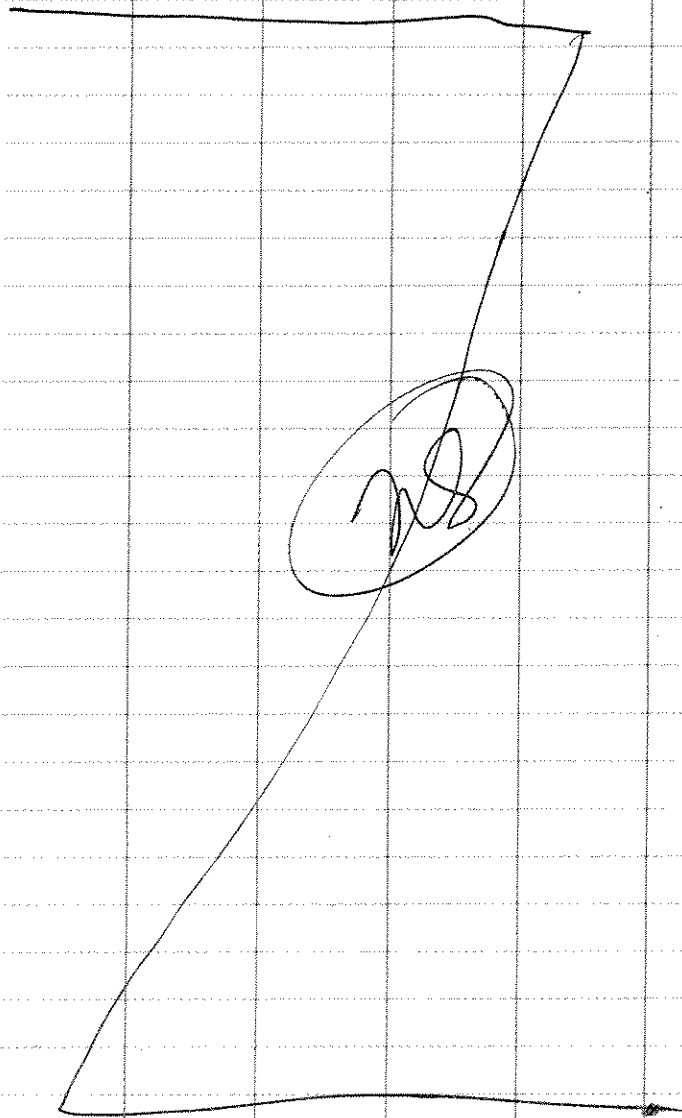
Location: Wetlands Enhancement  
Area (WEA) Area 9

Sample Designation	Type of Sample	Method	Sample Depth	Analysis Req'd	
A9-BS-1	Soil	Grab	1.5'	Pb, As, Cr, SVOCs	Brown Clay
A9-BS-2	↓	↓	↓	↓	Grey Clay
A9-BS-3	↓	↓	↓	↓	Grey Clay
A9-BS-4	↓	↓	↓	↓	Brown Organic Mat'l
Field Blank	Water	↓	↓	↓	

- All samples were taken at approx 8" - 12" B.G.

- Shipped FedEx overnight

- WEA - used 25' x 25' grid.



22 Oct. 02

Weather: 33° (@ time of sample collection)

- frost on ground

- all samples grabs unless noted

Sample ID	Time Collected	Matrix	Observations
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A9-BS-5	0800	Soil	- Organic mat'l w/ coarse stone - wet
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A9-BS-6	0810	Soil	- Org. mat'l w/ coarse stone
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A9-BS-7	0820	Soil	- Grey Clay w/ coarse stone
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A9-BS-8	0840	Soil	- Grey Clay w/ orange deposits
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A9-BS-9	1025	Soil	Clay / Org. Mat'l, small stones
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A9-BS-10	1035	Soil	Grey Clay, orange deposits
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A9-BS-11	1045	Soil	Grey Clay w/ orange deposits
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DUPE of A9-BS-11 (DUPE X-3)

29

(20)

All samples 1' B.G.

Sample ID	Time Collected	Matrix	Observations
A9-BS-12	1100	Soil	Wet, Grey Clay - clumpy
A9-BS-13	1130	Soil	Wet Clay w/ coarse stone
A9-BS-14	1140	Soil	Crumbly Clay, coarse stone
A9-BS-15	1150	Soil	Wet, gray clay w/ coarse stone
A9-BS-16	1200	Soil	Greenish / Gray Clay w/ orange deposits.
A9-BS-17	1300	Soil	Same as #16
A9-BS-18	1315	Soil	Dark Grey Clay w/ orange deposits
A9-BS-19	1345	Soil	Green / Gray Clay w/ orange deposits
A9-BS-20	1410	Soil	Green / Gray Clay w/ a lot of orange deposits & round cobbles

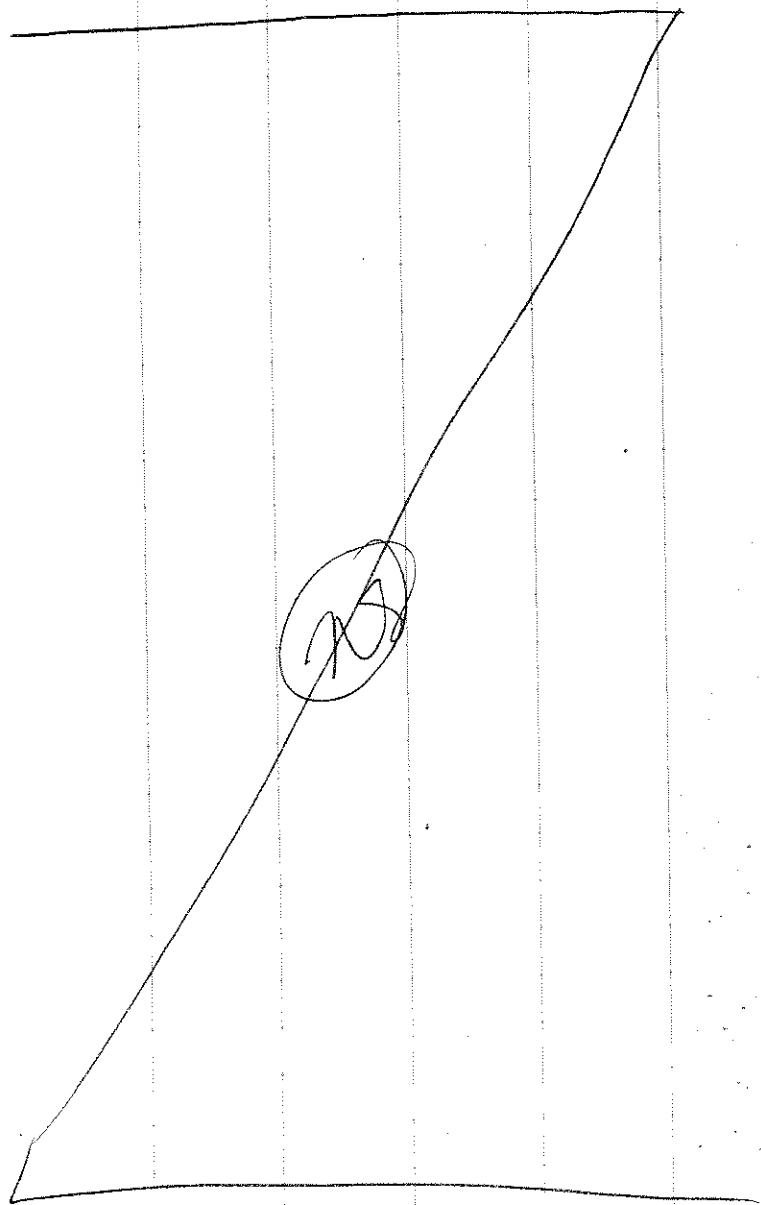
MS/MSD

(31)

Sample ID	Time Collected	Matrix	Observ.
A9-BS-21	1440	Soil	Clay w/ orange deposits & coarse stone
A9-BS-22	1450	Soil	SAA
<u>DUPED</u> (DUPE X-4)			
A9-BS-23	1500	Soil	Wet Clay / Organic Mat'l Mixture
A9-BS-24	1510	Soil	Wet, sloppy, dark mat'l w/ coarse stone
A9-BS-25	1520	Soil	Blue / Green clay w/ slight orange deposits

All samples collected 10/22/02  
were from Area 9.





23 Oct 02

Weather: 42° Overcast  
(Frost/Light Snow overnight).

Location: Area 11 (Excavation Confirm.)  
Dimensions: 11' x 159' x 2' D.

\* As per Daria N, Sidewall samples are not needed

\* Samples taken approx. every 30', along centerline of excavation.

\* All samples are 2' below grade

\* All samples are grabs < <sup>SVPCs</sup> PB, As, Cr

<u>Sample ID</u>	<u>Time</u>	<u>Matrix</u>	<u>Observations</u>
A11-BS-1	1230	Soil	Green/Grey Clay w/ orange deposits
A11-BS-2	1240	Soil	Grey/Black Clay w/ slight orange deposits
A11-BS-3 (~2' N of SS manhole)	1250	Soil	Sandy Mat'l w/ 2" minus stones, looks like imported fill
A11-BS-4	1300	Soil	Dark Grey & Green Clay w/ some orange deposits

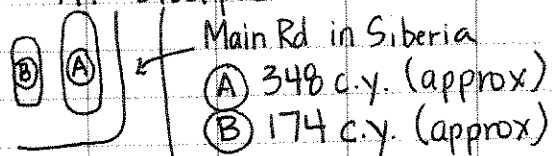
Sample ID Time Matrix Observations

1 A11-BS-5 1305 Soil Grey Clay w/  
black sand &  
weathered shale/  
stones.

A11-BS-6 1315 Soil SAA:  
DUPE - X-5

Stockpile samples of Areal material

- There are 2 stockpiles of material  
from Area 1. They will be designated  
as A1-Stockpile A and  
A1-Stockpile B



Sample ID Time

A1-Stockpile A-1 2:20 All samples consist  
A1-Stockpile A-2 2:30 of weathered shale &  
A1-Stockpile B-1 2:40 sandy mat'l

- All Stockpile samples are composites  
of 3 grabs. → analyzed for Pb, As, Cr

24 Oct 02

Weather: 45° Sunny  
(Frost Overnight)

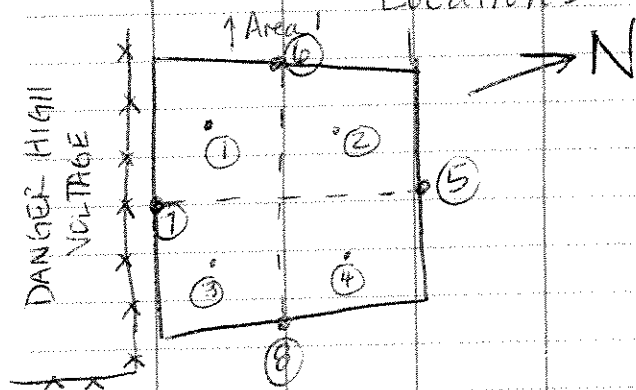
Area 2 (A):

- portion of Area 2 that is  
directly adjacent to Area 1
- Quantity of mat'l removed  
= 493 c.y. (approx)
- All samples are 4' B.G. (Bottom)
- All wall samples are 2' B.G.
- All samples are grabs
- All samples are analyzed  
for SVOCs & Pb, As, Cr

Sample ID	Time	Observations
A2-BS-1	1100	Grey Sand/Weathered Shale
A2-BS-2	1115	Grey Sand, Coarse Stone
A2-BS-3	1135	Brown Sand w/ Weathered Shale - WET
A2-BS-4	1145	Grey Sand w/ Coarse stone & Some clay

↑ DUPE X-6

Area 2 (A) - Sketch of Sample Locations



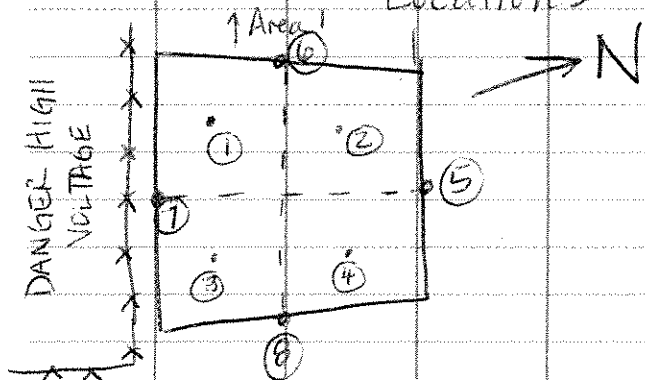
Area 2 (A) Wall Samples

Sample ID	Time	Observations
A2-WS-5 MS/MSD	1300	Sand w/ coarse stone & some clay
A2-WS-6	1310	Brown Sand/Clay w/ coarse stone
A2-WS-7	1320	Brown Sand w/ weathered shale
A2-WS-8	1330	Clay w/ coarse stone

o Samples shipped via FedEx



# Area 2 (A) - Sketch of Sample Locations



## Area 2 (A) Wall Samples

Sample ID	Time	Observations
A2-WS-5 MS/MSD	1300	Sand w/ coarse stone & some clay
A2-WS-6	1310	Brown Sand/Clay w/ coarse stone
A2-WS-7	1320	Brown Sand w/ weathered shale
A2-WS-8	1330	Clay w/ coarse stone

Samples shipped via Fed Ex

28 Oct. 02

Weather: 40° P. Cloudy

## Area 9 Confirmation Samples - 2nd Round.

Locations: Same as samples A9-BS-6, 7, 8 & 18, one (1) foot below orig. locations.

Sample ID	Time	Depth	Observations
A9-BS-6B	1110	2' B.G.	Sand / Clay w/ coarse stones & organic mat'l
A9-BS-7B	1120	2' B.G.	Clay w/ coarse stone & sand.
A9-BS-8B	1155	2.5' B.G.	Dark Grey Clay w/ orange deposits
A9-BS-18B	1205	2' B.G.	Green/Gray Clay w/ orange deposits.

- All above samples are grabs, taken 8"-10" B.G.s. Analyzed for Pb, As, Cr & SVOCs.

WVA- Sampling Log

10/28/02 - 10/31/02



- The following samples are composites of 3 grabs, and are being analyzed for Pb, As, Cr. J

Sample

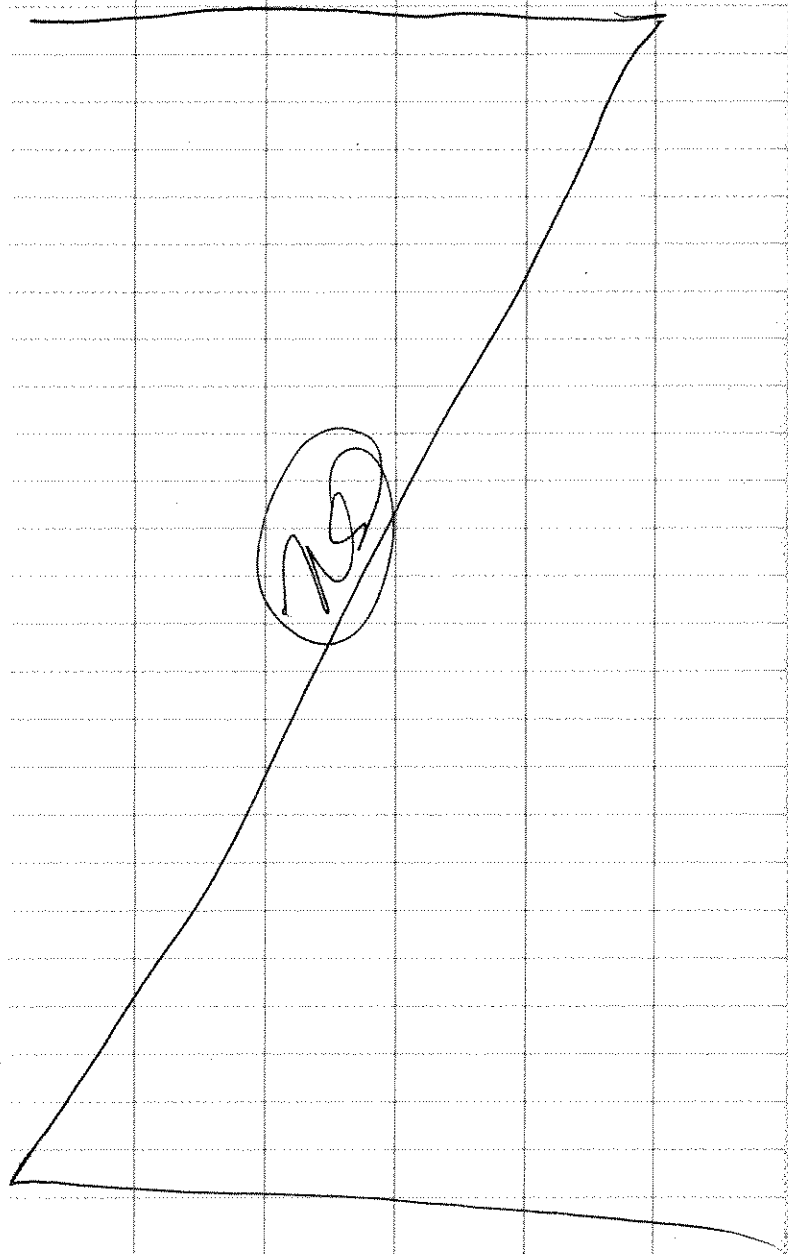
Water Sample - from holding tank containing GW from Area 2.

Sample ID:

A2-Water-10/28/02  
Comp., taken @ 1420  
Analyze: PAHs

- All samples are grabs, soils, analyzed for SVOCs, Pb, As, Crns

<u>Sample ID</u>	<u>Time</u>	<u>Depth</u>	<u>Observations</u>
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29 Oct. 02

Weather: Sunny 42°

Location: Area 2 (Section (B))

- All samples:

· grabs

· soil

· analyzed for SVOCs only

<u>Sample ID</u>	<u>Time</u>	<u>Depth</u>	<u>Observ.</u>
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A2-BS-13	1010	4' B.G.	Grey Clay w/ slight petro. odor
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A2-BS-14	1020	4' B.G.	Grey Clay w/ orange deposits - wet
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A2-BS-15	1025	4' B.G.	Wet Clay coarse stone w/ slight petro. odor
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A2-BS-16	1030	4' B.G.	Coarse stone & sand w/ mixed fill debris (bricks, etc.)
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Sample ID	Time	Depth	Observation
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A2-BS-17	1245	4' B.G.	Sand and shale
A2-BS-18	1300	4' B.G.	Sand, stone & weathered shale.
<sup>WS<sub>ms</sub></sup> A2-BS-19 - East Wall West	1310	2' B.G.	Brown sand & weathered shale.
A2-WS-20 - South Wall DUPE X-B	1320	2' B.G.	Sand/Clay & weathered shale
A2-WS-21 ms/msd East Wall (approx. center)	1400	3' B.G.	Clay & Black Sand w/ strong petroleum odor
A2-WS-22 East Wall (~10' from N wall)	1435	2' B.G.	Sand & weathered shale
A2-WS-23 North Wall	1445	2' B.G.	Sand/shale

31 Oct 02

Weather: Sunny 42°

Location: Area 9 (Wetlands Enhancement Area)

- Sample A9-BS-8B, taken on 10/28/02, exceeded COA's for As (29 mg/kg).  
Another 1-foot excavation was made today in the vicinity of that sample location

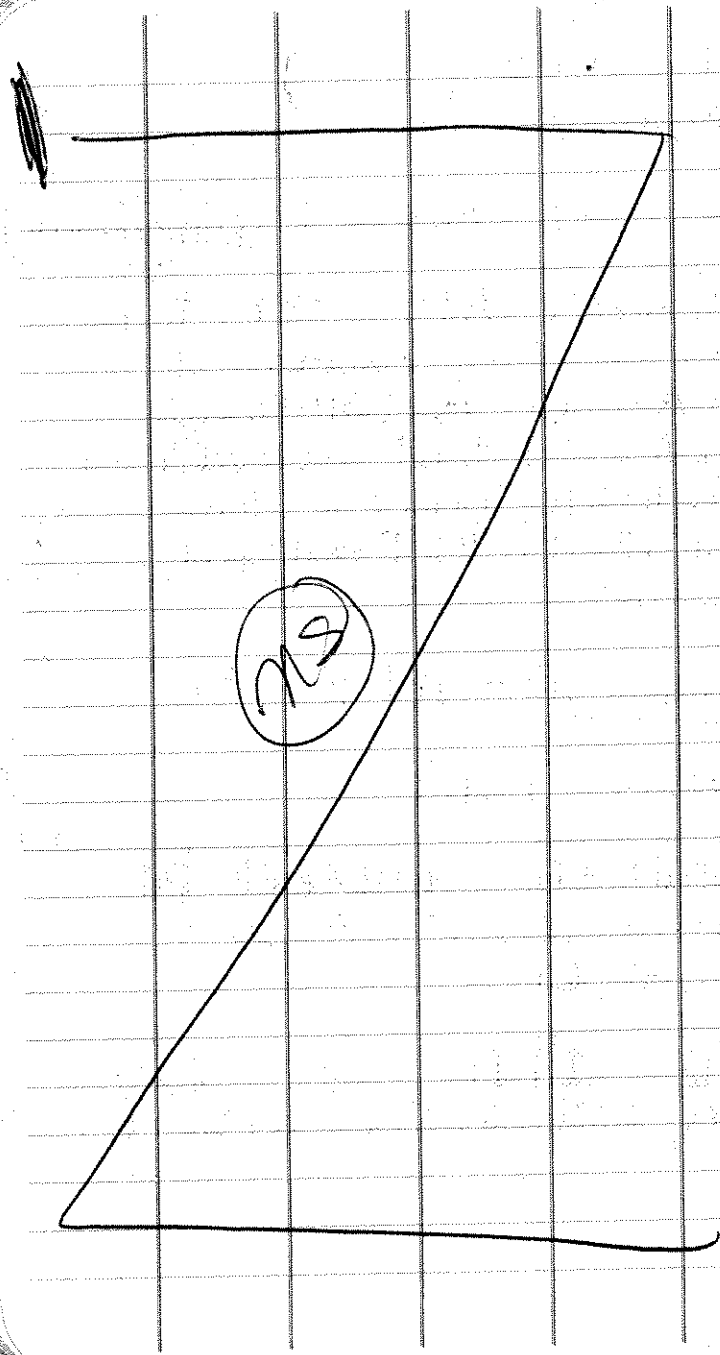
Sample ID - A9-BS-8C

Time - 1315

Grab soil sample to be analyzed for SVOCs & Pb, As, Cr.

Observations - Grey clay w/ orange deposits.





5 Nov 02

Weather: 40° Overcast

Location: Area 6 <sup>Analyze for</sup>  
 (starting in SW corner) <sup>svocs only</sup>  
 - All samples are ~1' B.G.

Sample ID	Time	Observations
Ab-BS-1	0910	Sand/Coarse Stone
Ab-BS-2	0915	"
Ab-BS-3	0920	Dark Sand/Coarse Stone
Ab-BS-4	1350	"
Ab-BS-5	1400	Sand/Coarse Stone
Ab-BS-6	1420	"
Ab-BS-7	1430	"
DUPEX-9		
Ab-BS-8	1500	"
Ab-BS-9	1510	Clay/Sand & Coarse Stone
Ab-BS-10	1515	Stone/Sand Mix
Ab-BS-11	1520	"

RE  
 sampling  
 log  
 1/4-11/8

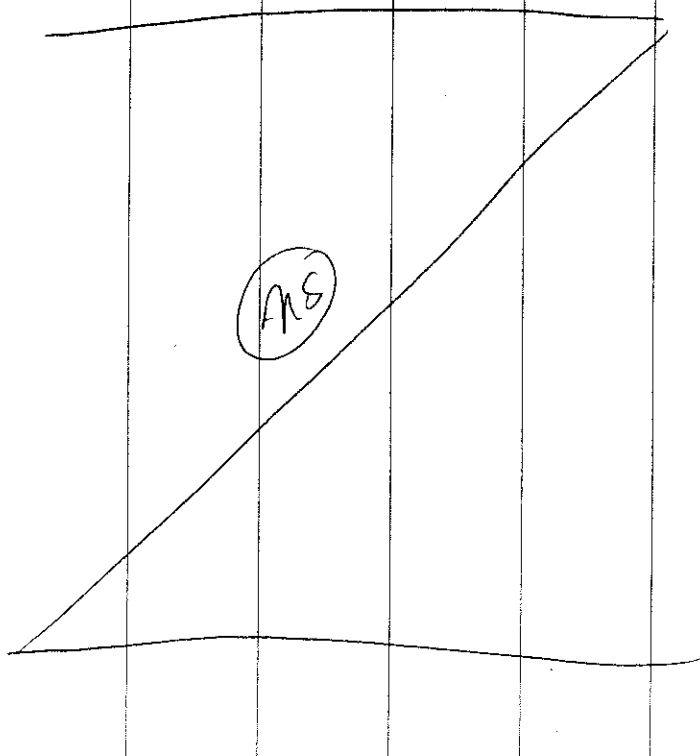


Sample ID	Time	Observations
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Ab-BS-12	1340	Weathered Shale - could only get 1-2" B.G.
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Ab-BS-13	1550	Sand / Coarse Stone
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Ab-BS-14	1555	Clay / Sand ? Weathered Shale
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8 Nov. 02

Weather: 38° (AM)

Location: Area 6 - Resample

SAMPLE ID	TIME	OBSERV.
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Ab-BS-2B	0845	Wet, weathered shale,
----------	------	-----------------------

Ab-BS-3B	0850	Sand ? weathered shale
----------	------	---------------------------

\* The above samples were ~2' B.G. @ the location of failing samples Ab-BS-2 and Ab-BS-3.

\* Both samples will be analyzed for PAHs only.

Weather: 45° Sunny

Location: Area 1 stockpile -  
Mat'l Requiring offsite  
disposal

SAMPLE ID	TIME	OBSERVATIONS
-----------	------	--------------

AI-OFFSITE S.P.-1 G 1045 1045-1048	Strong odor, mixed mat'l's - sand, stone
--	--

AI-OFFSITE S.P.-2 G 1055 1055-1100	"
--	---

AI-OFFSITE S.P.-3 G 1105 1105-1110	"
--	---

AI-OFFSITE S.P.-4 G 1120 1120-1125	"
--	---

\* All above samples will be analyzed for Full TCLP. One jar per sample is a grab for VOC analysis. All other sample aliquots are composites of 3 grabs.

Weather: 48° Breezy

Location: Area 6 - N end,  
adjacent to perimeter  
road

\* All of the following samples are grabs taken at 1' B.G. (6-10" B.G.s.) and will be analyzed for PATTs

Sample ID	Time	Observations
-----------	------	--------------

Ab-BS-15 -DUPE X-10	1220	Sand & Coarse Stone
------------------------	------	------------------------

Ab-BS-16	1225	Sand, coarse stone/shale & orange dep.
----------	------	--

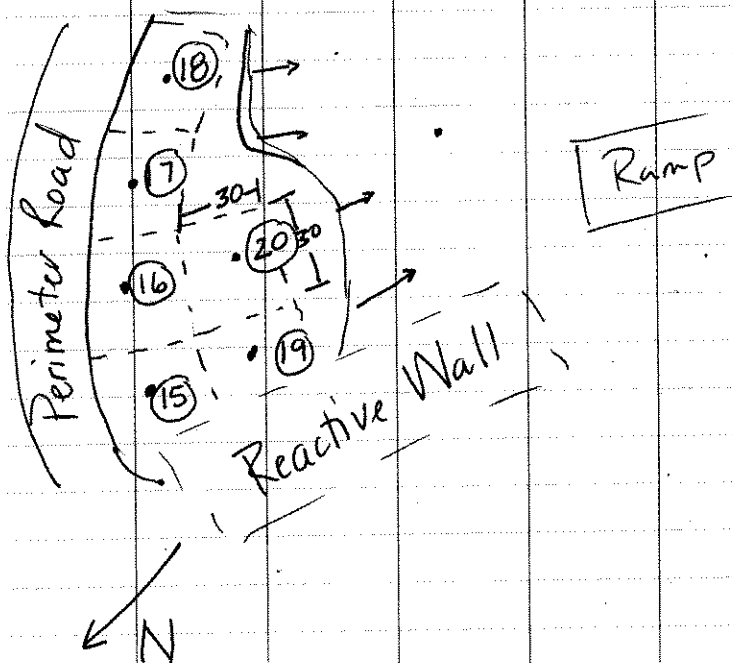
Ab-BS-17	1230	Moist sand & Weathered shale
----------	------	------------------------------------

Ab-BS-18	1235	Sand & Coarse Stone
----------	------	------------------------

Sample ID	Time	Observation
A6-BS-19	1420	Dry sand & coarse stone

A6-BS-20	1425	Sand, coarse stone & weathered brick.
----------	------	---------------------------------------

Sketch of Sample (Not to Scale)  
Locations (A6-BS-15 thru 20)

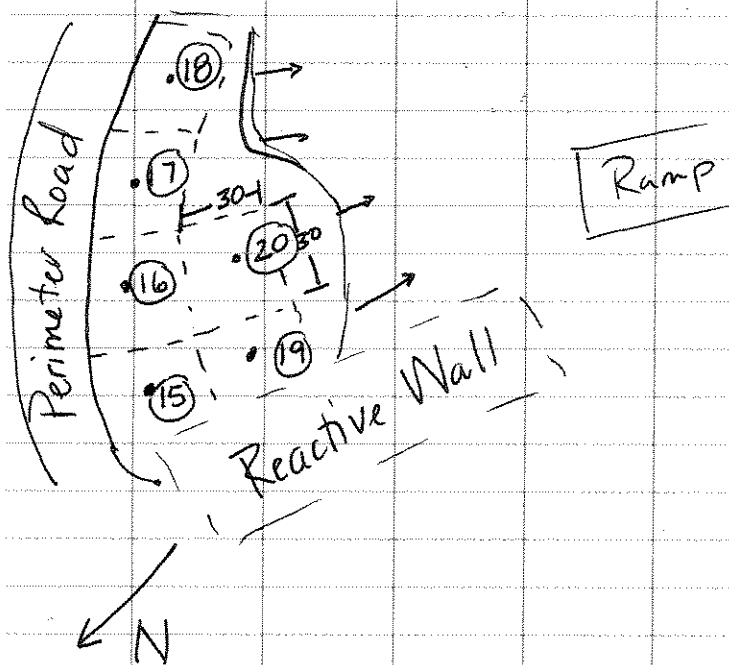


Sample ID	Time	Observation
-----------	------	-------------

A6-BS-19	1420	Dry sand & coarse stone
----------	------	-------------------------

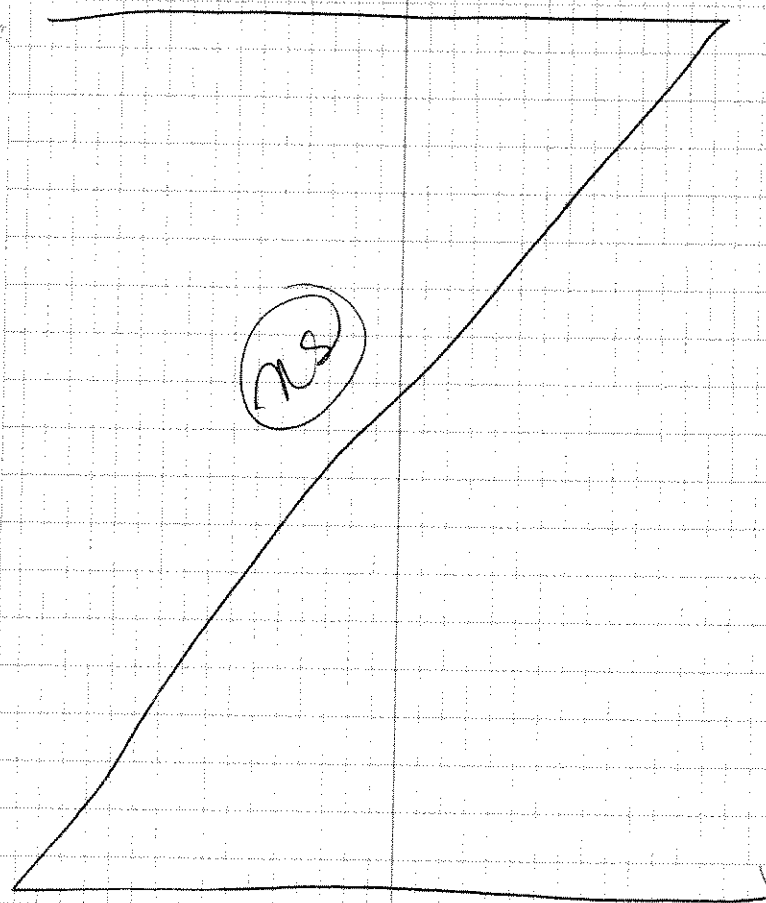
A6-BS-20	1425	Sand, coarse stone & weathered brick.
----------	------	---------------------------------------

Sketch of Sample (Not to Scale)  
Locations (A6-BS-15 thru 20)



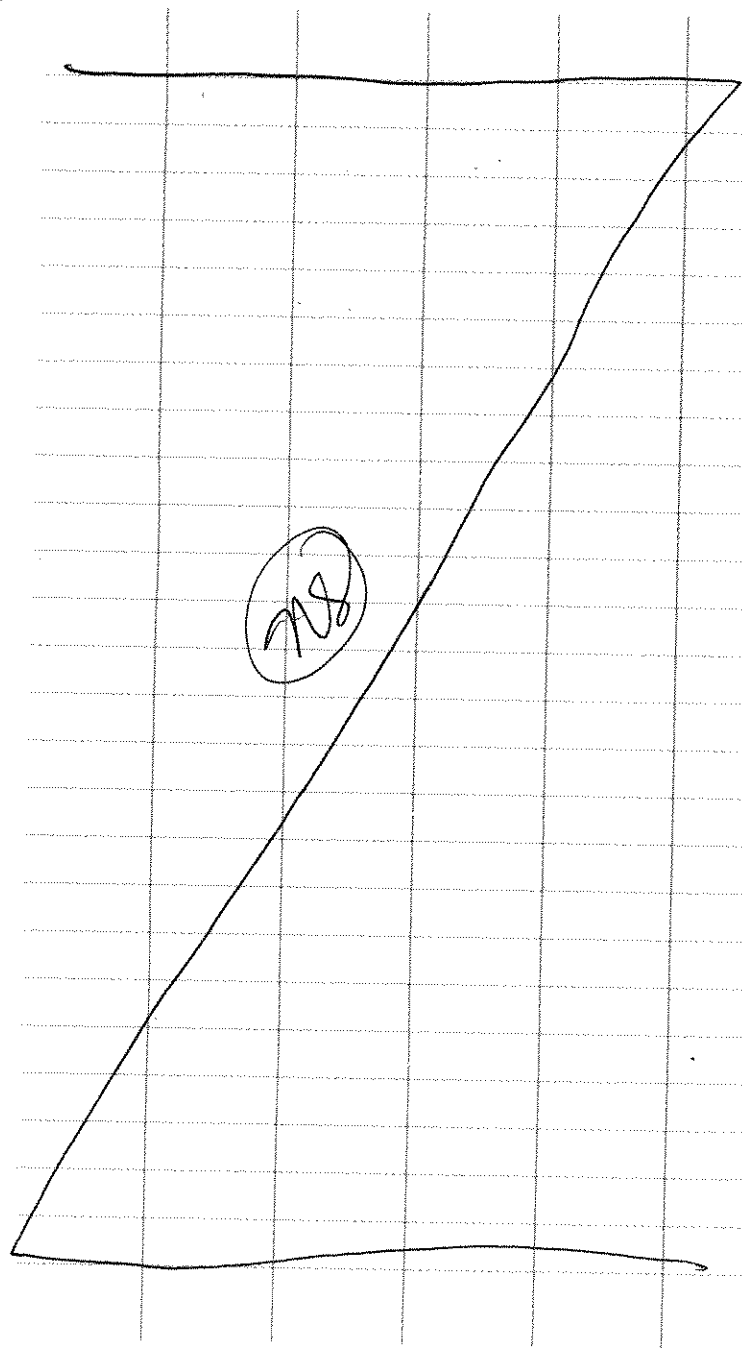
12 Nov. 02

Sample ID: A2-Water 11/12/02  
Sampled @ 1435  
Composite  
Analyze for PAtHs



Sampling  
Log  
Notes  
11/12/02  
11/13





13 Nov 02

Weather: Light Rain 420

Location: Area 6

- All samples are soils, grabs taken 1' B.G. (6-8" deep)
- All samples will be analyzed for SVOCs (PAH) only.

Sample ID Time Observations

A6-BS-21 0900 Sand & Coarse Stone

A6-BS-22 0910 "  
-DOPE X-11

A6-BS-23 0915 "

A6-BS-24 0920 "

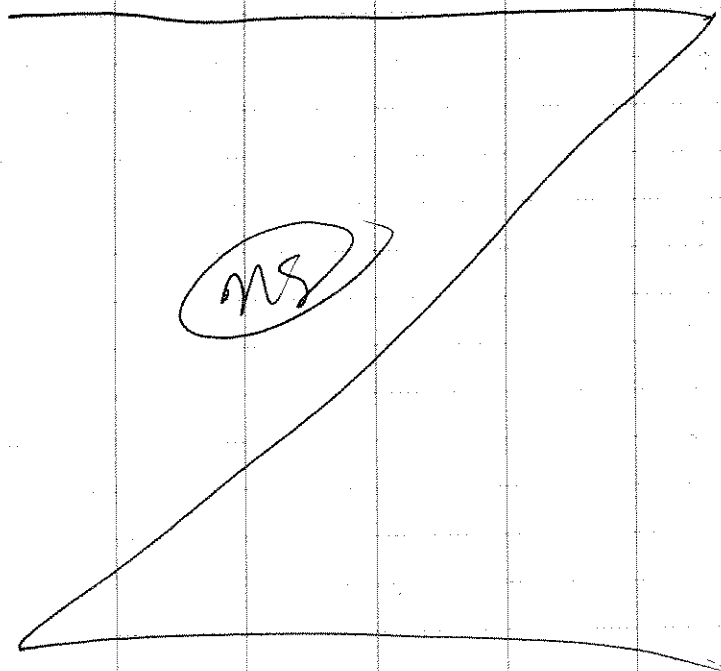
A6-BS-25 1340 "

A6-BS-26 1345

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
A6-BS-27	1415	Sand & Coarse Stone
A6-BS-28	1425	"
A6-BS-29	1430	Sand, stone & some clay-wet
A6-BS-30 <u>-MS/MSD</u>	1435	"

# R.E. Sampling Notes

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
A6-BS-27	1415	Sand & Coarse Stone
A6-BS-28	1425	"
A6-BS-29	1430	Sand, stone & some clay - wet
A6-BS-30	1435	"
<u>-MS/MSD</u>		



21 Nov. 02  
Location - Area 6

@ location of sample  
A6-BS-3B

Sample ID: A6-BS-3C

Time taken: 1340

- Analyze for SVOC (PAH)

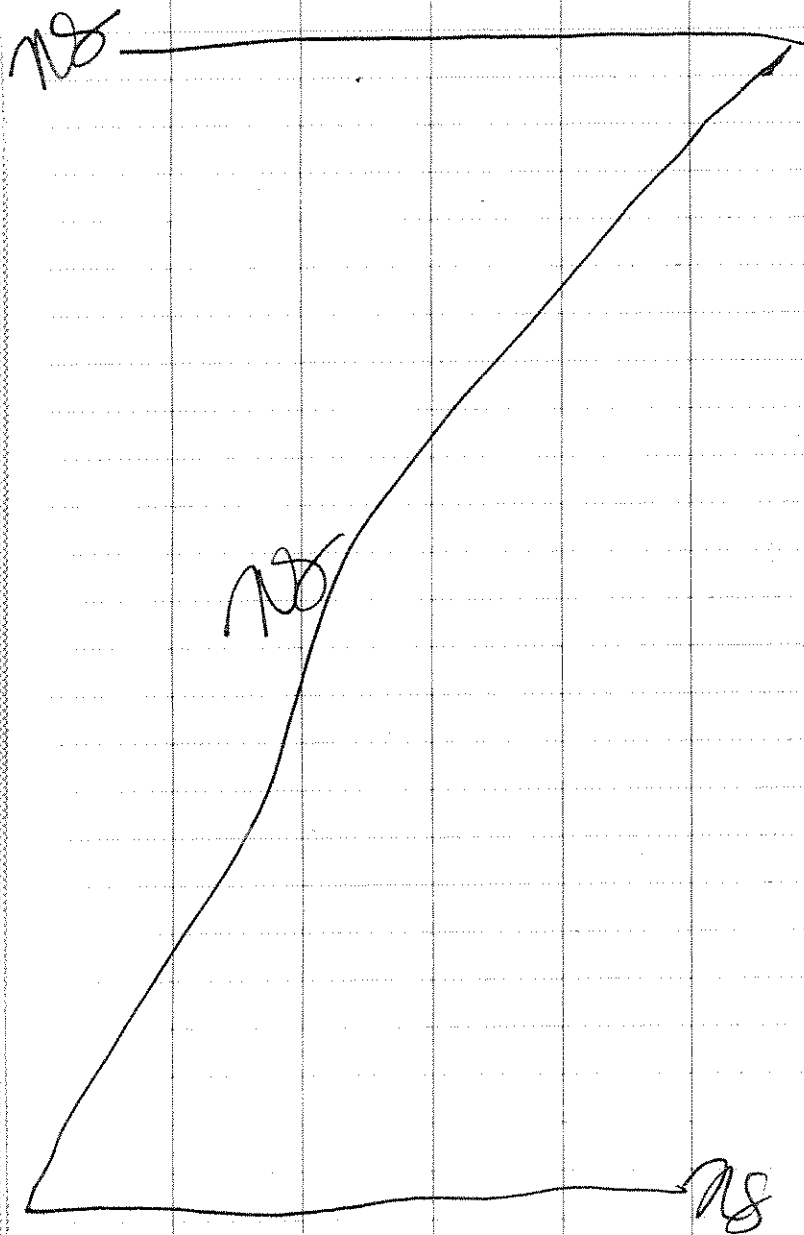
- Sample taken 3' B.G.

- Wet stone/sand & some clay.

- Shipped via Fed Ex,  
with one week TAT.

- Due to possibility of water  
being groundwater, excavation  
was backfilled immediately  
after sample was taken.  
(Cannot go deeper, even if  
sample results are high).

# Sampling log 12/2-12/6



2 Dec. 02

Location: Area 6

Weather: Windy 22°

Note: Bottom of Area excavated on 11/27 is frozen.

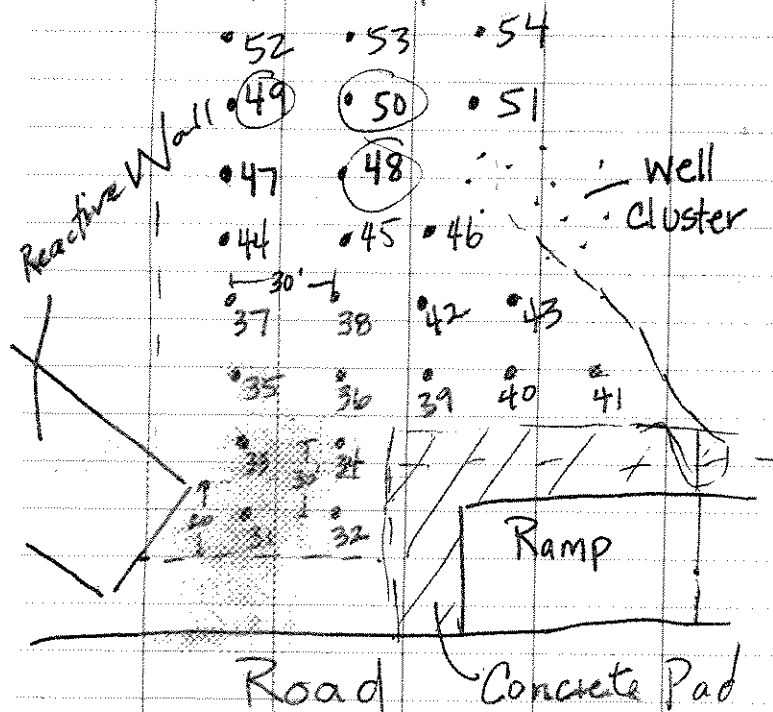
Sample ID Time Observations

Ab-BS-31	1246	Sand & coarse shale. Some clay.
→ DOPE X-12		
Ab-BS-32	1310	Sand & Shale
Ab-BS-33	1315	"
Ab-BS-34	1320	"
Ab-BS-35	1335	Sand & coarse stone
Ab-BS-36	1346	"
Ab-BS-37	1345	Sand & Weathered Shale.
Ab-BS-38	1350	"

- All above samples were taken @ a depth of 6-12". Exc. depth = 1'
- All samples are Grabs will be analyzed for SVOC (PAH)



## Sketch of Sample Locations



<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
A6-BS-39	1440	Weathered Shale
A6-BS-40	1445	Sand & Shale
A6-BS-41	1447	"
DOPE X-13		
A6-BS-42	1455	"
A6-BS-43	1500	"

Location: Area 9.

A9-BS-26:

- Taken in "notch" of Area 9 - W end
- Analyze for metals & SVOC
- Taken ~ 1' B.G. (12" ↓)

Time: 1510

A9-BS-27:

- Taken ~~under old access road~~ in "notch" E end
- Analyze for metals & SVOC
- Taken ~ 1' B.G. (12" ↓)

Time: 1515

A9-BS-28:

- Taken under old access road

Time: 1520

NS

NS

NS

4 Dec. 02

Location: Area 6

See sketch  
on 12/2 for  
sample loc.

- Excavation depth = 1
- Samples taken 8-12" BGS
- Analyze for SVOCs only

Sample ID Time Observations

A6-BS-44	1110	Sand & coarse stone - frozen
A6-BS-45	1120	Sand & ms/msd weath. shale
A6-BS-46	1125	"
A6-BS-47	1130	Sand & Rust colored coarse stone
A6-BS-48	1315	Sand & coarse stone
A6-BS-49	1320	"
A6-BS-50	1330	"
A6-BS-51	1340	Sand / stone w/ petroleum odor.
DUPE X-14		

NS

NS

NS

5 Dec 02

Weather: 17° Overcast  
Starts snowing @ 1100

Location: Area 9 "notch"  
in same location  
as samples A9-BS-26  
& 27 (2' B.G.)

Sample ID Time Observation

A9-BS-26 B 1010 Sand & clay  
(had blue pieces ??) w/ coarse stone

A9-BS-27 B 1015 "

- Analyze for metals (As, Pb, Cr)  
and SVOC (PAH)

NS

NS

NS



Location: Area 6

- Samples taken in locations of failing samples after add'l 1' excavation.
- Analyzed for SVOC's
- Excavation 2' B.G.

<u>Sample ID</u>	<u>Time</u>	<u>Observation</u>
A6-BS-22B	1145	Sand w/ coarse stone
A6-BS-18B	1150	Green-blue clay w/ some sand & stone
A6-BS-25B	1415	Sand & coarse stone
A6-BS-23B DUPE X-15	1340	Sand & coarse stone
A6-BS-29B	1345	Shale & Sand.

Location: Area 6 Testpit

- Testpit in between locations of samples A6-BS-15/16/19/20

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
A6-TP1 (2) - 2' depth (3' total)	1055	Gray clay / sand interface. Strong petroleum odor.
A6-TP2 (3) - 3' depth (4' total) → Cannot see water table @ this depth	1100	Greenish gray clay w/ blue-green mottling. Petroleum odor.



Location: Area 6  
(see sketch on 12/2  
for sample locations)

- Analyze for SVOCs  
only

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
A6-BS-52	1425	Sand & coarse stone.
A6-BS-53	1430	Sand & light brown clay.
A6-BS-54	1435	Sand, coarse stone & crushed brick.

NS ————— NS

NS ————— NS

6 Dec. 02

Weather: 32° Overcast

\* 3" snow on ground  
from storm yesterday

Location: Area 2 (section C)  
- small piece

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
------------------	-------------	---------------------

Not sampled  
today because  
excavation was not  
complete until 3:00 pm.

\* All above samples were grabs, 1' B.G.  
analyzed for SVOCs.

Location: Area 6

Sample ID Time Observations

A6-BS-55 1355 Sand & coarse  
stone

A6-BS-56 1400 "  
DUPE X-16

A6-BS-57 1405 Sand & blue-grey  
ms/msd weathered shale

A6-BS-58 1415 Sand w/ 90%  
weathered shale

A6-BS-59 1410 Sand & Coarse  
stone

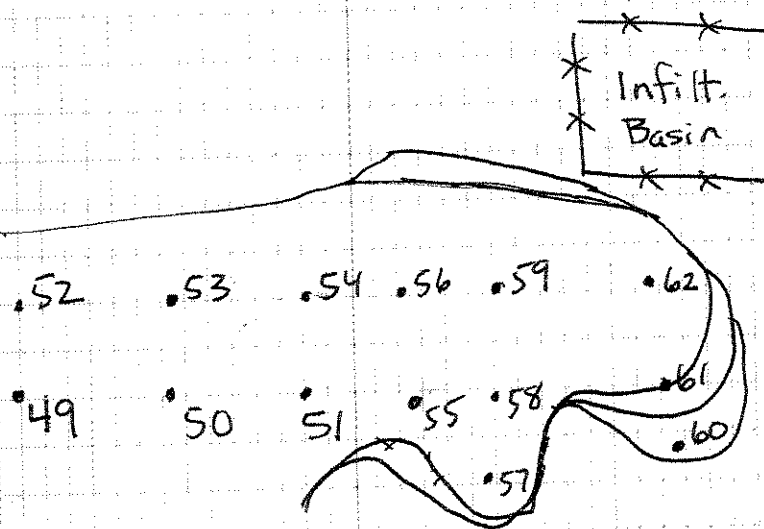
A6-BS-60 1420 Sand & weathered  
shale

A6-BS-61 1423 Sand & stone +  
decayed wood?

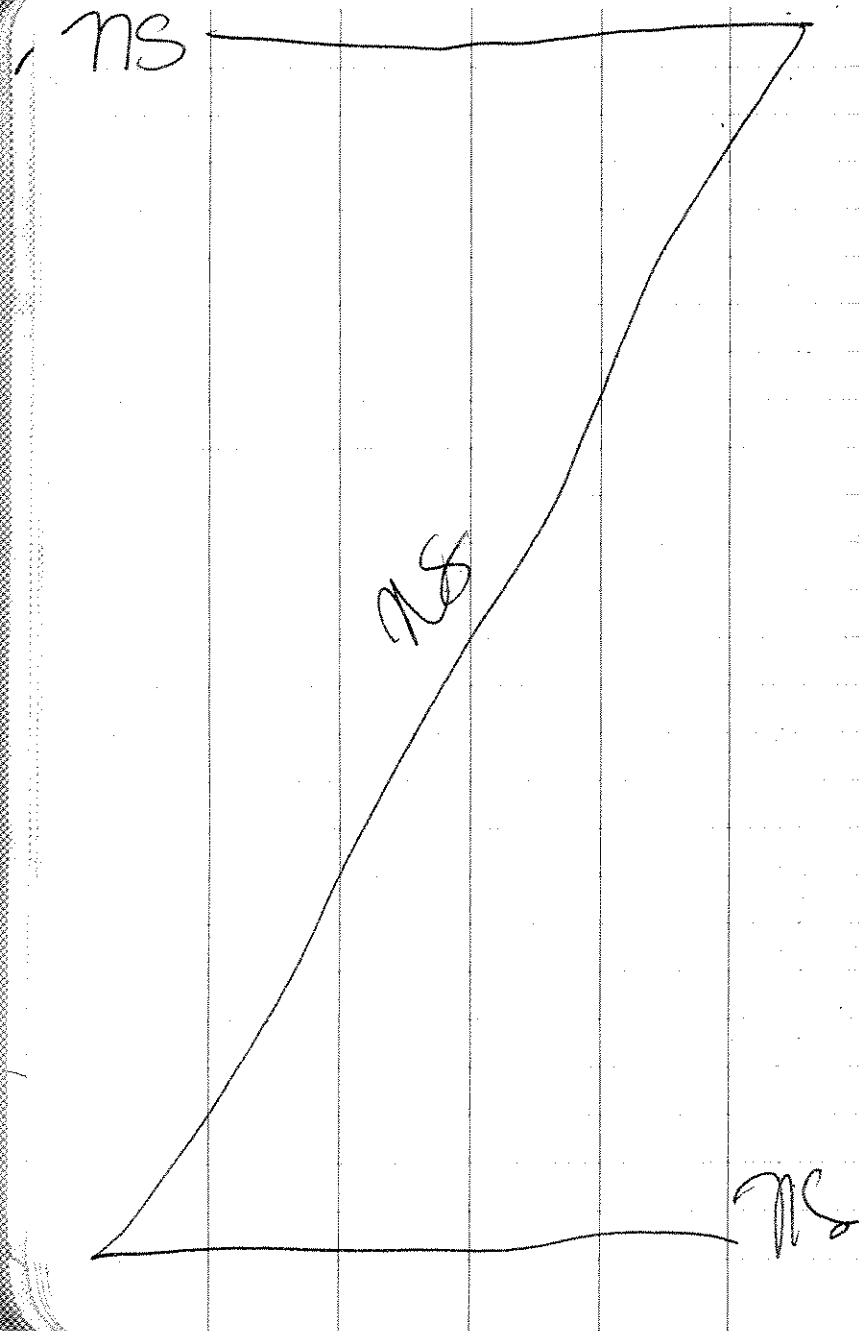
A6-BS-62 1425 Shale - wet w/  
some sand

Sketch of Sample Loc.

\* Not to Scale \*



# RE Sample log



9 Dec 02

Weather: COLD! 10°

Location: Area 6 @  
location of samples  
A6-BS-48 → 50

Sample ID Time Observation

A6-BS-48B 1110 Sand:  
weath. shale

A6-BS-49B 1115 "

A6-BS-50B 1120 "

\* Above samples were taken  
~12" bgs (excavation 2'  
depth)  
- Analyze for SVOCs only.



Location : Area 2©

\*Analyze for SVOC (PAH)

<u>Sample ID</u>	<u>Time</u>	<u>Observation</u>
------------------	-------------	--------------------

A2-WS-24 NW Wall 1.5' B.G.	1245	Sand & shale w/ some grey clay
----------------------------------	------	--------------------------------------

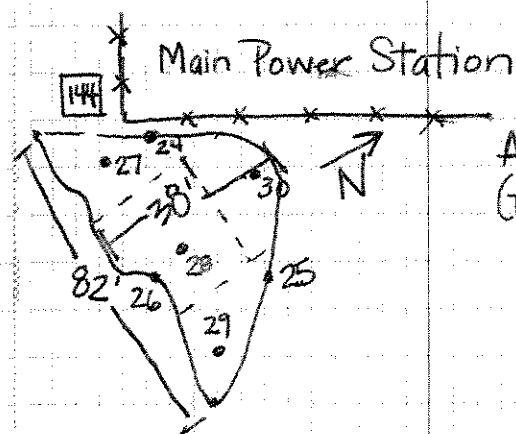
A2-WS-25 NE Wall DUPE X-17 2' B.G.	1250	Brown sand & coarse stone
---	------	------------------------------

A2-WS-26 SW Wall 2.0' B.G.	1300	Sand & coarse stone
----------------------------------	------	------------------------

NS ————— NS

NS ————— NS

Sketch of Area 2©

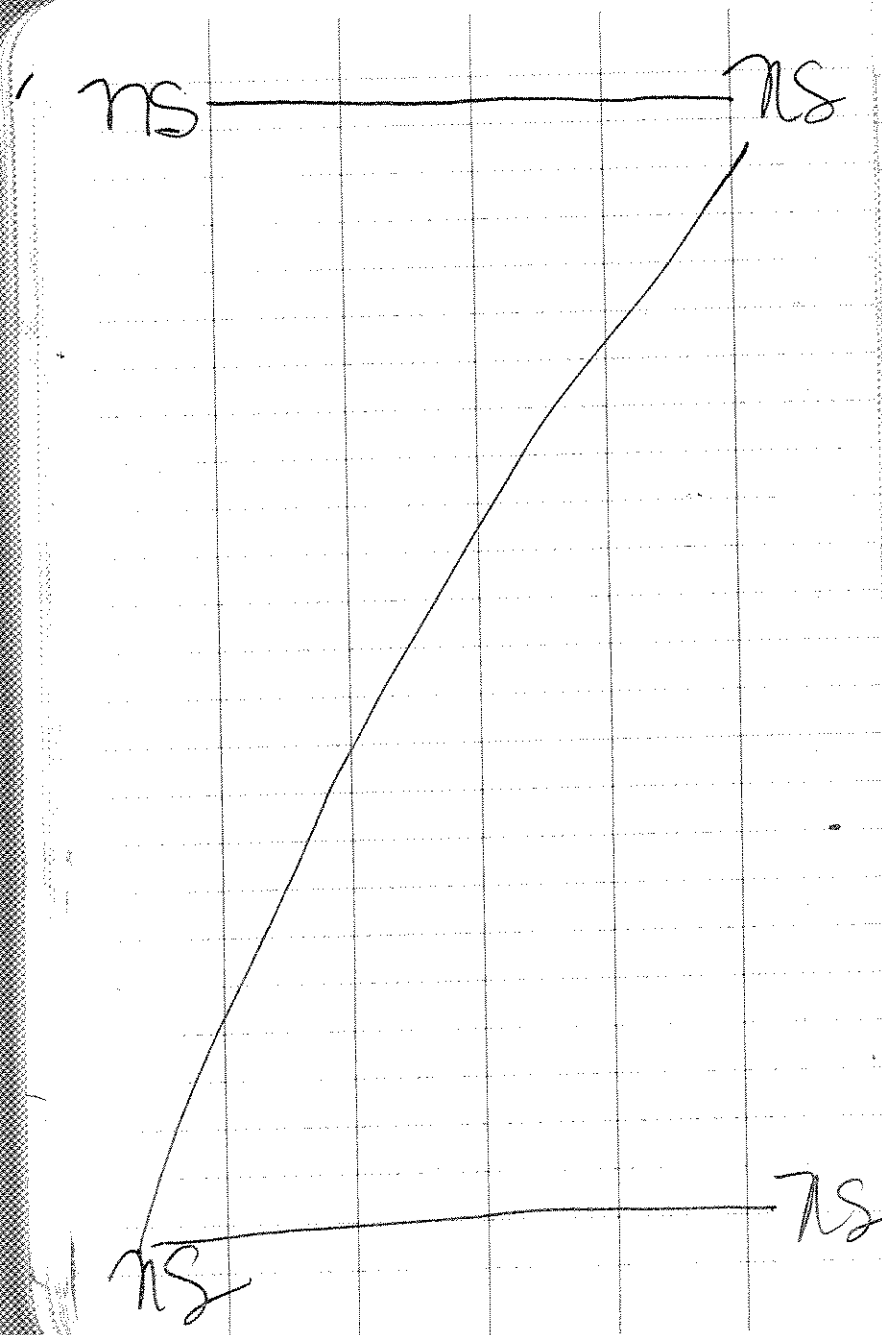


Approx dimensions  
(paced off)

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
------------------	-------------	---------------------

A2-BS-27	4 <sup>ms</sup> 1310	Grey clay & shale
A2-BS-28	4 <sup>ms</sup> 1315	Sand/stone w/ petroleum odor
A2-BS-29	1420	Wet sand & shale - sheens Petro. odor
A2-BS-30	1425	Wet sand & black coarse stone - sheens strong Petro. odor





10 Dec. 02

Onsite: <sup>NS</sup>

Weather: 20° Sunny

Location: Area 9 notch

Sample ID: A9-BS-26C

Time: 1030

- Analyze for SVOCs & As, Pb, Cr
- Sample is green/gray clay w/ rust colored deposits.

Location: Area 6

Sample ID Time Observations

A6-BS-22<sup>NS</sup><sub>C</sub> 1415 Weathered shale & sand  
- wet

A6-BS-25<sup>NS</sup><sub>C</sub> 1420 Shale & brown clay - wet

\* Exc. depth = 3.5' - just above GW

Location: Area 6

Sample ID Time Observations

A6-BS-15B 1515 Black sand w/  
grey clay. Strong  
odor.

A6-BS-16B 1510 Grey clay w/  
ms/msd  
greenish dep-  
osits

A6-BS-19B 1455 Dk. brown  
sand & clay  
DUPE X-18 mix.

A6-BS-20B 1500 Dk gray clay  
& weathered  
shale. Slight  
odor

NS

NS

NS

NS

11 Dec. 02  
Weather: 30° Cold, Overcast

Location: Area 9/11 Stockpile

Sample ID Time Observations

A9/11 SP-1 1040 Sand/Stone

A9/11 SP-2 1045 Sand & Clay

A9/11 SP-3 1047 Sand/Stone

A9/11 SP-4 1050 Sand, weath.  
shale

A9/11 SP-5 1053 Sand/Stone

A9/11 SP-6 1105 Sand & Clay

A9/11 SP-7 1110 Sand, stone  
& lt. brown clay

A9/11 SP-8 1115 Sand & clay/  
DUPE X-19

A9/11 SP-9 1120 "

A9/11 SP-10 1125 "

Area 9 + 11 Quantities  
(Estimated):

Area 9:	627
Area 11:	206
- Access Rd:	10.7
A9 Notch:	106.7
	<hr/> 26.7

977.1 c.y

∴ 10 composite samples

Stockpile samples  
are to be analyzed  
for As, Pb, Cr.

3 grab composites

Location: Area 6

Sample ID: AL-BS-61B

Time: 1300

- Exc. is 2' deep
- Analyze for SVOCs
- Sand, coarse stone; some weathered shale

# Area 9 + 11 Quantities (Estimated):

Area 9 : 627  
Area 11 : 206  
Access Rd: 10.7  
A9 Notch: 106.7  
26.7

977.1 c.y

∴ 10 composite samples

Stockpile samples  
are to be analyzed  
for As, Pb, Cr.

3 grab composites

Location: Area 6

Sample ID: AL-BS-61B

Time: 1300

- Exc. is 2' deep
- Analyze for SVOCs
- Sand, coarse stone; some weathered shale

16 Dec 02

Weather - 35° light snow

Area 6 - @ location  
of Samples AL-BS-49 & 49B  
(Depth = 3' B.G.)

Sample ID: AL-BS-49C

Sampling Log



# Sampling Notes

31 Dec 02

Location: Area 5

Weather: 35° Overcast  
Rain on: off.

- All samples are grabs & will be analyzed for SVOCs & As, Pb, Cr
- Excavation depth = 2' Samples taken 6-12" below bottom.

Sample ID   Time   Observations

A5-BS-1   1140   Sand w/  
coarse stone

A5-BS-2   1150   "

A5-BS-3   1155   Wet sand &  
stone w/brick

A5-BS-4   1205   "

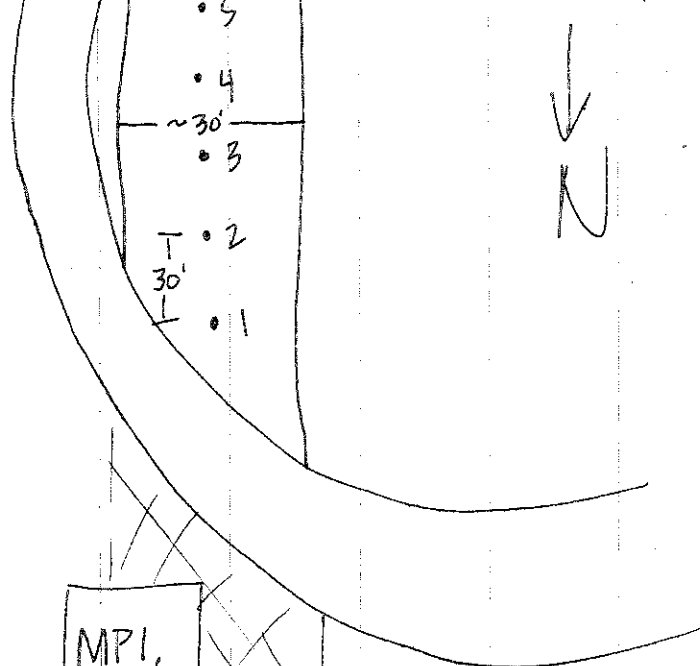
A5-BS-5   1215   Sand & shale

A6-BS-6   1230   Sand & stone - metal  
filings

A6-BS-7   1235   Brown sand &  
clay mix.

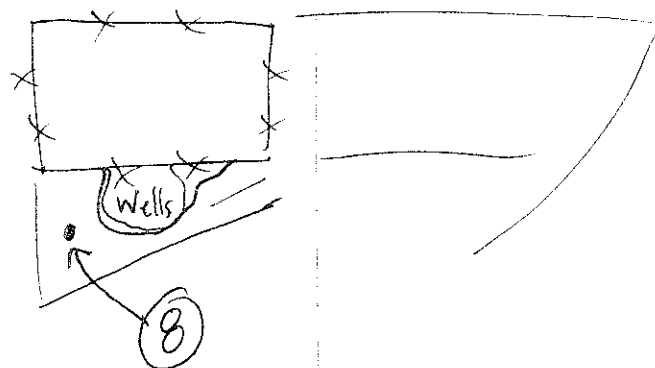
# Sketch of Sample Locations Area 5 - next to basin

~~Area 5 Stockpile~~



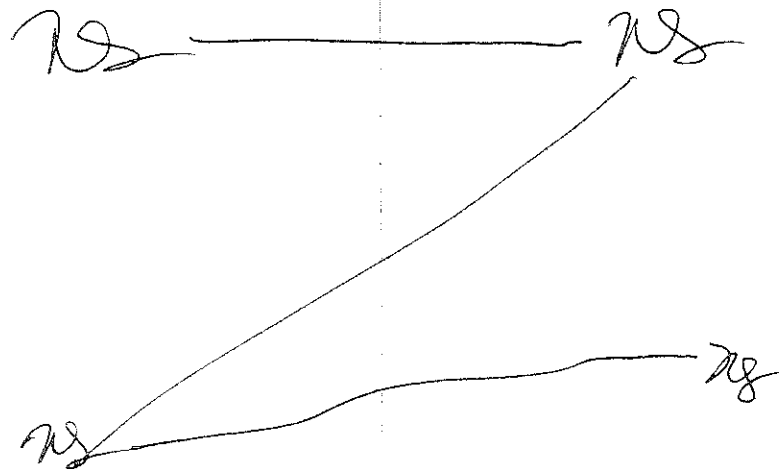
Not  
Excavated

\* NOT TO  
SCALE \*

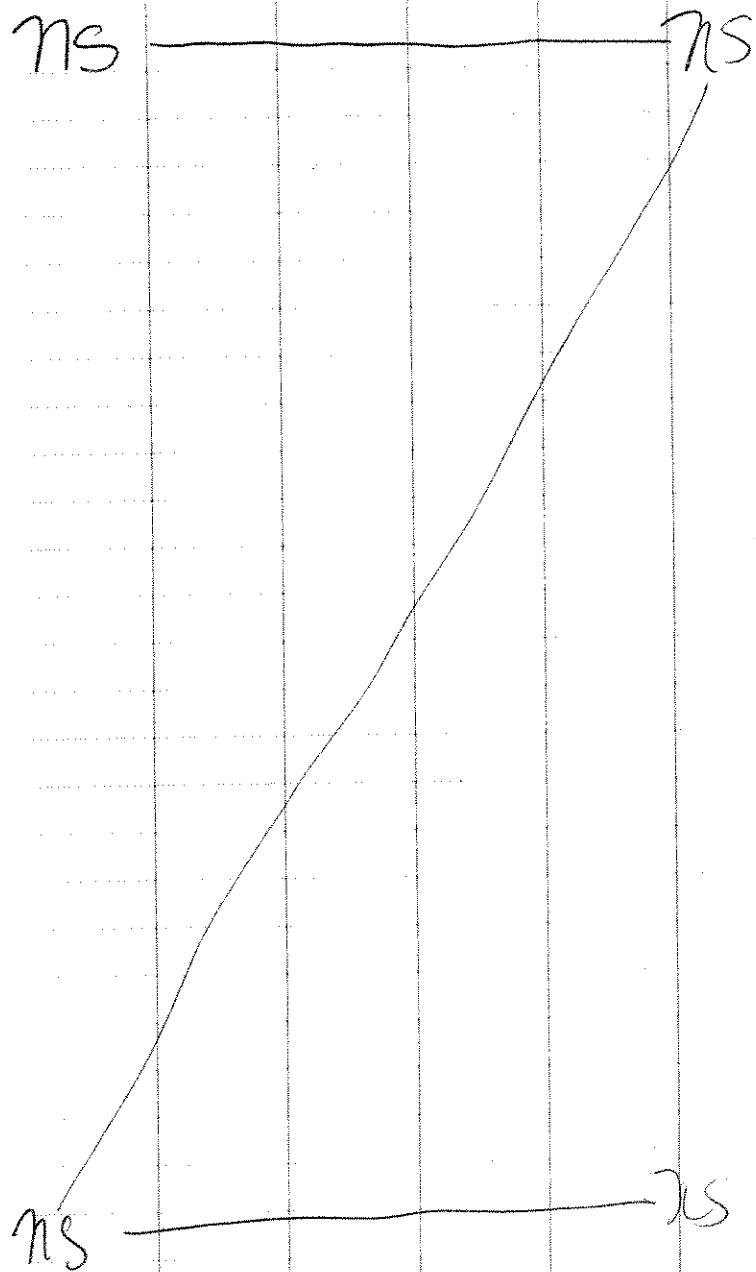


A5-BS-8  
Time: 1405

Observations: Sand &  
Coarse stone



# Sampling Log



8 Jan 03

Weather - Overcast 19°  
- Flurries on : off

Location: Area 5

- Excavation depth is approx. 4-4.5' (an add'l 2-2.5' was excavated)

Sample ID Time Observations

A5-BS-8B 0930 Clayey w/  
coarse stone.

A5-BS-1B 1215 Sand w/  
weathered  
shale & stone

A5-BS-2B 1220 "

A5-BS-3B 1225 "

A5-BS-6B 1450 Sand & coarse  
stone - wet

A5-BS-7B 1500 Wet dk gray  
ms/msd & black - some  
clay

NS

NS

NS

NS

9 Jan 03

Weather : Overcast 25°

Location : Area 6 (East section)

- Excavation is 1' B.G.
- Samples to be analyzed for SVOCs (PAH)

Sample ID Time Observation

AlE-BS-1 1405 Loamy soil w/ small coarse stone

AlE-BS-2 1415 "

AlE-BS-3 1420 "

AlE-BS-4 1510 Sand & coarse stone

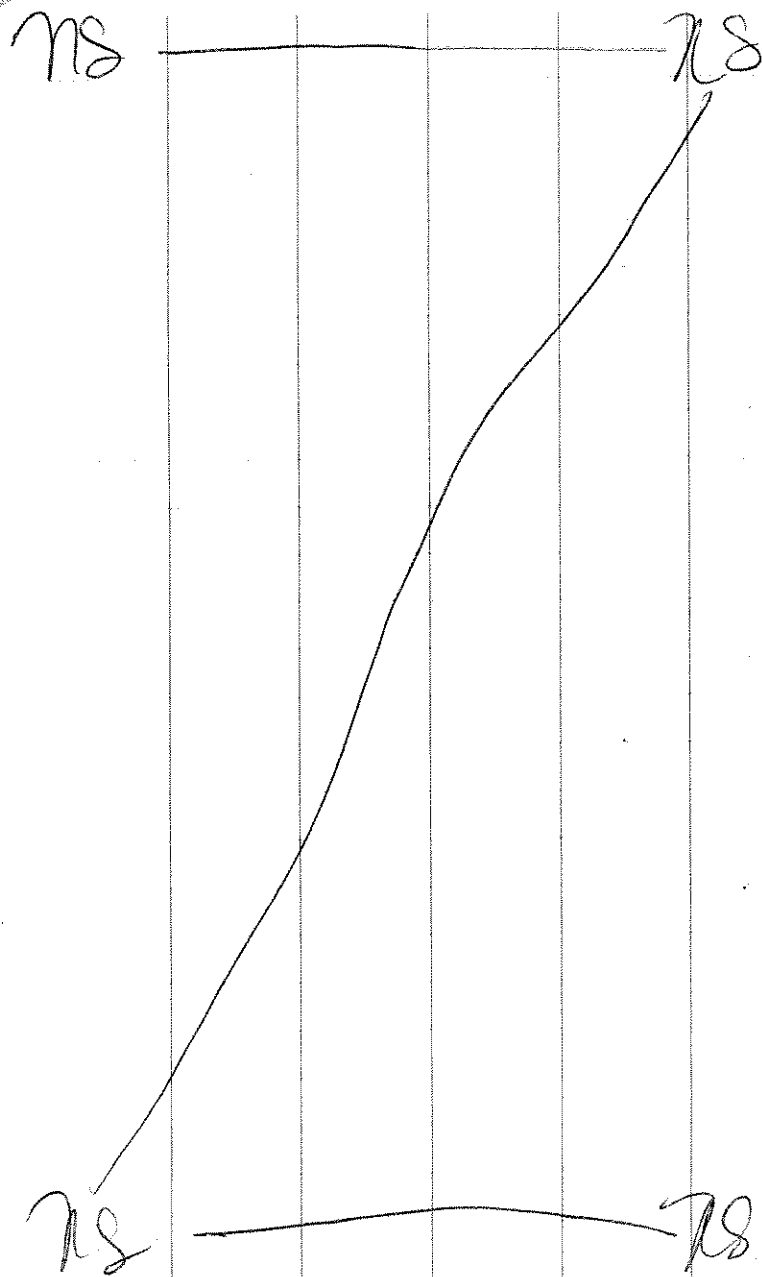
NS

NS

NS

NS





10 Jan. 03

Weather - Windy, bitter  
cold  $\rightarrow 15^{\circ}$  (w/out wind  
chill)

- Note - Another 1.5" of  
snow fell last night.

Location : Area 6 (East)

<u>Sample ID</u>	<u>Time</u>	<u>Observation</u>
AbE-BS-5	1105	Sand & coarse stone
AbE-BS-6	1110	"
DUPLEX-21		
AbE-BS-7	1115	"
AbE-BS-8	1120	Sand stone & glass fragments
AbE-BS-9	1130	"

Location: Area 5 stockpile  
- Samples are 3-grab comp.  
- Analyzed for Ag, Pb, Cr  
Approx 1200 c.y. = 12 Samples

Sample ID Time Observation

A5-SP-1 1155-1200 Sand & Stone

A5-SP-2 1250 "

DUPE X-22

A5-SP-3 1255 "

A5-SP-4 1305 "

A5-SP-5 1310 "  
MS/MSD

A5-SP-6 1335 "

A5-Offsite-1 1325-1330 "  
VOC - 1325

- The above 7 samples  
were taken from the  
add'l (uncovered) exc. stockpile  
from Area 5.

Location: Area 5 stockpile

- Samples are 3-grab comp.
- Analyzed for Ag, Pb, Cr
- Approx 1200 c.y. = 12 Samples

Sample ID   Time   Observation

A5-SP-1   1155-1200   Sand & Stone

A5-SP-2   1250   "

DUPE X-22

A5-SP-3   1255   "

A5-SP-4   1305   "

A5-SP-5   1310   "  
MS/MSD

A5-SP-6   1335   "

A5-Offsite-1   1325-1330   "  
VOC - 1325

- The above 7 samples  
were taken from the  
add'l (uncovered) exc. stockpile  
from Area 5.

14 Jan 03

Weather: 7° COLD!!

Location: Area 6 (E) in  
between Area 5: road

- Analyze for SVOCs, 1' depth

Sample ID   Time   Observations

A6E-BS-10   1125   Sand w/  
coarse stone

A6E-BS-11   1130   "

A6E-BS-12   1135   "

A6E-BS-13   1140   Sand & weathered  
shale w/ white  
powdery sub-  
stance



NS

NS

NS

NS

15 Jan 03

Weather: 8° COLDSample ID Time Observ.

AGE-BS-2B 1400 Sand &amp; Weathered Brick

AGE-BS-3B 1405 Sand &amp; small amt of crushed brick

AGE-BS-4B 1410 Dark sand & weathered shale  
DUPE X-24

AGE-BS-5B 1415 Sand &amp; coarse stone

AGE-BS-6B 1425 Sand & Stone  
MS/MED

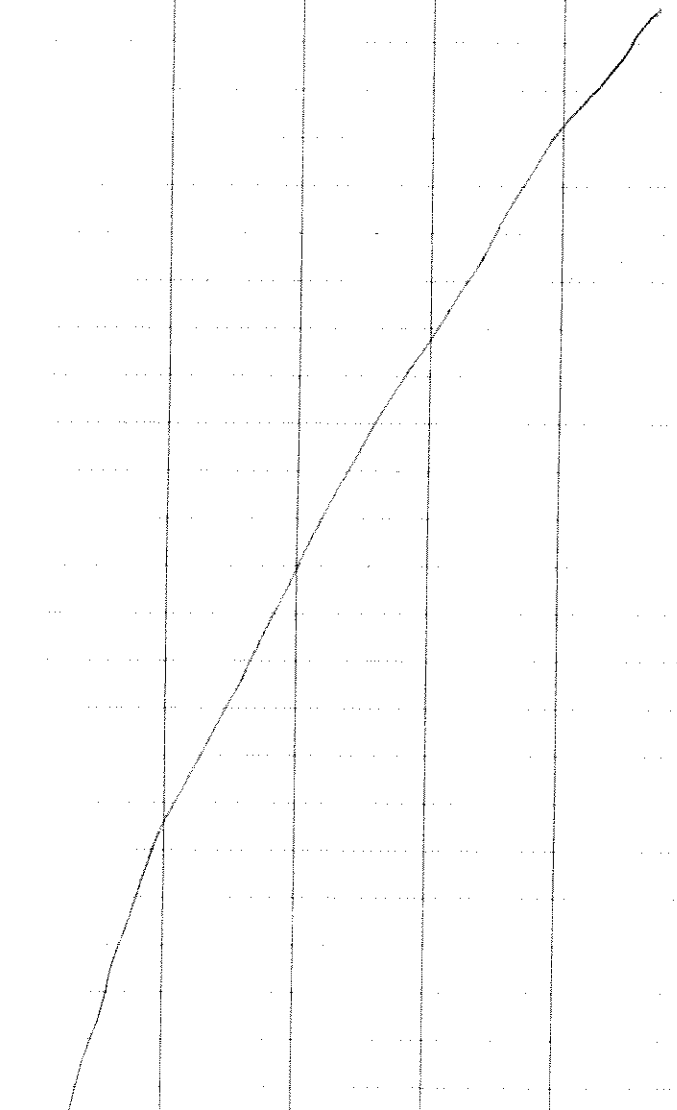
AGE-BS-9B 1430 "

- Exc. depth  $\approx 2.5'$
- Analyze for SVOCs (PAH) only
- Samples are grabs.



# Sampling Notes

NS ————— NS



23 Jan 03

Weather:  $-2^{\circ}$  ( $-15^{\circ}$  w/  
windchill)

Location: Area 6E

Sample ID: A6E-BS-4C

Time: 0820

- \* Sand & coarse stone
- \* Analyze for SVOCs only
- \* Grab, exc depth  $\sim 3.5'$

Location: Area 9/11 Stockpile

Sample ID Time

A9/11-0S-1  
VOC

A9/11-0S-2  
VOC

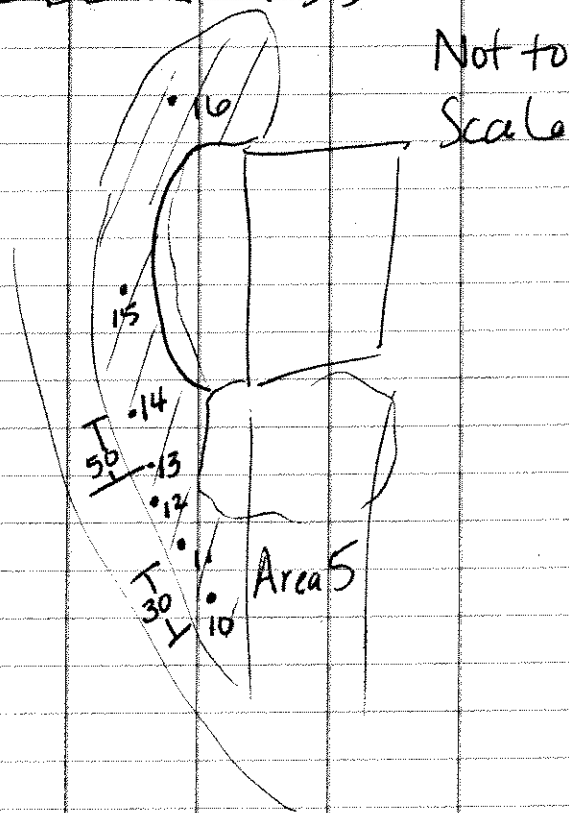
- \* Analyze for Full TCLP
- \* 3-grab composites
- \* VOC - grab

<u>Sample ID</u>	<u>Time</u>	<u>Observ.</u>
------------------	-------------	----------------

AbE-BS-14	1320	Sand & stone
-----------	------	--------------

AbE-BS-15	1330	"
-----------	------	---

AbE-BS-16	1335	"
-----------	------	---



Location: Area 5 Stockpile

- Taken from the 1<sup>st</sup> covered stockpile

- SP samples to be analyzed for As, Pb & Cr. OS samples to be analyzed for full TCLP

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
------------------	-------------	---------------------

A5-SP-7	1445	Sand & stone - moist
---------	------	----------------------

A5-SP-8	1450	"
---------	------	---

A5-SP-9	1500	
---------	------	--

A5-SP-10	1505	
----------	------	--

DURE X-23

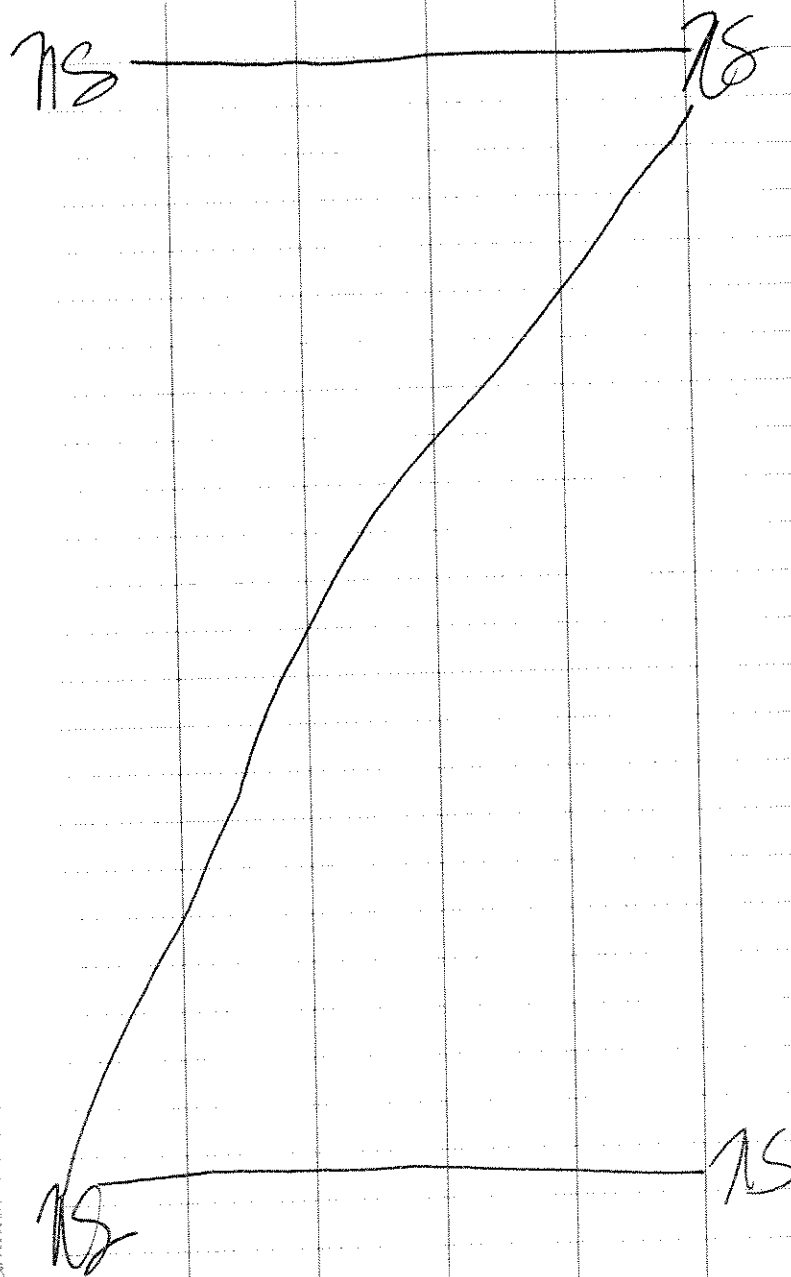
A5-SP-11	1510	
----------	------	--

A5-SP-12	1515	
----------	------	--

A5-OS-2	1520-1522	
---------	-----------	--

VOC 1520

# Sampling Notes



27 Jan. 03

Weather: 10° (-10° w/windchill)

Location: Area 9/11 Stockpile

- 3 grab composites

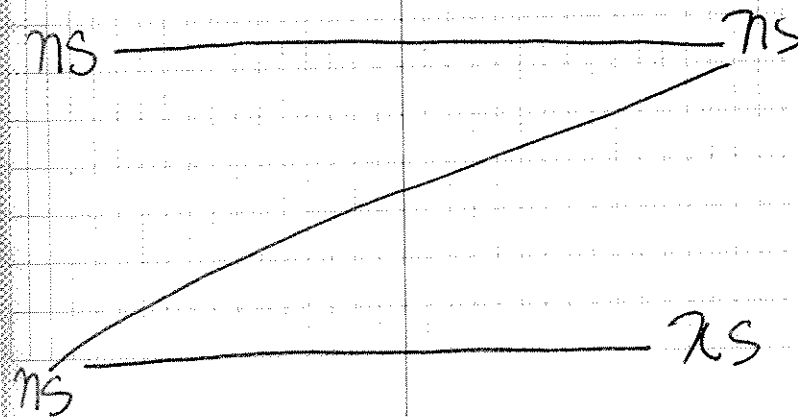
(VOC - grab)

- Analyze for full TCLP

Sample ID Time Observ.

A9/11-OS-1 0910-0915 Dark sand,  
VOC 0910 Clay & Stone

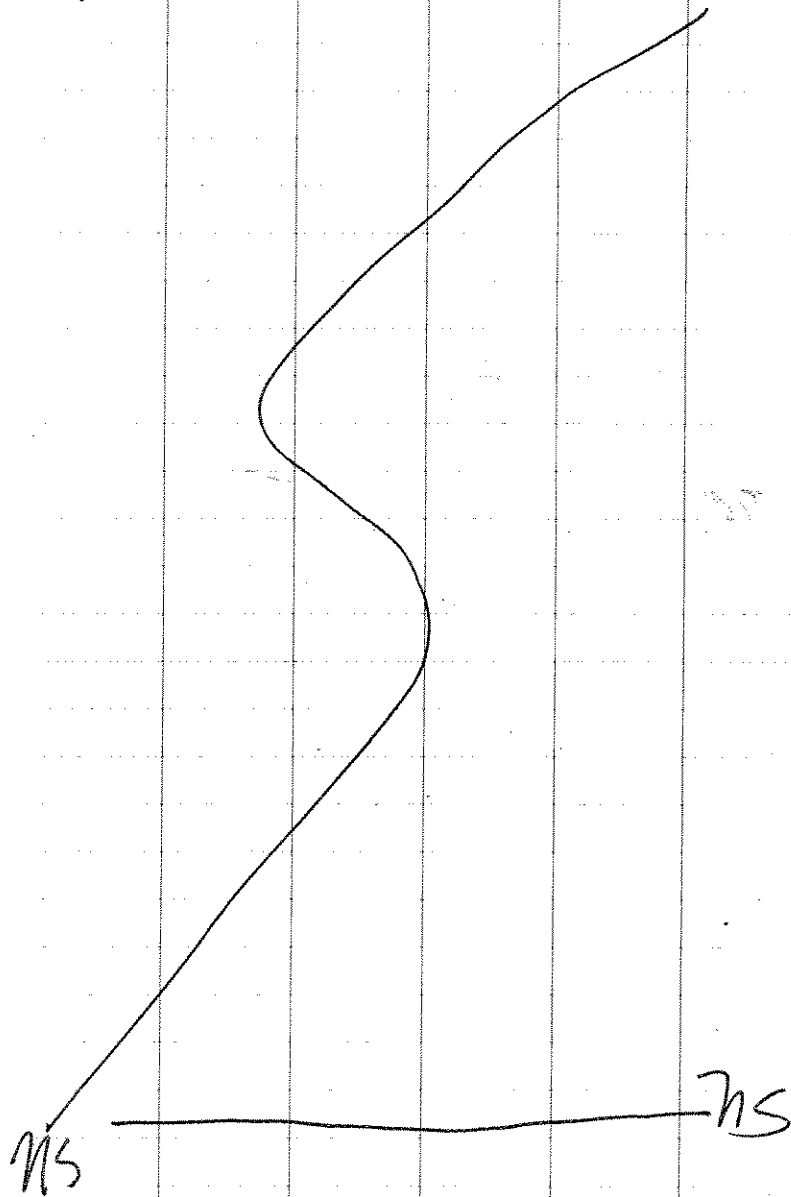
A9/11-OS-2 0917-0920 "  
VOC 0917





# Sampling Notes

NS ————— NS



4 Feb. 03

Weather: 40° Rainy

Location: Area 5

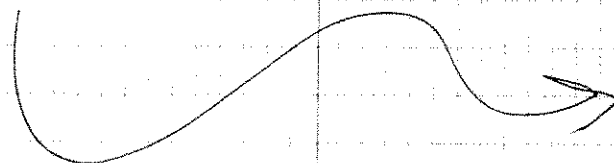
Sample ID Time Observations

A5-BS-4B 1220 Sand & shale  
- very moist

A5-BS-5B 1230 Sand, stone &  
crushed brick

A5-BS-9 1235 Sand, shale,  
(next to inf. basin) brick & some  
clay

\*The above samples will  
be analyzed for SVOCs  
and As, Pb, Cr.





Location: Area 6E (in between road & Area 5)

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
A6E-BS-11B	1530	Sand & coarse stone

A6E-BS-12B 1540 "

\*The above samples will be analyzed for SVOCs

NS

NS

5 Feb 03

Weather: 18° & Windy

Location: Area 6E (middle section).

Sample ID = A6E-BS-14B

Time: ~~1325~~<sup>ns</sup> 1350

Observations: Brown sand & weath. shale

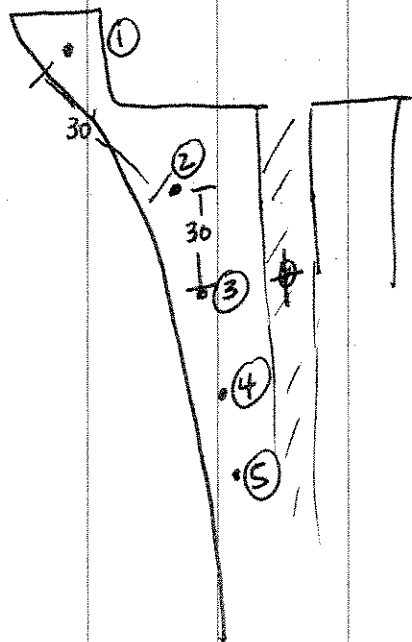
\* Exc. depth  $\approx$  2.5'

\* Analyze for SVOCs

Location: Area 6N (N of perimeter road)

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
A6N-BS-1	1400	Sand & coarse stone - some clay
A6N-BS-2	1407	Sand & stone
DUPE X-25		
A6N-BS-3	1415	Sand & coarse stone

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
ALN-BS-4	1420	Sand & stone
ALN-BS-5	1445	Mostly sand small amt. of crushed stone / brick



6 Feb. 03

Weather: 18° Sunny

Location: Area 6N

<u>Sample ID</u>	<u>Time</u>	<u>Observations</u>
ALN-BS-6	1115	Sand & Coarse Stone
ALN-BS-7	1120	"
ALN-BS-8	1127	" some ms/msd glass fragments
ALN-BS-9	1135	Sand & Coarse Stone
ALN-BS-10	1145	" DUPE X-26
ALN-BS-11	1155	Dark brown sand & weathered shale

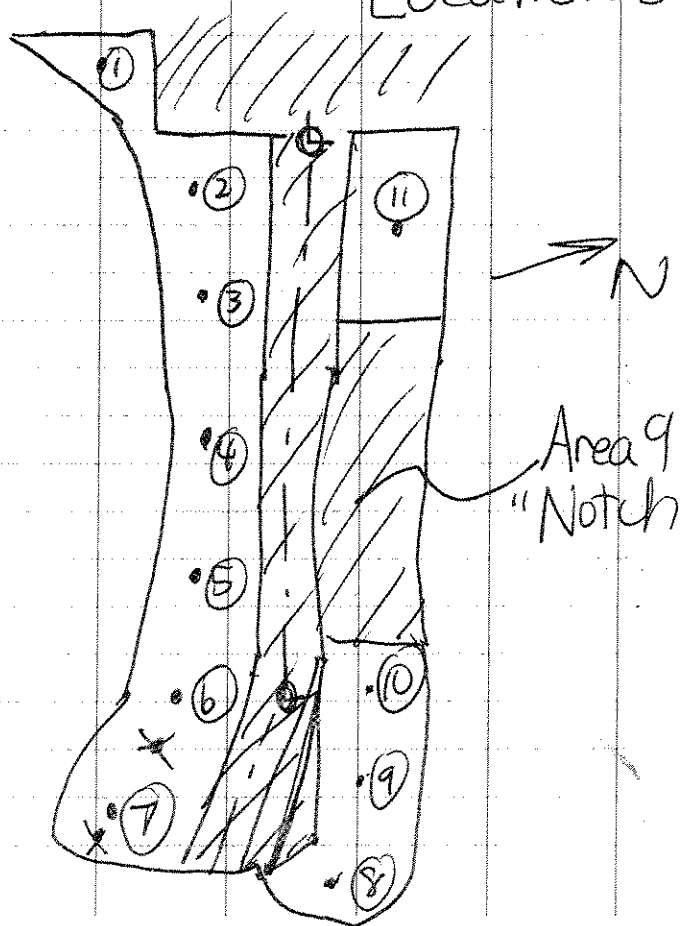
\* Analyzed for SVOCs

Sample ID Time Observations

ALN-BS-12

ns

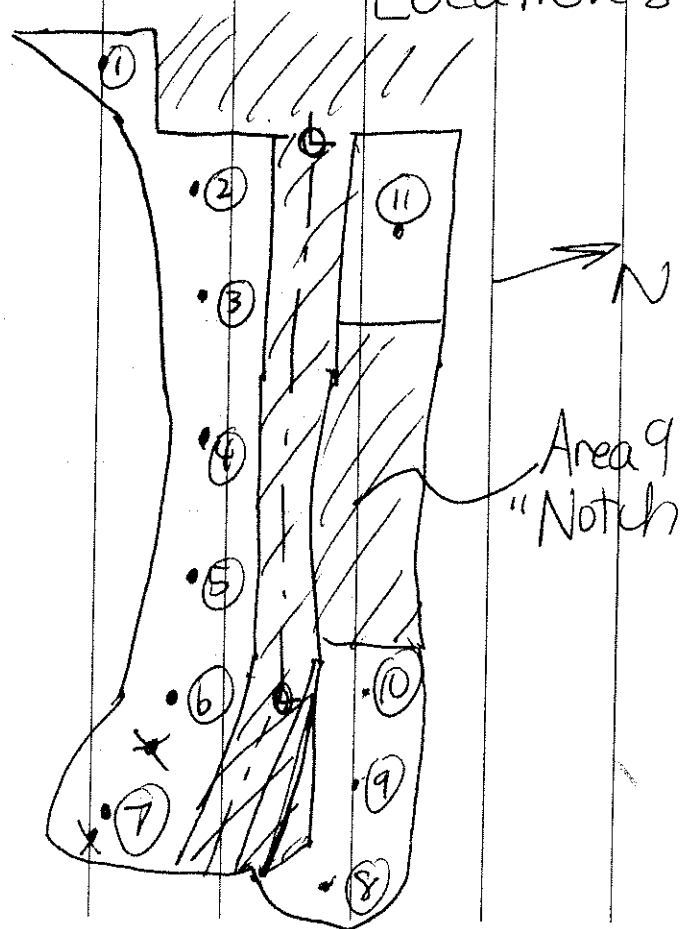
Sketch of Sample  
Locations



Sample ID Time Observations

AGN-BS-12

Sketch of Sample Location



10 Feb 03

Weather: 20°

Location: Area 6N

Sample ID Time Observations

AGN-BS-3B 1325 Brown clay & Sand.

AGN-BS-4B 1332 Clay w/ orange mottling. Surrounded by nothing wood-

AGN-BS-5B 1340 Sand & weathered shale.



11 FEBRUARY 2003

WEATHER: 15°F CLEAR

LOCATION: AREA 6N

SAMPLE ID	TIME	OBSERVATIONS
A6N-B5-6B	1400	SILT f gravel. some weathered shale & debris.
A6N-B5-7B	1410	WEATHERED SHALE w SILT.
A6N-B5-8B	1420	SILT, fm gravel
A6N-B5-9B	1430	fm gravel some weathered shale and msc. debris (brick)
FIELD BLANK	1500	
A4-SUMP-GW	1530	GROUNDWATER POSSIBLE SEEN.

LOCATIONS - SEE MAP FOR ORIGINAL SAMPLES

JP



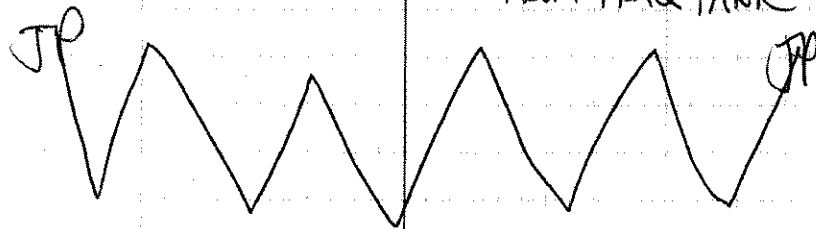
13 FEBRUARY 2003

WEATHER: 10° F FEW CLOUDS

LOCATION: A4 GROUND WATER Sump

SAMPLE ID	TIME	OBSERVATIONS
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A4-SUMP-GWB 1630 GROUNDWATER  
FROM FRAC TANK

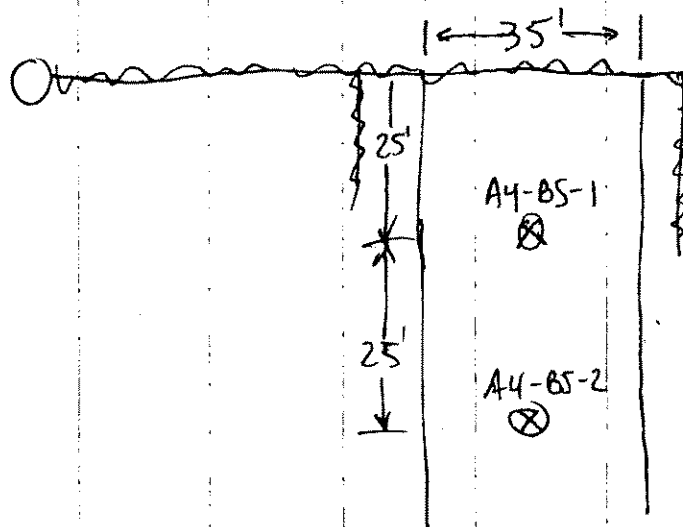


20 FEBRUARY 2003

WEATHER: 40°F SUN

LOCATION: AREA 4

NORTH END SOUTH OF EAST TO  
WEST GROUNDWATER INTERCEPTION  
HEADER PIPE. BETWEEN EAST  
AND CENTRAL PIPE LATERALS.



SAMPLE ID	TIME	OBSERVATIONS
A4-BS-1	1500	GRAY SILT & SHALE
A4-BS-2	1515	BROWN/GRAY SILT SHALE AND DEBRIS.

SAMPLE ID

TIME

OBSERVATIONS

A4-BS-3

1530

GRAY SILT  
WEATHERED SHALE

A4-BS-4

1545

GRAY SILT  
WEATHERED  
SHALE.

FIELD BLANK

1600

\*NOTE MISSED DUPLICATE OF A4-BS-3.  
WILL DUP NEXT SAMPLE.

JP JP.

21 FEBRUARY 2003

WEATHER: 35°F SUN

LOCATION: WVA - AREA 4

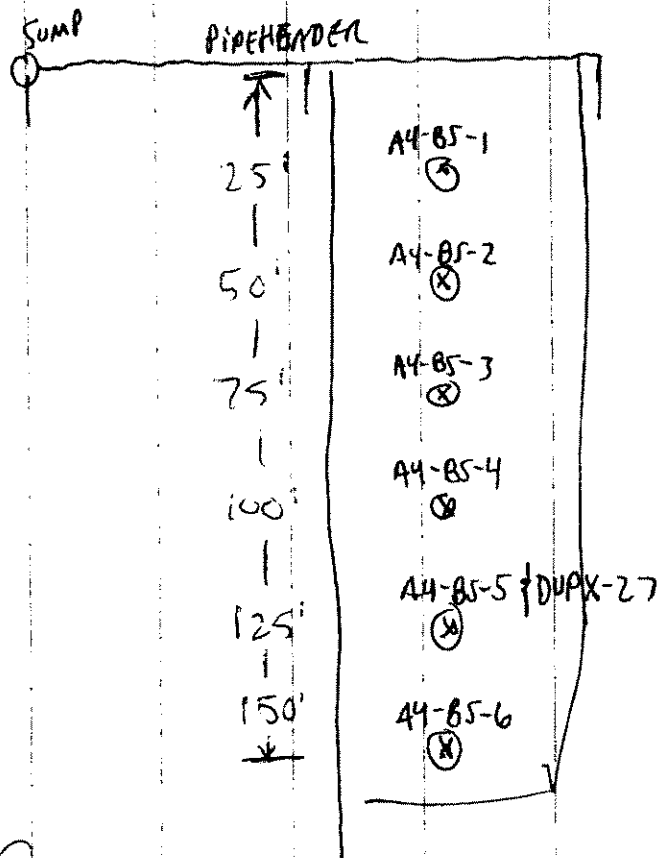
AREA BETWEEN EAST AND CENTRAL PIPE  
RUNS ~ 4' BG.

SAMPLE ID	TIME	LOCATIONS	OBSERVATIONS
A4-BS-5	1030	125'S of Pipe header	DENSEST SHALE
DUPX-27	1035	"	"
A4-BS-6	1045	150'S of Pipe header	GRAY SILT CLAY SOME SHALE & DEBRIS
FIELD BLANK	1100	—	H <sub>2</sub> O

SEE NEXT PAGE FOR FIELD SAMPLE  
LOCATION DRAWING. →

↑  
Approx.  
North

NOT TO SCALE.



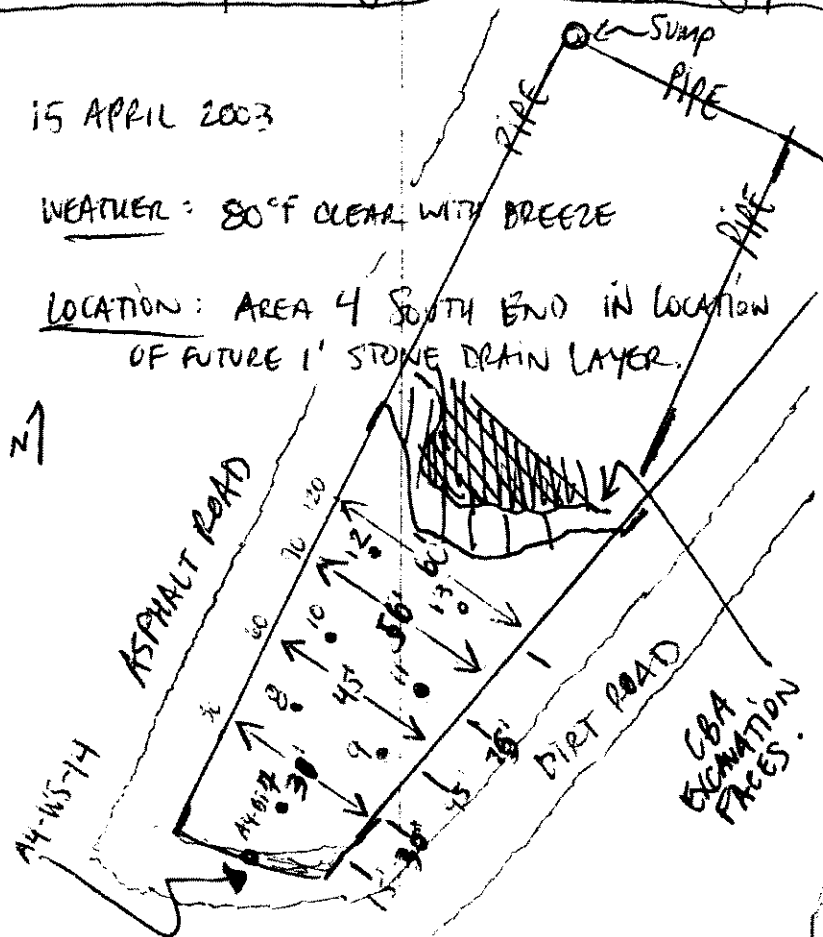
2 APRIL 2003

TAKE SAMPLE FROM GROUND WATER COLLECTION  
SYSTEM IN AREA 4 AT DISCHARGE STANDPIPE.  
USED PERISTALTIC PUMP. SHIP TO MITKEM  
3-AMBER LITER 2-PLASTIC.  
FOR SVOA, PH, METALS, OIL & GREASE  
COC # NA. JP

15 APRIL 2003

WEATHER: 80°F CLEAR WITH BREEZE

LOCATION: AREA 4 SOUTH END IN LOCATION  
OF FUTURE 1' STONE DRAIN LAYER.



SAMPLE ID	TIME	OBSERVATIONS
A4-B5-7	1115	GRAY CLAY little f gravel
A4-B5-8	1130	GRAY CLAY little f gravel
A4-B5-9	1145	Gray/Brown CLAY
A4-B5-10	1200	DARK GRAY CLAY
A4-B5-11	1215	GRAY/BROWN CLAY
FIELD BLANK	1300	
A4-B5-12	1515	DARK GRAY CLAY LITTLE ROCK FRAGMENTS
A4-B5-13	1530	GRAY/BROWN CLAY SOME ROCK FRAGMENTS
A4-W5-14	1330	~ 3' b.g. ① Silt/clay interface brown sandy silty clay some rock FRAGMENTS.

I SAMPLED AS FAR AS I COULD GO TO THE NORTH.  
CBA HAS NO MORE EXCAVATION COMPLETED TO  
FINAL DEPTH FOR SAMPLING

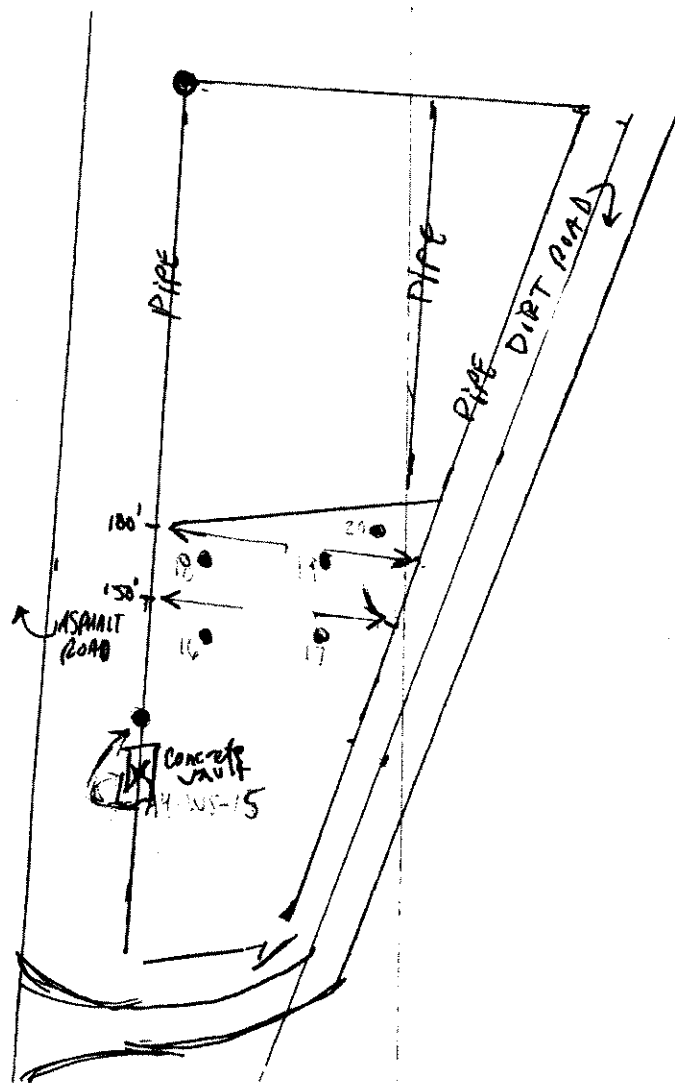
JP

JP

16 APRIL 2003

WEATHER: 60°F BREEZE

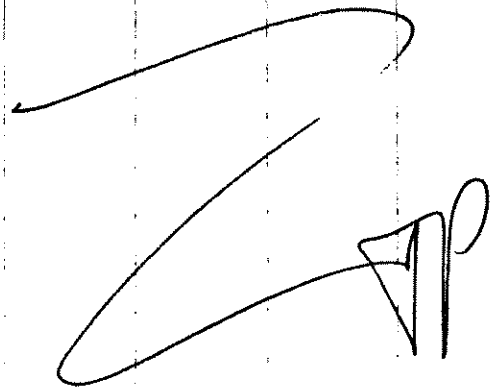
LOCATION: AREA 4 (South End)





SAMPLE I.D.	TIME	OBSERVATIONS
A4-WS-15 DUPX-28 MS/MSD	1300	BROWN SILT SAND & gravel Some weathered shale ~ 20' NORTH OF CONCRETE HAVANA.
A4-BS-16	1330	BROWN/GRAY CLAY w/ ROCK FRAG.
A4-BS-17	1400	BROWN/GRAY CLAY w/ ROCK FRAG.
A4-BS-18	1430	BROWN/GRAY CLAY w/ ROCK FRAG.
A4-BS-19	1500	BROWN/GRAY CLAY w/ ROCK FRAG.
A4-BS-20	1530	BROWN/GRAY CLAY w/ ROCK FRAG.
FIELD BLANK	1100	

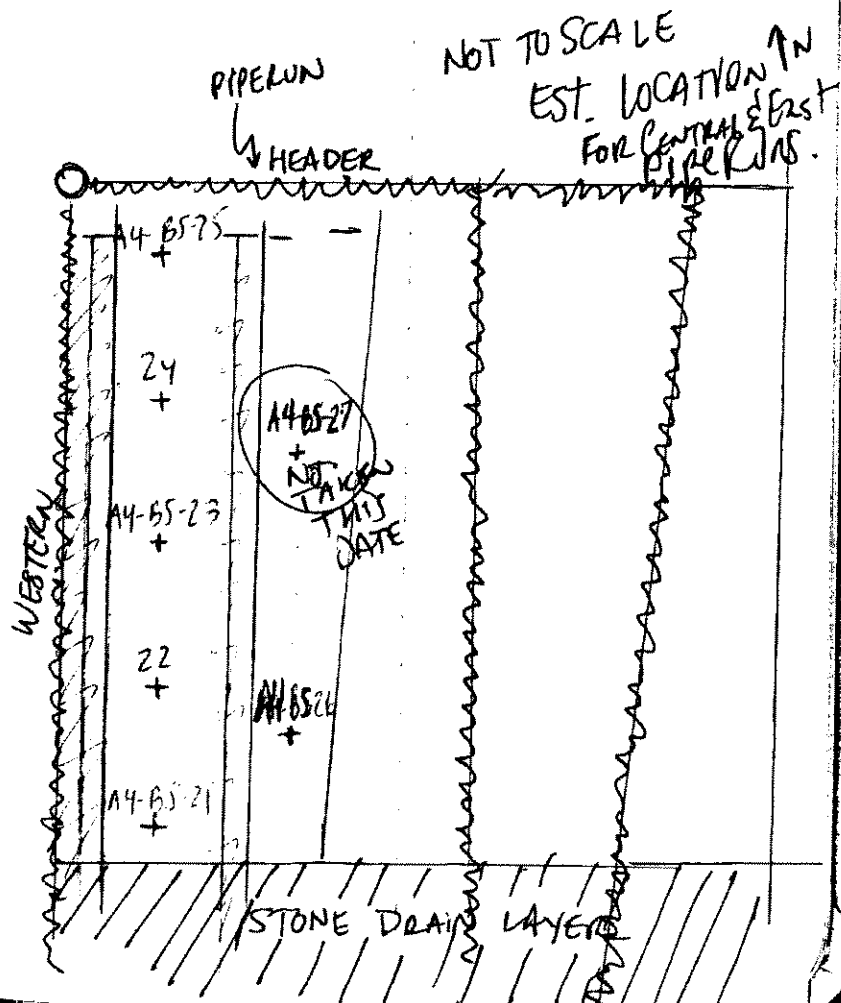
JP



21 APRIL 2003

65°F CLEAR / BREEZE

AREA 4 - NORTH OF STONE DRAIN FIELD  
A.M. BETWEEN WESTERN & CENTRAL PIPE RUNS.  
EXCAVATION TO 4' DEPTH.




SAMPLE I.D.	Time	OBSERVATIONS
A4-B5-21	1245	DARK GRAY SILT with some clay and rock fragment
A4-B5-22	1300	GRAY SILT - SOME SHALE
A4-B5-23	1315	GRAY SILT & SHALE.
A4-B5-24	1330	GRAY SILT AND WEATHERED SHALE.
A4-B5-25	1345	GRAY SHALE & SILT.
A4-B5-26	1600	GRAY SILT & SHALE.

FIELD BLANK 1230

NOT TAKEN DUE TO LACK OF PROGRESS  
~~A4-B5-27 1600~~

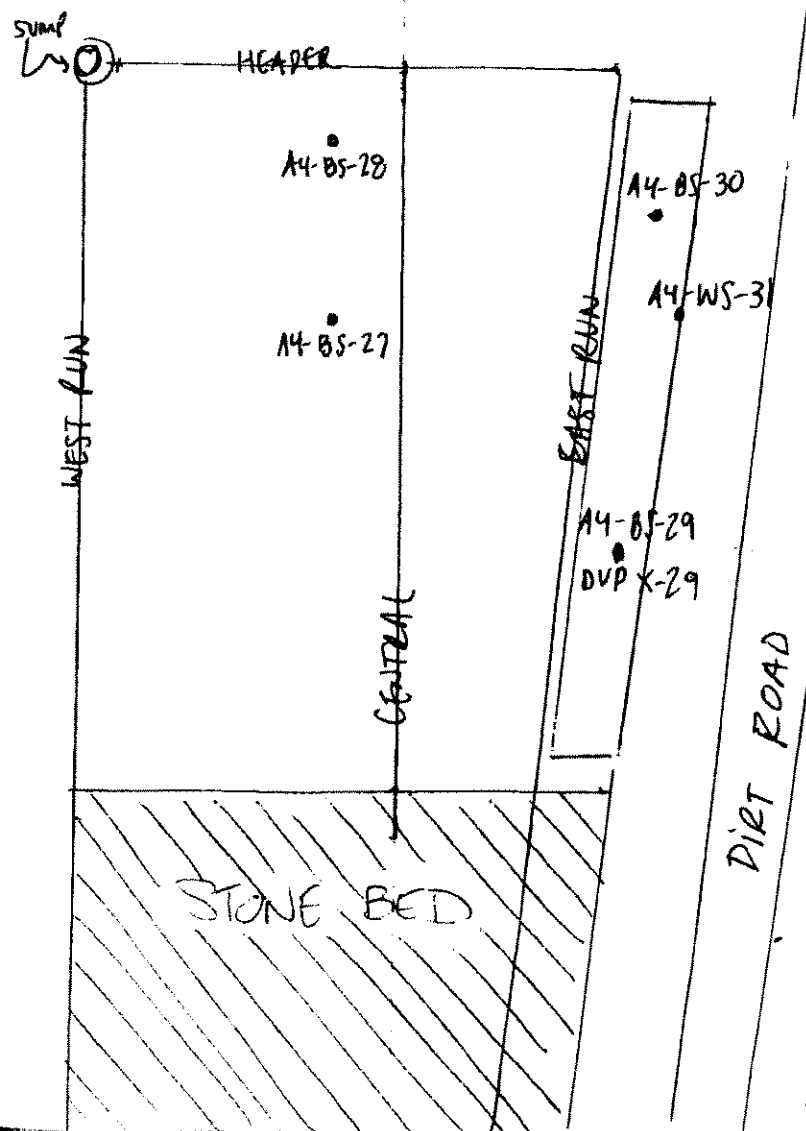
JP



22 APRIL 2003

RAIN ~ 45°F

AREA 4 - EXCAVATION TO 4' DEPTH.



SAMPLE ID	TIME	OBSERVATIONS
A4-B5-27	1000	GRAY SILT/CLAY/SHALE. 50' SOUTH OF HEADER PIPE.
A4-B5-28	1030	GRAY SILT/SHALE/CLAY. 15' SOUTH OF HEADER PIPE.
A4-B5-29 DUPX-29	1400	BROWN SILT & SHALE. 100' SOUTH OF HEADER PIPE.
A4-B5-30	1430	GRAY SILT & SHALE 30' SOUTH OF HEADER PIPE
FIELD BLANK	0930	
A4-B5-31	1500	BROWN SILT, SAND, GRAVEL 50' SOUTH OF HEADER PIPE 3' b.g.

JP

JP

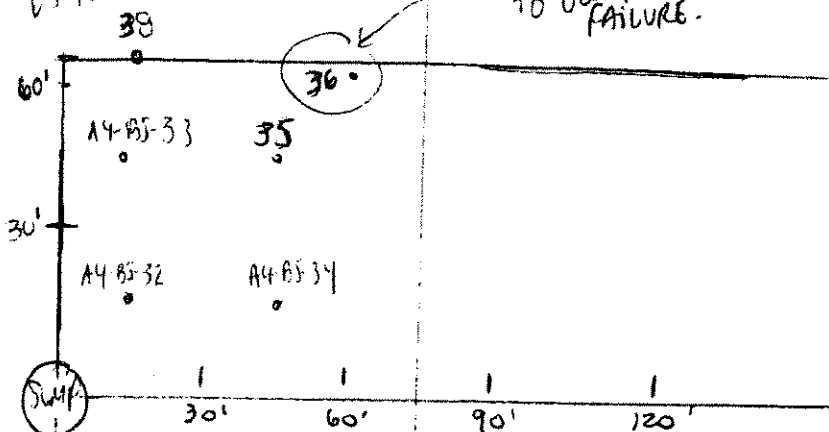
30 APRIL 2003

70°F CLEAR (PM)

AREA 4 NORTH OF GW COLLECTION.  
EXCAVATION TO 4' DEPTH.

End of EXCAVATION.  
65' N OF SUMP

NOT TAKEN THE DATE DUE  
TO EQUIPMENT  
FAILURE.



SAMPLE ID	TIME	OBSERVATIONS
FIELD BLANK	1300	
A4-B5-32	1330	gray broken shale and clay
A4-B5-33	1345	Gray broken shale and clay
A4-B5-34	1400	Gray broken shale and clay some silt.
A4-B5-35	1415	GRAY SHALE CLAY
A4-B5-38	1500	BROWN FINE GRAVEL, SHALE, SILT.
A4-B5-36	1430	NOT TAKEN
A4-B5-37	1445	NOT TAKEN
<del>A4-B5-38</del>	<del>1500</del>	<del>NOT TAKEN</del>
A4-B5-39	1515	DUE TO CBA EQUIP. FAILURE.
DUP X-30		

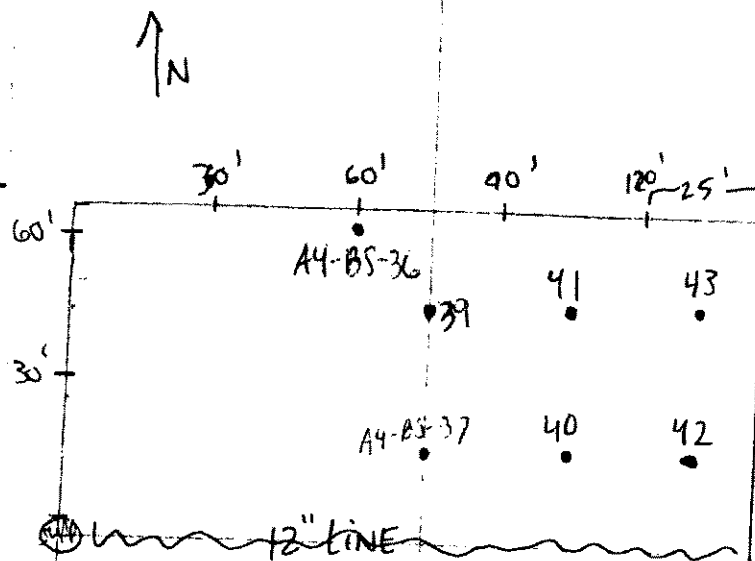
JP

JP

1 MAY 2003

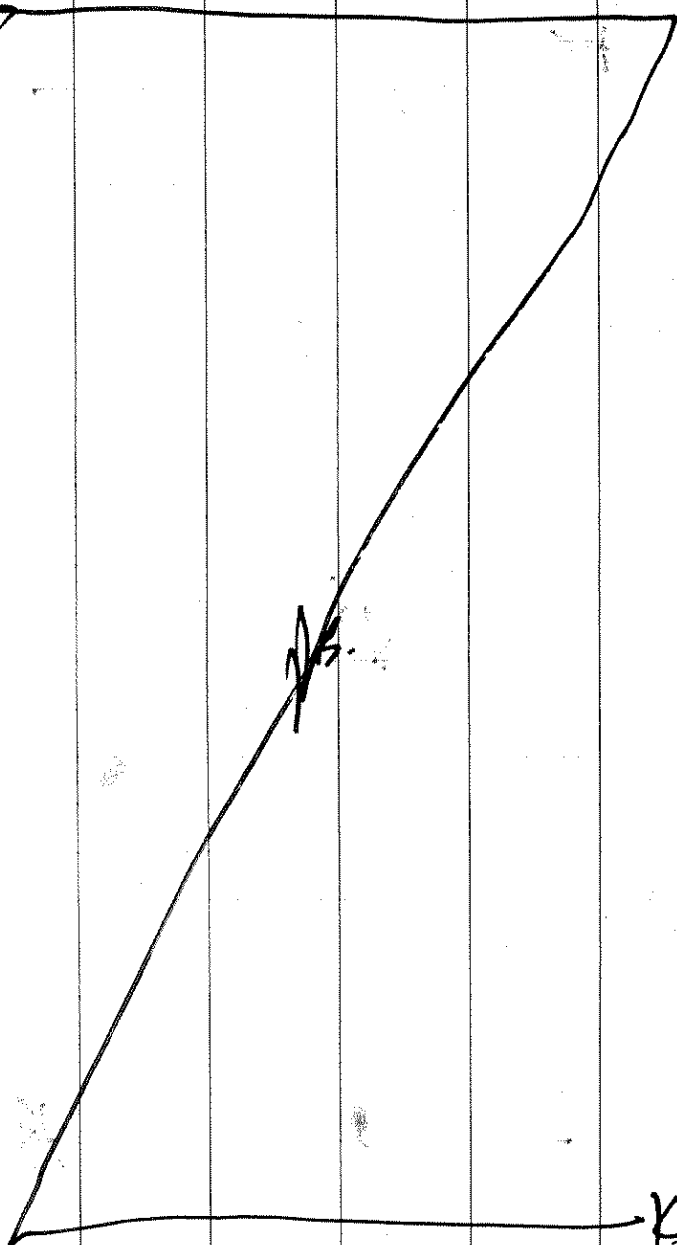
WEATHER:  
CLOUDS.

LOCATION:

AREA 4. EXCAVATION TO 4' DEPTH  
NORTH OF GW COLLECTION PAVING.



KS



WVA

Land Farming

6/11/03

0745 - K. Stahle onsite

Weather - overcast  $\approx 65^{\circ} F$ purpose - Baseline soil sampling  
for Tilling Project.

Cells: A, C, and D.

810 - ZARFA STAFF (Will, Tim)  
onsite

- discuss the days proceeding

830 - Initiate soil sampling via  
Geo probe - direct push and  
macro cores.

Time

Sample

desc.

~~0840~~ 840 - D-1- DK Brown -  
Gray fine sand  
and silt; little  
med. sand & clay.  
some sub ng  
Rock frags.  
Moist, no odors.  
Loose. PID = 0

0900 - D-2

MS, MSD

SAA; Increased = 0  
clay content.

0910

- D-3

SAA. PID = 0

KS

19

Handwritten notes in the left column of the grid.

Handwritten notes in the left column of the grid.

WVA

Land Farming

6/11/03

Time  
0930

Sample ID  
D-4

desc.  
SAA - w/ some  
orange brick  
Fragments. PID=0

0950

C-1

SAA - w/ little  
brick fragments  
PID=0

1015

C-2

SAA - some Petro  
odors; PID=0

1040

C-3

\*Dup.\*

SAA - PID=0

Dup KS-1 collected

1100

C-4

SAA - PID=0

1120

A-1

SAA - PID=0

1140

A-2

SAA slight Petro  
odors. PID=0

1200

A-3

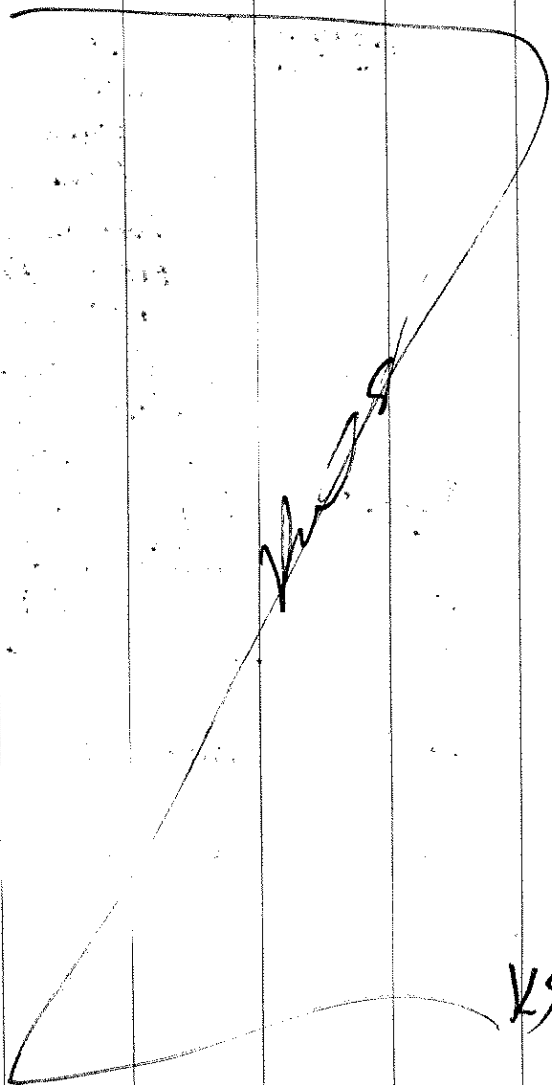
SAA - PID=0

1210 - Finish sampling cells A, C, and D.

1015 - weather changed to  
steady rain.

Handwritten signature or initials at the bottom of the grid.

KS



KS

WMA

Card Farming

5/15/64

0800 - K. Stahl, Zebra onsite

- measure cells C/D

- L = 400'

- subdivide 50' subcells.

0830 - Initiate soil sampling.

~~Time~~ (KS)

~~ID~~

ID

Time

D-4

850

D-4MS

851

D-4MSD

852

D-3

900

D-2

915 - KS-1 Dup.

D-1

930

C-4

940

C-3

950

C-2

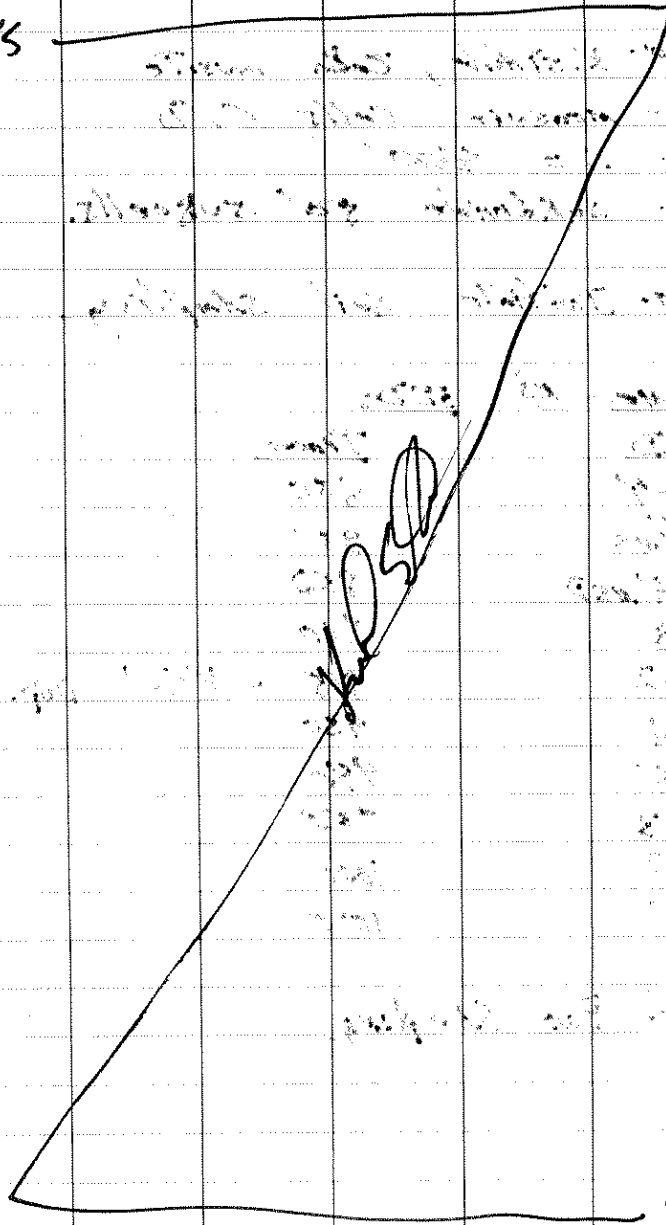
1000

C-1

1010

1010 - End Sampling.

KS



KS

WUA

Land Farming

5/5/04

1030 - move To Gw Sump.

Water level = 1.50"

1100 - Sample collected (6w) From Gw Sump.

1130 - K. Stathe offsite

~~Just Stop~~

~~0755 - MPI on site. J. Wyckoff. 7-27-05~~

~~0800 - Zebra on site. Ethan, Will.~~

~~- Set up to collect samples from cells C9D.~~

~~- Locations marked by A. Vitellius and J. Wyckoff on 7-27-05.~~