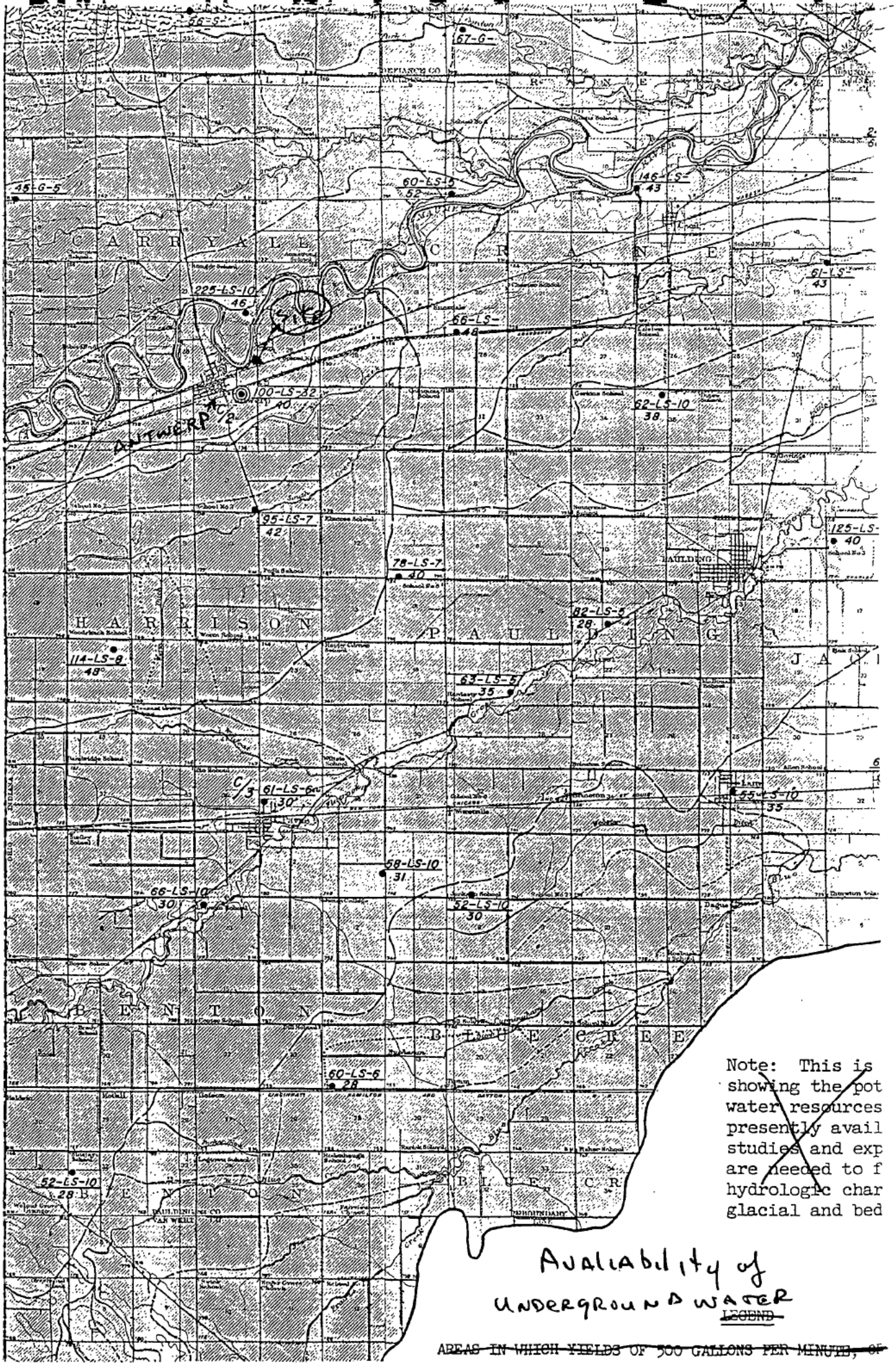
non responsive

965672

Entire area shown is Limestone covered w/ 20'-100' of drift (mostly clay) Scattered Sand + gravel lenses yeild <10gpm Supplies up to 200gal. per min from bedrock down to 300' in areas.

WITHIN 3 mi RAD. at least.



Note: This is showing the pot water resources presently avail studies and exp are needed to f hydrologic char glacial and bed

Availability of UNDERGROUND WATER

~~LEGEND~~

~~AREAS IN WHICH YIELDS OF 500 GALLONS PER MINUTE, OF~~

DATE 8-5-85 TDD # R05-8507-04

TIME 3:24

SITE Grizzley Manufacturing, Paulding, Ohio

CONTACT Harry Wieb PHONE (419) 399-4011
administrator - Water
Paulding Utilities

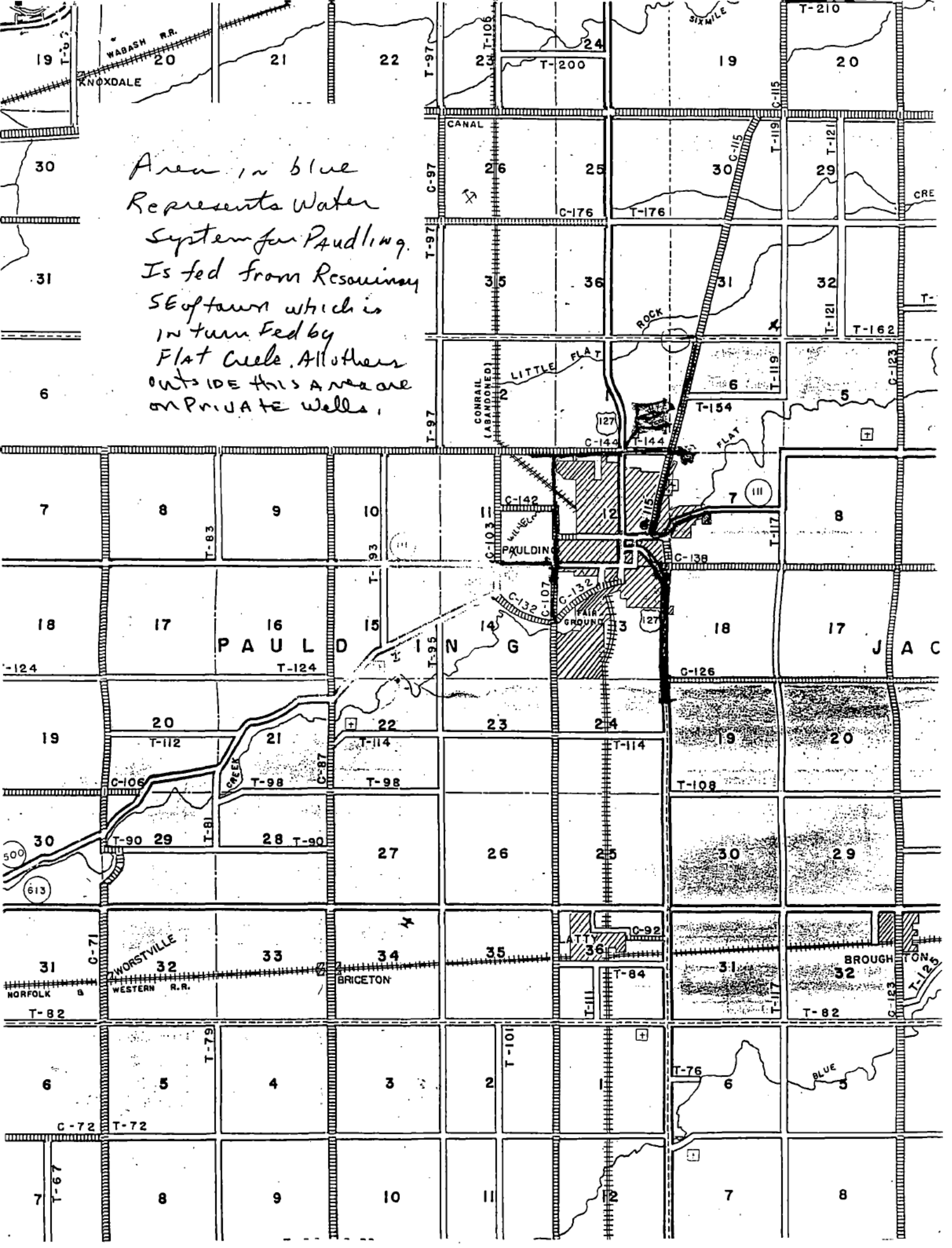
SUBJECT To return my call - couldn't talk - had meeting.

Returned call ~~3:00~~ 4:10 pm. Described the boundries of the water system in Paulding and confirmed that outside of Paulding (in the area) people on Wells (PRIVATE).

Pat P. Pekelle

Date 8-6-85

Area in blue
Represents Water
System for Paulding.
Is fed from Reservoir
SE of town which is
in turn Fed by
Flat Creek. All others
outside this area are
on PRIVATE Wells.



Interview

(6)

DATE 8-5-85 TDD # R05-8507-04

TIME 2:25 pm

SITE Grizzley Manufacturing (Nutrum Corp)

CONTACT Ray Pearce PHONE ( )

OERA NWDO
Drinking water Section
Engineer.

SUBJECT During the interview Ray explained the Water Distribution system for Paulding ie it's general boundries. He has given me a Report outlining the boundries (attached) He said that the outside area of Paulding Water system uses private wells.

Rod Petell

Date 8-5-85

DATE 8/5/85 TDD # R05-8507-04

TIME 2:00 PM

~~SITE~~ Municipal water supplies: Van Wert, Rossford, Bryan, Paulding

CONTACT Pat Williamson PHONE (419) 352-8461

Public Water Supply Div.

Ohio EPA

SUBJECT Pat gave me the following information on these municipal water supplies from the OEPA microfiche files:

Van Wert: This village is supplied by surface water via an intake on Town Creek at latitude 040°50'51" and longitude 84°34'18". This water supply serves 11,320 people

Paulding: There is one surface water intake at latitude 041°07'29" and longitude 84°35'31" drawing water from Flat Rock Creek. The water supply serves 2754 people.

Bryan: The city is served by 5 wells in a well field located at latitude 041°28'49" and longitude 84°32'17", serving 8,000 people. well depth and aquifers unknown.

Rossford: City gets its water from the City of Toledo water supply

Randall Stewart

OHIO WATER RESOURCES BOARD

Well Record No. 19 JJS.

63 12

Co. Paulding Twp. Paulding Sec. 24

Well Location 1 mi. and ½ S. of Paulding on Rt. 127. Size 10" x 51'

Map Paulding

Owner City Water Works Address Paulding, Ohio

Driller Moody Bros. Date 7-27-48

Well Head Elev. or M. P.

Elev. of Ground at Well

Pumping Test: 300 GPM for 24 hrs.; 11' D.D.

Static Level 18' Date 7-27-48

Normal Pumpage

Quality Use

Adequacy of supply

Owner's Well No. or Other Designation

Source of Data Driller

Collected by mt Date 1948

35951 STRATA	DEPTH From	DEPTH To
Clay	0	8
Sand		12
Clay		43
Gravel		51
Rock		220
Solid Rock	220	

Drilled 3 wells - same formations

Deep well pump
Capacity - 300 GPM
Depth of setting: 100'
Johnson Screen: 8'

X: 1,427,500 ±1000
Y: 537,000 N ±1000

* Chief Aquifer

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER

Office No. 83 Pt JJS.

Log form No.

Quad. Paulding

63 12

Co. Paulding Twp. Paulding Sec. 24, NE¼

Owner Paulding, Ohio

Address

Well location Paulding, O., well field, S. of town.

Construction Details	Pumping Test by E.J. Schaefer
Casing: Diam. length	Rate: —
Screen:	Hrs:
Type of pump:	D.D.
Capacity:	S.L. 27'
Depth of setting:	Date October 1950

Owner's Well No.

Driller G.W. Jackson & Son

Located by RJB Date Oct. 1950

Remarks Strip log made by RJB
Samples available at Orton Hall

STRATA	Depth From	Depth To
Elevation 727 plus or minus		
Drift	0	70
Monroe	70	380
Niagaran	380	590
Clinton	590	620
Red Medina	620	625

TD. 625'

150 gpm - 31' dd
200 gpm - 73' dd
230 gpm - 121' dd.

Pumping test on file.

X: 1,428,000
Y: 535,000 N

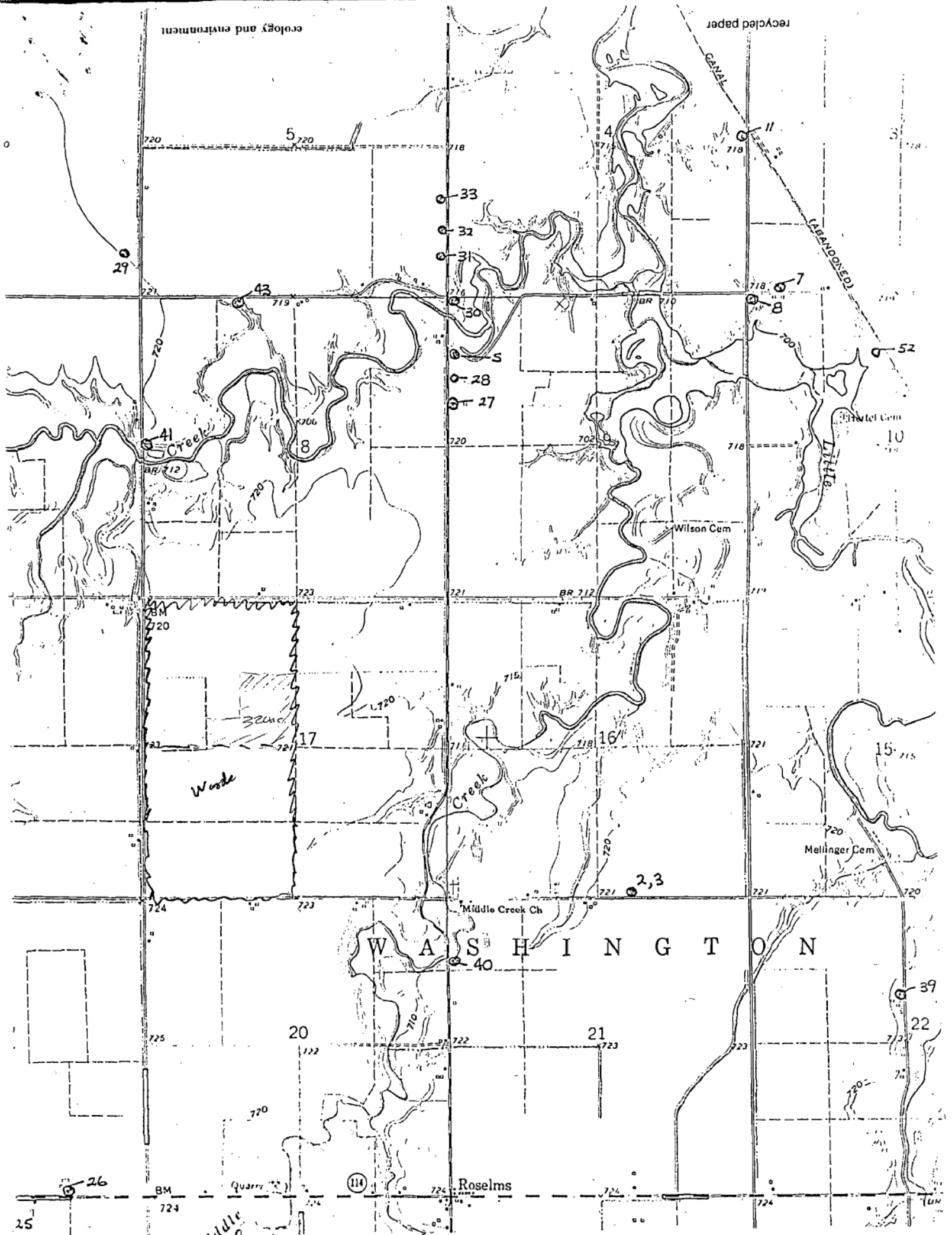
* Approximate Location

AREA BORING LOGS

recycled paper

ecology and environment

recycled paper
ecology and environment



ecology and environment
recycled paper
OHIO

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio

PLEASE USE PENCIL OR TYPEWRITER. DO NOT USE INK.

No. 228113

County Paulding Township Washington Section of Township 16

Owner [redacted]

Location [redacted]

non responsive

CONSTRUCTION DETAILS

Casing diameter 4 1/4 Length of casing 34

Type of screen Length of screen

Type of pump

Capacity of pump

Depth of pump setting

Date of completion

BAILING OR PUMPING TEST

Pumping rate 5 G.P.M. Duration of test 1

Drawdown 7 ft. Date 6-6-59

Developed capacity

Static level—depth to water 11

Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	18 Ft.
Hard pan	18	28
Boulders + sand	28	32
Shale	32	34
Lt gray limestone	34	52
Water	52	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads.

non responsive

[redacted]

Drilling Firm M E Thompson Date 6-6-59

Address Scott Ohio Signed M. E. Thompson

LOCATED

X= 1,483,000
Y= 504,500 N

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

№ 86063

County Paulding Township Washington Section of Township ~~or Lot Number~~ 16

Owner [redacted]

Locatio [redacted]

CONSTRUCTION DETAILS

Casing diameter 4" Length of casing 38'
Type of screen Length of screen
Type of pump
Capacity of pump
Depth of pump setting

PUMPING TEST

Pumping rate 5 G.P.M. Duration of test 1
Drawdown 8 ft. Date 4-28-
Developed capacity
Static level—depth to water 12
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	32 Ft.
Gravel	32	36
Shale	36	38
Hk gray limestone	38	60
Water	60	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.

[redacted]

Drilling Firm W. E. Thompson
Address Scott St.

Date 4-28-52
Signed W. E. Thompson

LOCATED

3

X= 1,471,200
Y= 515,000 N ± 1500

WELL LOG AND DRILLING REPORT

ORIGI

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

№ 129859

County PAULDING Township WASHINGTON Section of Township or Lot Number SEC. 9

non responsive

CONSTRUCTION DETAILS	PUMPING TEST
Casing diameter 5 5/8 Length of casing 35'	Pumping rate 10 G.P.M. Duration of test 1
Type of screen NONE Length of screen	Drawdown 4 ft. Date July 15
Type of pump UNINSTALLED	Developed capacity 15 GPM
Capacity of pump	Static level—depth to water 15'
Depth of pump setting	Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
CLAY	0 Feet	35 Ft.
LIMESTONE	35	41
WATER AT 41'		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, e

non responsive

Drilling Firm POTTS BROS

Address MELROSE O.

Date July 15, 1954

Signed Floyd Potts

LOCATED 5

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER
DO NOT USE INK.

№ 36695

County PAULDING Township WASHINGTON Section of Township SEC 9

non responsive

CONSTRUCTION DETAILS

Casing diameter 4 1/4 Length of casing 37
Type of screen — Length of screen —
Type of pump JET —
Capacity of pump 9 G.P.M.
Depth of pump setting 56 —
Date of completion 8-3-67

BAILING OR PUMPING TEST

Pumping Rate 1 G.P.M. Duration of test 3
Drawdown 20 ft. Date 8-3-67
Static level-depth to water 25
Quality (clear, cloudy, taste, odor) DARK C
& SULPHUR GAS —
Pump installed by OWNER —

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
YELLOW CLAY	0 Feet	18 Ft.
GREY CLAY	18	30
HARD PAN	30	34
LIME STONE	34	55
WATER AT 40 FT.		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads,

non responsive

non responsive

Drilling Firm SPITNALE WELL DRILLING Date 8-3-67
Address CONTINENTAL, O Signed Carl Spitnale

LOCATED

*If additional space is needed to complete well log, use next consecutive numbered f

recycled paper
ecology and environment

W[illegible] LOG AND DRILLING R[illegible]ORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus 12, Ohio

PLEASE USE PENCIL
OR TYPEWRITER
DO NOT USE INK.

Nº 30608

County Paulding Township Washington Section of Township 9

non responsive

CONSTRUCTION DETAILS

Casing diameter 4 1/4 Length of casing 34
Type of screen Length of screen
Type of pump
Capacity of pump
Depth of pump setting
Date of completion

BAILING OR PUMPING TEST

Pumping Rate 10 G.P.M. Duration of test 1
Drawdown 14 ft. Date 5-21-64
Static level-depth to water 18
Quality (clear, cloudy, taste, odor) Sulph
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	22 Ft.
Hard Pan	22	30
Shale	30	34
Blk. gray limestone	34	70
Water	70	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, e

non responsive

Drilling Firm M. E. Thompson
Address Scott Ohio

Date 5-21-64
Signed M. E. Thompson

LOCATED

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER
DO NOT USE INK.

№ 3290

County PAULDING Township WASHINGTON Section of Township SEC 9

non responsive

CONSTRUCTION DETAILS

Casing diameter 4½ Length of casing 28
Type of screen 2 Length of screen 1
Type of pump 1
Capacity of pump 1
Depth of pump setting —
Date of completion 7-9-65

BAILING OR PUMPING TEST

Pumping Rate 2 G.P.M. Duration of test 3
Drawdown 15 ft. Date 7-9-6
Static level-depth to water 25
Quality (clear, cloudy, taste, odor) CLEAR SOME SULPHUR GAS
Pump installed by OWNER

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
YELLOW CLAY	0 Feet	15 Ft.
GREY CLAY	15.	24
HARD PAN	24.	28
HARD LIMESTONE	28.	35
INSTRA AT		
35 + 34		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads,

non responsive

Drilling Firm CARL SPITNALE Date 7-9-65
Address CONTINENTAL, O Signed Carl Spitnale

LOCATED

*If additional space is needed to complete well log, use next consecutive numbered fo

3

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio

PLEASE USE PENCIL OR TYPEWRITER. DO NOT USE INK.

No. 228148

County Paulding Township Washington Section of Township 21

non responsive

CONSTRUCTION DETAILS

Casing diameter 4 1/4 Length of casing 32
Type of screen Length of screen
Type of pump
Capacity of pump
Depth of pump setting
Date of completion

BAILING OR PUMPING TEST

Pumping rate 5 G.P.M. Duration of test 1
Drawdown 16 ft. Date 11-23-
Developed capacity
Static level—depth to water 15
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
clay	0 Feet	15 Ft.
Hard pan	15	25
Boulders + gravel	25	30
shale	30	32
Lt gray limestone	32	59
water	59	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads

non responsive

Drilling Firm M. E. Thompson Date 11-23-59
Address Scott Ohio Signed M. E. Thompson

LOCATED 4

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio

PLEASE USE PENCIL OR TYPEWRITER. DO NOT USE INK.

No. 228150

County Paulding Township Washington Section of Township 8

non responsive

CONSTRUCTION DETAILS

Casing diameter 4 1/4 Length of casing 21
Type of screen Length of screen
Type of pump
Capacity of pump
Depth of pump setting
Date of completion

BAILING OR PUMPING TEST

Pumping rate 5 G.P.M. Duration of test 1
Drawdown 9 ft. Date 1-8-6
Developed capacity
Static level—depth to water 11
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	17 Ft.
shale	17	21
Lt gray limestone	21	50
water	50	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads,

non responsive

Drilling Firm M E Thompson Date 1-8-60
Address Scott Ohio Signed M E Thompson

LOCATED 41

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER
DO NOT USE INK.

№ 33347

County Paulding Township Washington Section of Township 8

non responsive

CONSTRUCTION DETAILS

Casing diameter 4 1/4 Length of casing 37
Type of screen Length of screen
Type of pump
Capacity of pump
Depth of pump setting
Date of completion

BAILING OR PUMPING TEST

Pumping Rate 10 G.P.M. Duration of test 1 h
Drawdown 14 ft. Date 9-12-6
Static level-depth to water 18
Quality (clear, cloudy, taste, odor) Clear
Pump installed by

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	14 Ft.
Hard pan	14	30
Boulders & Sand	30	34
Shale	34	37
Brown Limestone	37	65
Water	65	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.

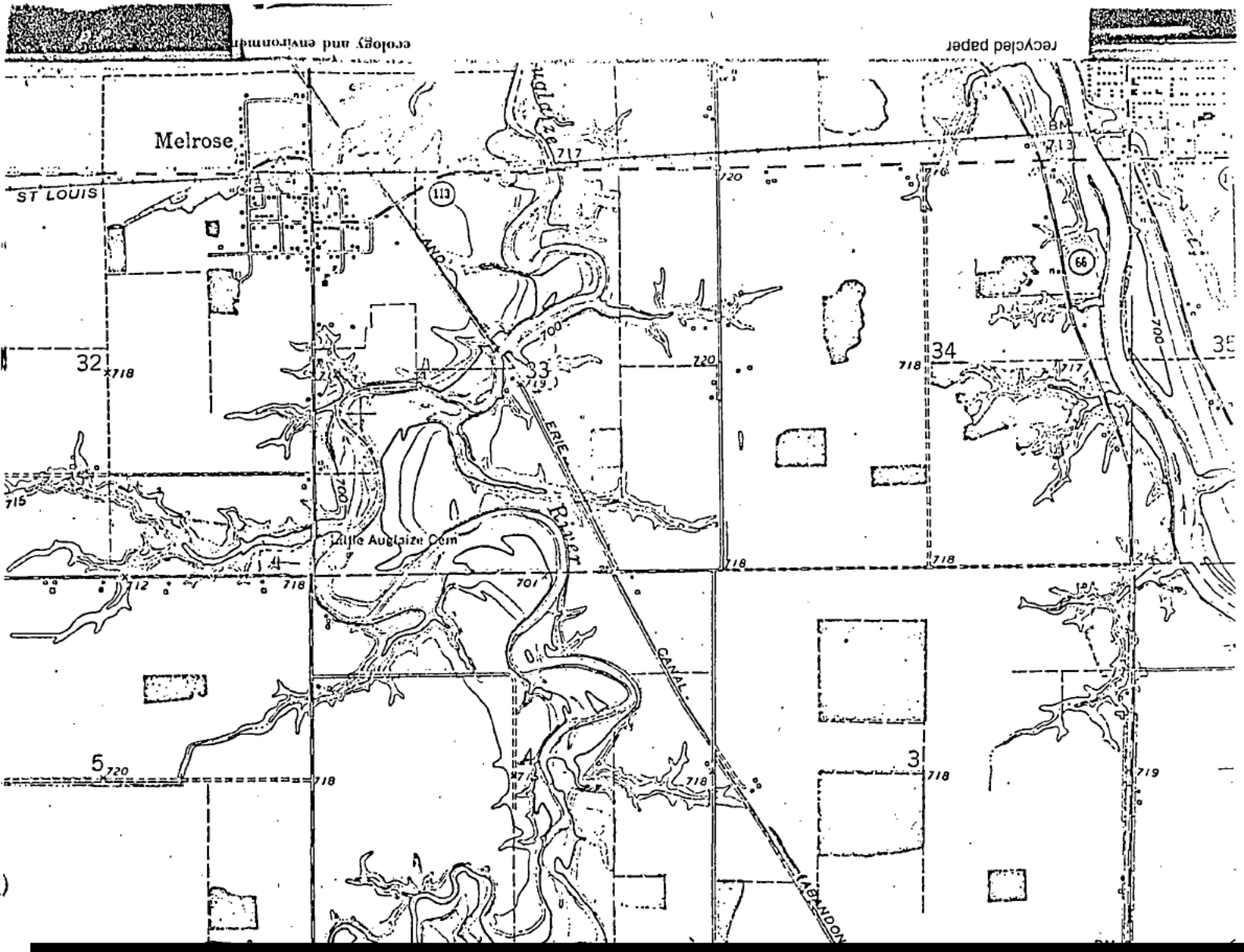
non responsive

Drilling Firm M. E. Thompson Date 2-12-66
Address Signed M. E. Thompson

*If additional space is needed to complete well log, use next consecutive numbered form

43

non responsive



non responsive

recycled paper

ecology and environment

non responsive

Table 1. Generalized Section of the Bedrock Formations.

System	Group	Division	Material	Average (ft.)
Silurian	Bass Islands	Tymochtee	Dolomite, gray to brown.	
		Greenfield	Dolomite, gray to brown.	
	Niagara	Guelph	Dolomite, light, very pure.	80
		Cedarville	Dolomite, light to drab.	70
		Springfield	Dolomite, drab to blue-gray.	10
		Euphemia	Dolomite, drab to blue-gray.	6
		Alger	Shale, gray.	5
			Dolomite, limy.	6
			Shale, gray.	45
		Dayton	Dolomite, gray to drab.	8
	Clinton	Brassfield	Limestone, light to pink.	67

ecology and environment
recycled paper

III. The well

Driller: Stoepfel Drilling Co.
Ottawa, Ohio

Drilling started: September 17, 1968

Drilling completed: September 25, 1968

Casing: 38 feet of 12-inch

Static level: 21.19 feet below land surface

Total depth: 370 feet

Geophysical logging: October 4, 1968

An onsite log of the drilling is given below:

Material	From	To
Brown clay & soil	0	18
Brown clay	18	20
Gray clay	20	28
" " with rock frags.	28	34
Light-brown-gray dolo., fine	34	40
Light to med. gray dolo.	40	50
Med. gray dolo., coarse	50	60
" " " " , wet	60	70
Water @ 72' est. 10 gpm		
Med. gray dolo., coarse	70	80
Med. gray with brown, coarse	80	90
Med. gray dolo.	90	100
Med. gray with brown, water	100	110
Buff dolo. with brown, coarse	110	120
" " , fine to med.	120	130

recycled paper
ecology and

Log of drilling - (continued)

Material	From	To
Water @ 115' and 135'		
Est. 35 gpm		
Med. gray dolo., coarse	130	140
Buff with gray dolo.	140	150
" " " "	150	160
Est. 50 gpm +		
Med. gray dolo., coarse	160	170
Med-dark gray, coarse	170	180
Dark brown-dark gray dolo.	180	190
Water @ 185'		
Dark gray to black dolo.	190	200
Dark gray to black dolo.	200	210
Black, Fissile dolo.	210	220
Black dolo., fine to med.	220	230
Dark gray to black dolo.	230	240
" " " " "	240	250
Dark gray dolo.	250	260
Water @ 263'		
Dark gray to black dolo.	260	270
" " " " "	270	280
Brown dolo. @ 278'		
Med. brown dolo.	280	290
Light-med. brown dolo.	290	300

ecology and environment
recycled paper

Log of drilling - (continued)

Material	From	To
Water @ 293'		
Est. 170 gpm		
Light brown to gray dolo.	300	310
Salt and pepper @ 306'		
Light gray, white chips	310	320
Water @ 323'		
Light gray to white dolo.	320	330
" " " " "	330	340
" " " " "	340	350
" " " " "	350	360
" " " " "	360	370

The well was drilled through approximately 272 feet of Tymochtee and Greenfield dolomite and encountered the top of the Niagaran at about 306 feet. Gamma ray, self-potential, resistivity, and temperature logs were made of the well. Copies of these geophysical logs are contained in the pocket on the back cover of this report. The gamma ray log shows the characteristic shape for the Niagara section.

IV. Chemical Quality

Field Analyses

Water samples were collected at 20-foot intervals during the drilling operations. These were analyzed at the site,

recycled paper

ecology and environment

RECEIVED
JAN 12 1982
OHIO EPA
N.W.D.O.

INTRODUCTION

Stablex Corporation proposes to construct and operate a waste management center offering the SEALOSAFE^{SM} Service, a fixation/solidification technology. This facility will produce STABLEX^{TM} from process additives and compatible pretested waste materials, including those considered to be potentially toxic and hazardous. This material is a non-biodegradable, non-flammable, environmentally inert product suited for placement on site.

A potential site has been identified in Paulding County, Ohio as suitable to Ohio EPA for a regional waste management center. This document provides preliminary information on the conceptual plant layout and placement method of STABLEX.

A. AREA HYDROGEOLOGY

The proposed 320-acre site is located in Paulding County in northwest Ohio. The Paulding County area is a relatively flat glacial lake plain with local relief generally less than 5 feet per mile. The area is extensively farmed, however some areas still contain sizeable wood lots.

Preliminary information* tends to indicate that the soil deposits at the site consist of approximately 10 to 15 feet of clay-rich lake bottom soils. Locally this deposit is generally identified as the Paulding clay. Underlying the lake bottom soils a glacial till is typical. The glacial till generally consists of a mixture of clay and silt with minor amounts of sand and gravel. This soil would most likely be defined as a clay.

* See area boring logs attached.

ecology and environment
recycled paper

Water supply wells for the area indicate that limestone has been encountered at depths ranging from 26 to 32 feet below the groundsurface. Most wells extend to depths of 60 to 80 feet and produce water at rates ranging from 5 to 40 gals/minute. Although some artesian pressures have been noted, no flowing wells are known to exist in the general area of the proposed site.

The average annual rainfall for this area of Ohio is approximately 35 inches per year with approximately 25 inches of evapotranspiration resulting in 9 to 10 inches of runoff per year.

B. STABLEX CORPORATION PROPOSAL

1. Materials Processed

The materials to be processed at the facility will include essentially inorganic hazardous and non-hazardous liquid and solid waste. Included as Table A-1 is a listing of hazardous waste types granted temporary exclusion for STABLEX under the delisting process by the USEPA on November 25, 1980. This exclusion is specific to the Stablex project in Groveland Township, Michigan, but is reflective of the wastes which would be accepted at a facility in Ohio.

2. Typical Plant Configuration

Exhibit 7 of Stablex Corporation's New Hampshire RCRA Part B application is included for background information on plant layout. Although a plant in Ohio would not be identical, many of the components would be the same.

Four broad groups of hazardous wastes are received at a Stablex facility which include cyanides, acids, chromic acids and alkaline/neutral materials. Separate bulk truck unloading bays, drum storage and bulk solid bays are provided to insure segregation by material type.

Ohio EPA

Mr. Frank Roach
R & R Properties
1140 South McCord Road
Holland, Ohio 43528

December 20, 1984

Dear Mr. Roach:

I have enclosed material concerning Nuturn that should be helpful. I highlighted my field map to show you where asbestos waste was covered. The numbers indicate where I took soil samples at and the depths are recorded on the following page.

The July 5, 1984, letter to Ms. Grisham explains that the covering operation was done satisfactorily, according to NESHAP regulations. The last enclosure describes the shutdown at the plant.

Should you need any further assistance, do not hesitate to contact me.

Sincerely,

Don North

Donald F. North
Air Pollution Control Unit

DFN/lst

cc: File

Northwest District Office
1035 Devlac Grove Drive, Bowling Green, Ohio 43402-4598 (419) 352-8461

OhioEPA

Ms. Miranda Menzies
Dames & Moore
644 Linn Street
Suite 501
Cincinnati, Ohio 45203

April 9, 1985

Dear Ms. Menzies:

I have enclosed material concerning Nuturn that should be helpful. I highlighted my field map to show you where asbestos waste was covered. The numbers indicate where I took soil samples at and the depths are recorded on the following page.

The July 5, 1984, letter to Ms. Grisham explains that the covering operation was done satisfactorily, according to NESHAP regulations. Another enclosure describes the shutdown at the plant. Also included is a copy of the Asbestos NESHAP.

Should you need any further assistance, do not hesitate to contact me.

Sincerely,

Don North

Donald F. North
Air Poblution Control Unit

DFN/1st

Enclosure

cc: File

Northwest District Office
1035 Devlac Grove Drive, Bowling Green, Ohio 43402-4598 (419) 352-8461

3

OhioEPA

Re: Paulding County
Solid Waste

Nuturn Corporation
700 W. Caroline Street
Paulding, Ohio 45879

October 13, 1977

Dear Sir:

We received your proposal for disposing of the "asbestos hill" which is located on your plant site. A review of your plan and the laboratory report was made and it appears that what you have proposed is a satisfactory solution for disposing of this waste on a one time basis. We would also recommend that two feet of final cover be placed on top of the waste.

You may proceed with this project and if you should have any questions or need any assistance, feel free to call.

Sincerely yours,

Loren W. Shaffer
District Sanitarian

LWS/sld

State of Ohio Environmental Protection Agency
Northwest District Office
1035 Devlac Grove Drive, Bowling Green, Ohio 43402 • (419) 352-8461

James A. Rhodes, Governor
Ned E. Williams, P.E., Director

nuturn CORPORATION
700 W. CAROLINE ST.
PAULDING, OHIO 45879

ecology and environment
recycled paper

September 30, 1977

Arm - looks ok - approval - necessary

RECEIVED
OCT - 4 1977
Ohio Environmental Protection Agency
NORTHWEST DISTRICT

Ohio EPA
State of Ohio Environmental
Protection Agency
Northwest District Office
1035 Devlac Grove Drive
Bowling Green, OH 43402

Attention: Loren Shaffer

Dear Mr. Shaffer:

Thank you for your quick response and meeting with us on our problem of disposing the "asbestos hill".

Attached are the reports that you requested during our September 22 meeting.

If there is any additional information or new questions to be answered from these reports, please call and I will get an answer for you.

Sincerely,

William R. Shunk

William R. Shunk
Plant Manager

WRS:llk

Attachments

ecology and environment

recycled paper

nuturn CORPORATION

Internal Memorandum

TO: W. R. Shunk

DATE: September 28, 1977

FROM: L. B. Cooper

RE: EPA REQUEST

Reference our meeting on September 22, 1977, with EPA representatives, I have been able to obtain all the information that was requested.

Enclosed you will please find the four (4) main items that were in question; (1) A sample of Kauser's core drill; (2) A sketch of the project; (3) Chemical breakdown of the hill; (4) A copy of Kauser's bid and Nuturn's purchase agreement. One main exception to our agreement is that after Mr. Kauser's bid, Nuturn changed the requirements to one (1) foot or more for the top coverage.

Construction on this project was started on September 22, 1977, (Thursday) but Nuturn also has an agreement with Mr. Kauser about additions to project in case of EPA requirements and their up-dates. Although we do have this flexibility, immediate attention should be given this project since construction is in progress. Mr. Kauser has stated that phase I will be completed in approximately 20 days from this date.

L. B. Cooper

L. B. Cooper
Supervisor
Maintenance

LBC:llk

Enclosures

RECEIVED
OCT - 4 1977
Ohio Environmental Protection Agency
NORTHWEST DISTRICT

ecology and environment recycled paper

Charles Kauser Excavating, Inc.

ROUTE 2
PAULDING, OHIO
45879
399-5150

July 19, 1977

Nuturn Corporation
Paulding, Ohio 45879

Gentlemen:

The following is an "Estimated Bid" for burying asbestos hill. Estimate good through December 1977. Hill located west of Nuturn in Paulding, Ohio. Hill will be buryed with at least 6" cover on flat terrain so there will be no erosion. Estimate is $15,000.00. Payment Due after work is completed on hill.

Approximately 5,000 cu. yd. dirt will be stock piled for future use to close two existing ponds, estimate for closing two existing ponds $4,800. Estimated Bid $19,800.00.

Preparing seed bed and sewing approximately 7 acres.

140 lbs. Kentucky Fescue 31	
7 bu. oats	
3,500 lbs. fertilizer	
Total	$ 700.00
Estimated Bid	19,800.00
Total Bid	$20,500.00

Sincerely yours,

Charles Kauser

Charles Kauser
President

kjk/CK

C41-

nuturn CORPORATION

ecology and environment

PURCHASE ORDER

000420

- IMPORTANT -
THIS ORDER NUMBER MUST APPEAR ON ALL PACKING SLIPS, INVOICES, PACKAGES AND CORRESPONDENCE. DUPLICATE INVOICES REQUIRED FOR EACH SHIPMENT.

TO:
Charles Kauser Excavating, Inc.
Route 2
Paulding, Ohio 45879

VENDOR NO.

DATE: 9/12/77

SHIP TO: NUTURN CORPORATION
700 W. CAROLINE STREET
PAULDING, OHIO 45879

INVOICE TO: NUTURN CORPORATION
700 W. CAROLINE STREET
PAULDING, OHIO 45879

SHIP VIA: del.
F.O.B.: Plant
TERMS: net

DELIVERY REQUIRED AT OUR PLANT: Phase I - as soon as feasible to start completion 1 mo
Phase II - Per our instruction

THE TERMS AND CONDITIONS APPEARING ON THE REVERSE SIDE ARE PART OF THIS ORDER.

ITEM	QUANTITY	UNIT	DESCRIPTION	PRICE	UNIT
	Job		PHASE I Bury Asbestos Hill west of Factory. Clay border 360° around hill with slope 6' to 1' with an 8' top, so there will be no erosion. Stock pile fill dirt for Phase II. Payment due upon completion of job.	$15,700.	Job
	Job		PHASE II Pump out ponds, close two existing ponds (use fill dirt from Phase I). Payment due upon completion of job. Cost for preparing seed bed and sewing, approx. 7 acres is included in above costs: 140 lb. Kentucky Fescue 31 7 bu. oats 3500 lbs. fertilizer Total cost - $700. ( ) This purchase is taxable (✓) Tax-exempt from sales & use taxes under Cert. #99-008830 issued by State of Ohio Reference your quote 7/19/77	$ 4,800.	Job

Changes in this agreement are not valid unless covered by Purchase Agreement Change Notice.

RECEIVING DETAILS

DATE	ITEM	RECEIVER NO.	THIS SHIPMENT	CUMULATIVE	BALANCE DUE

FOLLOW UP DETAILS

DATE	NAME	COMMENTS

CONFIRMING P. O. - DO NOT DUPLICATE

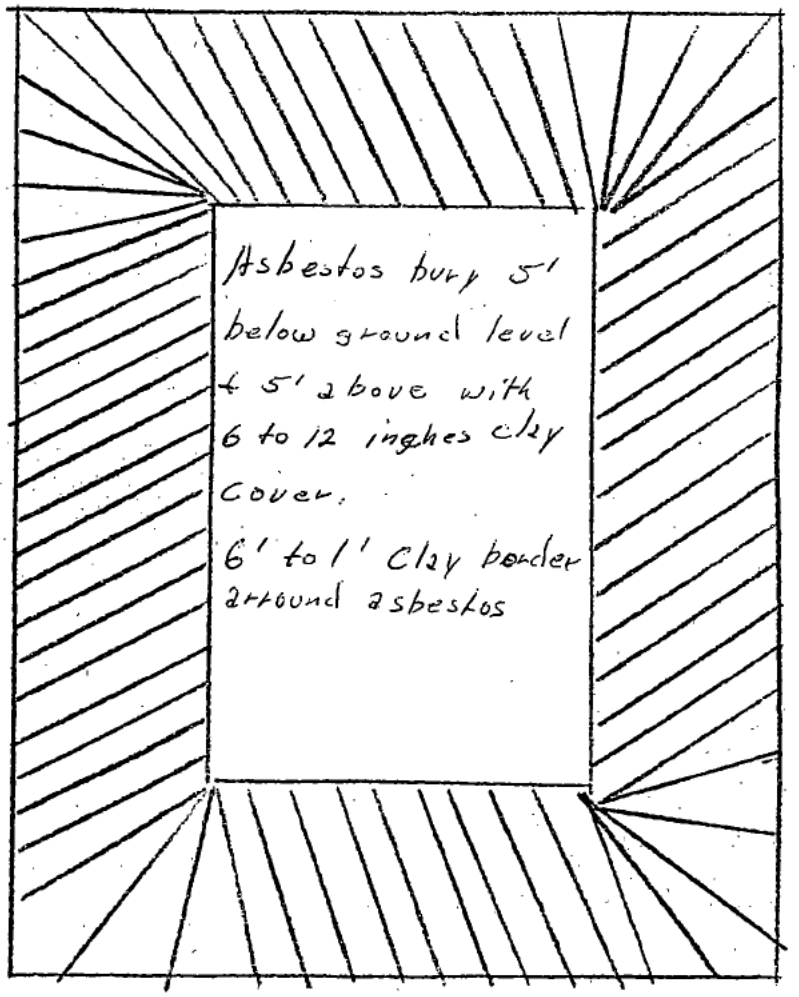
W. R. Sh

AUTHORIZED SIGNATURE

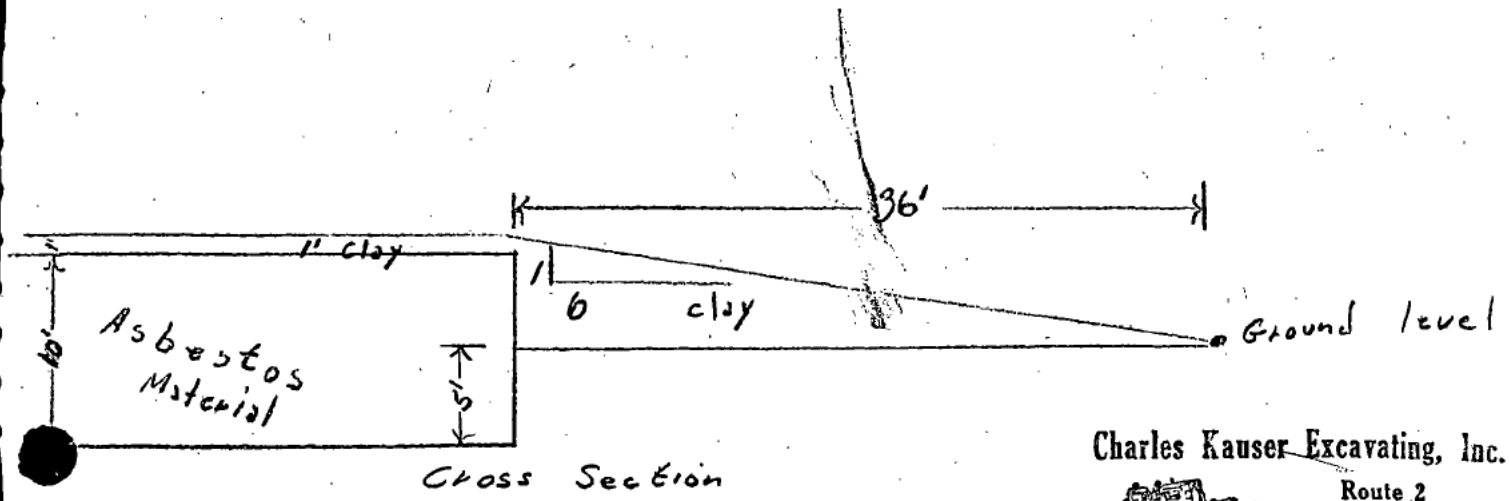
PURCHASING

NUTURN CORPORATION

recycled paper ecology and environment



clay border 1' clay cover



Cross Section

Charles Kauser Excavating, Inc.
Route 2
Paulding, Ohio 45879

Sample

Log of Test Hole at Nuturn Corp. Paulding O.

FT.	Description of Material
0	top Soil dark Gray Clay
1	yellowish-brown clay
2	grayish-brown clay
3	prominet yellowish brown clay
4	
5	grayish brown clay silty
6	
7	
8	

Charles Kauser Excavating, Inc.
Route 2
Paulding, Ohio 45879

recycled paper

OhioEPA

12

Re: NESHAP's - Asbestos
Paulding

Ms. Rita M. Grisham
Director of Personnel
Nuturn Corporation
570 Metroplex Drive
Nashville, TN 37211

May 8, 1984

Dear Ms. Grisham:

I had several questions after reviewing Mr. Kauser's proposal. Therefore, I contacted him and arranged to meet with him at the site on Thursday, May 3, 1984. Let me summarize our conclusions below:

1. We inspected areas A, B, C, D, F and G and, with one minor addition, concluded that his proposal included all areas which must be covered north of the plant. Again, the areas to be covered are B, C and D. The addition is in the red, dotted area between A and B.

2. The entire operation must be done in such a way as to avoid stirring up dust (creating visible emissions). Unless absolutely necessary, asbestos waste material should not be disturbed. If any dust created from moving area A cannot be controlled then A must be left in place and covered. However, if the operation can be completed without creating excessive dust, A can be used to fill in the hole.

3. If dust is generated the soil will need to be wetted until the dust is controlled. Mr. Kauser will check into the possibility of obtaining a hose to use for this purpose. This should be provided when work begins.

I also made a more thorough inspection of the property surrounding the plant. I found three more areas that must be dealt with. They are referred to as H, I and J on the diagram and are described below:

H. In this area I observed asbestos waste material which must be covered in the same manner as areas B, C and D.

I. I observed fibrous asbestos material on a concrete pad. This must be cleaned up.

Northwest District Office
1035 Devlac Grove Drive, Bowling Green, Ohio 43402-4598 (419) 352-8461

J. In this area there are several piles of waste material. These must be cleaned up, also. I would suggest digging a hole east of the plant in which to deposit material from I and J. Again, this must be done without creating dust.

I would suggest making a careful inspection of the grounds yourself to insure that all asbestos containing material is cleaned up.

In conclusion, Ohio EPA requires that you make arrangements to cover or clean areas H, I and J. I would advise you to also make arrangements to give the contractor flexibility to cover any other waste areas discovered by himself, yourself or Ohio EPA while the work is being completed. (These would probably be minor areas.)

If there are any questions regarding this letter, please contact me immediately. Otherwise, I will wait to receive an additional proposal involving H, I and J.

Sincerely,

Don North

Donald F. North
Air Pollution Control Unit

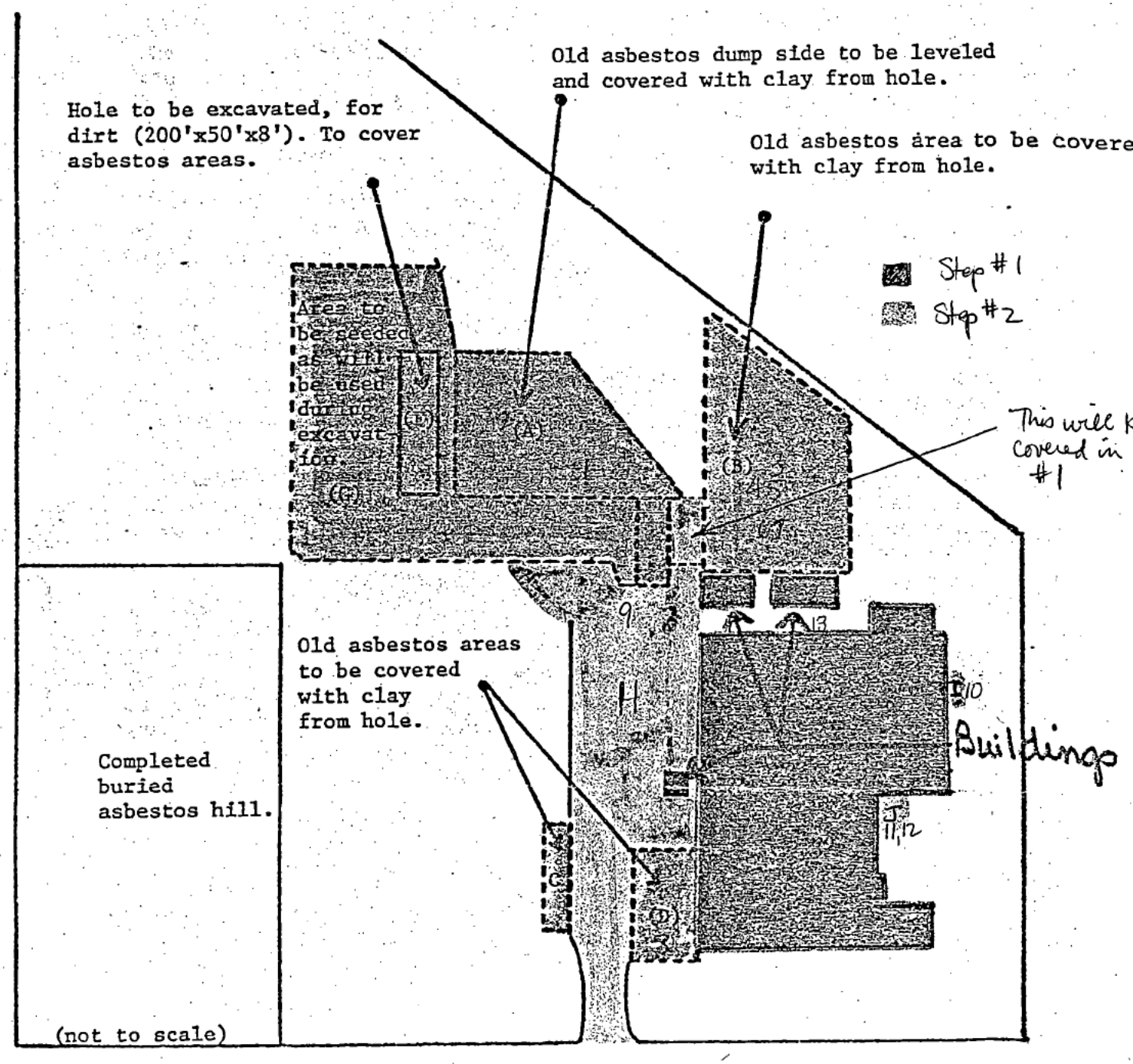
/jw
Enclosures

cc: Tom Tucker, DAPC
cc: Pat Walling, DAPC

File Copy

Charles Kauser Excavating, Inc.

ROUTE 2
PAULDING, OHIO
45879



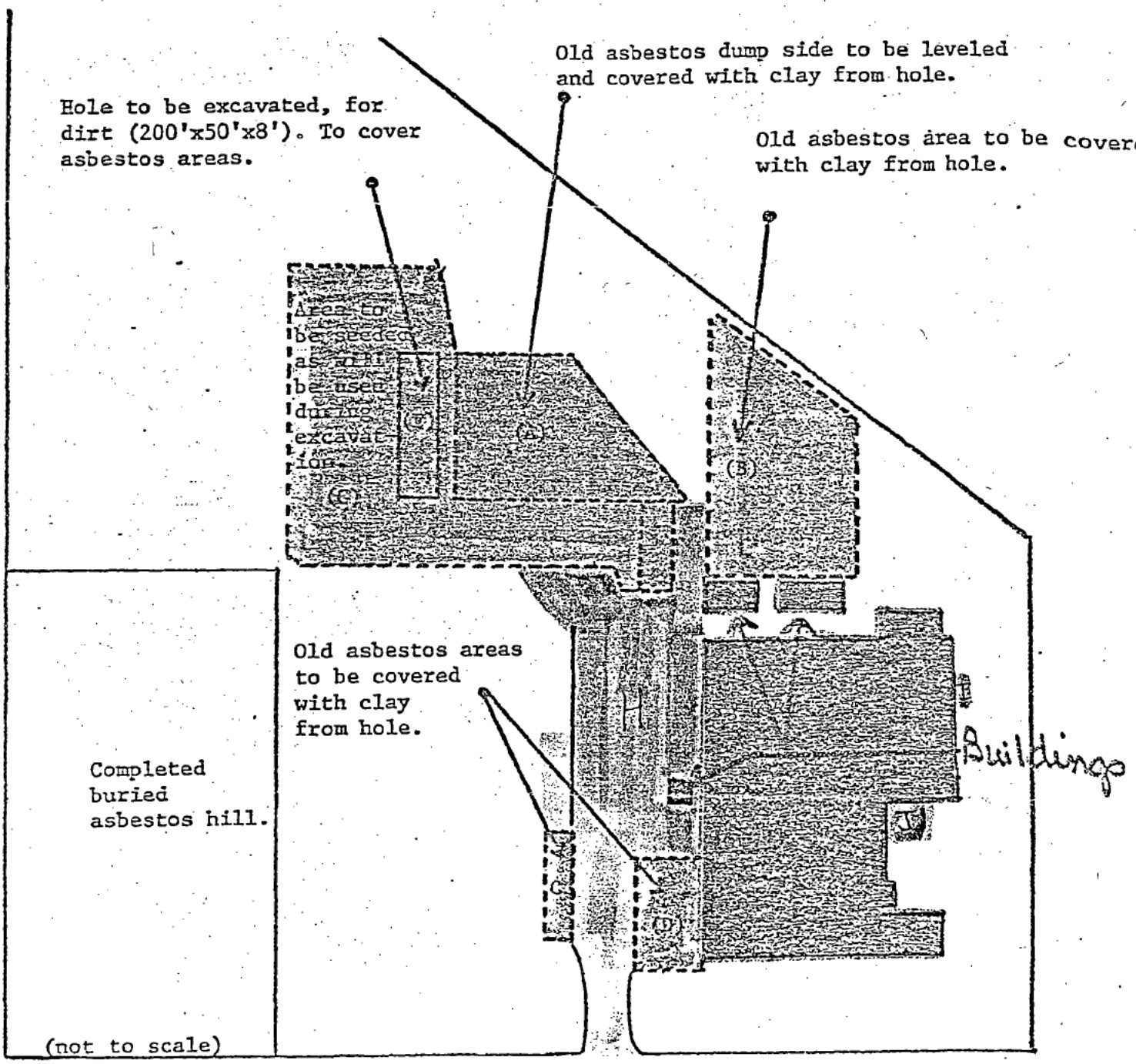
1. Acres to be covered with 6" clay and seeded (approx.) (A,B,C,D).....3.17
2. Acres to be seeded, as will be used during excavation (approx.) (G).....2.42
3. Total acres to be seeded (approx.).....5.59

Note: #'s 1-13 indicate location of pictures

Second Proposal agree upon 5-8-84

Charles Kauser Excavating, Inc.

ROUTE 2
PAULDING, OHIO
45879



1. Acres to be covered with 6" clay and seeded (approx.) (A,B,C,D).....3.17
2. Acres to be seeded, as will be used during excavation (approx.) (G).....2.42
3. Total acres to be seeded (approx.).....5.59

Uturn CORPORATION

May 9, 1984

RECEIVED
MAY 15 1984
OHIO EPA
N.W.D.O.

Mr. Donald F. North
Air Pollution Control Unit
Ohio EPA
Northwest District Office
1035 Devlac Grove Drive
Bowling Green, Ohio 43402

Dear Don:

As agreed at our meeting in Paulding on Tuesday, this letter is to confirm my understanding of the decisions made, as well as to respond to your May 8, letter to me.

A. In reviewing your letter, we agreed to your conclusions 1, 2, and 3. We agreed that we do not want to leave a hole and will use wetting as necessary in movement of soil. (Based on ground conditions, it is highly unlikely that the soil will be that dry anyway.)

B. Insofaras Area H is concerned, we agreed that the primary roadbed portion of this area does not need complete re-work, but adjacent sections do need attention. I have modified your drawing by adding C-1, H-1 and H-2 designations to describe such areas. C-1 is merely an extension of C, where it appears broken finished product has been used as fill material. Mr. Kauser will remove approximately 6 inches from this area (in a non-dusty fashion) and replace with 6 inches of non-contaminated soil. He will then seed or cover with gravel as appropriate as we proceed, and as will be agreed to between all of us at that time. Area H-1 is essentially the same type work where we discovered finished broken pieces mixed with gravel. Area H-2, outside the boiler house has some vegetation on it, but appears to have been filled in the past with scrap as well. This will be taken down to a manageable level by Mr. Kauser, re-covered with 6 inches of clay and seeded.

C. Area I - Complete agreement. I hired a laborer before I left Paulding yesterday to do this work as well as to walk the entire property and pick up, dig up, and otherwise locate any segment or other waste that is scattered on the property randomly in locations not included in the construction project. This clean-up work is to begin Thursday, May 10, weather permitting, and should not take more than a week for one person to complete it. The roadbed Area H is to be included so that there will not be any product there in the area we agreed needed only minimal attention to bring into compliance.

570 Metroplex Drive • Nashville, Tennessee 37211 • 615/834-3800 • Telex 555128

D. Area J - Agreed, except that we didn't really discuss digging a hole east of the plant. Mr. Kauser will be authorized, however, to properly dispose of the waste in J and cover over in compliance with regulations.

I attach a copy of the construction work plan -- modified once more to incorporate sections C-1, H-1, H-2 as referenced above. I included B-1 and K merely to designate areas where I especially asked the laborer to pick up loose pieces in addition to roadway H, the hill area on the SW corner and all around the edges of the building. Debris collected in this procedure will be placed in Areas A,D and B so it can be included in Mr. Kauser's burial.

I will check next week to be sure proper attention has been given to the ground clean-up project, so there will be no interference with Mr. Kauser's work.

As we discussed, please call me if there is any substantial variation required as the work is in progress. I will, of course, be flexible in dealing with Mr. Kauser if we encounter unforeseen problems, but do want prior knowledge as you can understand. Don, thanks for your time -- and that of Chuck -- in reviewing the project on Tuesday.

I am attaching a copy of my letter to Mr. Kauser outlining the additional work for which I need a quote. Please let me know if I have misunderstood or misstated the decisions we made Tuesday as outlined in this letter.

Sincerely,

Rita Grisham

Rita M. Grisham
Director of Personnel

RMG/skb

Enclosures

cc: C.J. Sinclair
J.L. Battle
C. Kauser, Paulding

PITTSBURGH TESTING LABORATORY
ESTABLISHED 1881
850 POPLAR STREET, PITTSBURGH, PA. 15220

AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES, ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AND AUTHORIZATION FOR PUBLICATION OF STATEMENTS, CONCLUSIONS OR EXTRACTS FROM OR REGARDING OUR REPORTS IS RESERVED PENDING OUR WRITTEN APPROVAL.

AREA CODE 412 TELEPHONE 922-4000

PLEASE REPLY TO:
P. O. BOX 1646
PITTSBURGH, PA. 15230

FORM 407 REV. PG

LABORATORY No. 771626

ORDER No. PG-5061

CLIENT'S No. Ltr. 12/22/76
David K. Simpson

REPORT

January 12, 1977

Analysis of: WASTE

Submitted by: Maremont Corporation

Reported to: Maremont Corporation
P. O. Box 1488
Nashville, Tennessee 37202

ASBESTOS WASTE

Analysis After Drying @ 110°C

Silicon Dioxide	27.55%
Lead	.92%
Copper	.27%
Iron Oxide	5.79%
Chromium Oxide	*.01%
Loss on Ignition @ 450°C	26.46%

*Less Than

Thermal Conductivity

LATER

PITTSBURGH TESTING LABORATORY

Robert J. King
Manager, Chemical Department

3 - Client
Attn: David K. Simpson
1 - PTL-Nashville

ctn

3. Western Reserve Manufacturing Co. (Case #499)
An EAR was forwarded to the EC on 6-26-1984 by the NEDO (Jim Veres) concerning this entity. Furthermore, a referral was also submitted to the Wastewater LSC by NEDO's Bill Miller. Thus, this case is a combined air/water enforcement matter. The "air portion" involves permit violations inasmuch as the firm has never applied for or received permits. This was discovered by the NEDO during a plant inspection which, however, could be made only after the DO obtained a search warrant.

Permit applications were finally submitted by Western Reserve Manufacturing. A review of these applications indicated compliance with the pertinent regulations. The NEDO believes, however, that additional inspections will be necessary to ascertain that no other, hitherto undiscovered sources are being operated out-of-compliance. The entity informed the NEDO that such inspections could only be made upon a 24-hour notice. This is unsatisfactory to the Ohio EPA. The NEDO, therefore, recommended referral to the AGO so that a Court Order be obtained. The Order would settle the inspection question once and for all. (See the EC Minutes of 10-26-84). The Director referred this combined air/water case to the AGO on 11-21-1984 (See the enclosures).

Case Closed.

4. Asphalt, Inc. (Case #428)
An EAR was forwarded to the LSC on 10-6-83 by the NEDO concerning this entity. The firm, which is a division of Griffith Blacktop, Inc., operates a hot-mix asphalt plant which violated OAC rule 3745-17-11. The existing particulate emission control system (cyclone and wet-tube washer) was inadequate. Stack tests performed on 7-20-83 demonstrated this inadequacy. The NEDO requested and the LSC recommended a Director's Warning Letter which was issued on 11-14-1983 (See the LSC Minutes of 11-10-83 and 11-23-83). Compliance was ordered by the beginning of the 1984 season (i.e. the spring of the year). The entity modified the emission control system using baffles and retested. The stack tests of 7-24-84 demonstrated compliance with OAC rule 3745-17-10. The NEDO, therefore, recommended a PTO but with Special Terms and Conditions to resolve some fugitive dust emission problems as well. This enforcement matter can, therefore, be concluded.

Case Closed.

5. Nuturn Corporation (Case #471)
Nuturn Corporation ceased its operations on 2-29-1980 at its Paulding, Ohio site. The facilities have been abandoned, except for a caretaker, since that date. The entity manufactured friction products (automotive brake pads, etc.) and buried some of the manufacturing wastes at its plant

Potential Hazardous Waste Site
Preliminary Assessment

Grizzley Manufacturing Co
700 W. Caroline St.
Paulding, Ohio 45879

The 5-phase site is located ~~in the~~ NW of Paulding Ohio. It is bounded by the Penn Central RR on the north, Carolina on the south. The facility, a manufacturer of friction products (automotive brake pads, etc.) ~~is~~ was abandoned. Waste was disposed of onsite. They consisted of asbestos + lead contaminated. ~~The waste material was also contaminated with lead and copper.~~

During a 1983 STATE investigation of the site, asbestos was found mounded + exposed. A number of violation of NESHAPS (National Emission Standards for Hazardous Air Pollutants) Sources) were found. ~~But~~ The violation were corrected and the site

site. The wastes contain asbestos, a NESHAPS - regulated material. In 1983 the Ohio EPA's NWDO (Don North) investigated the site and discovered that the "asbestos hill" as well as other dumping areas lost their earthen covers which were installed in 1977. Thus asbestos-bearing material became exposed to the wind and to the elements. Furthermore, a group of investors is considering the development of the plant site which is now owned by Greyhound Corporation, Chicago, Illinois. The question of NESHAPS violations was discussed in earlier EC meetings (See the Minutes of 4-27-1984, 5-11-1984, 7-6-1984). The NWDO identified the specific waste burial sites which were subsequently covered over by a new layer of earth (See the EC Minutes of 5-11-84). Seeding of the soil was to be done as well by Nuturn. The entity satisfied the pertinent NESHAPS regulations and no known violations of these or Ohio EPA's rules exist. I.e., no known airborne emissions of asbestos are occurring. The EC, therefore, recommended the closure of this case. A letter to the officials of Paulding should, however, be sent recommending that the existence and location of the asbestos burial sites be entered into the city's real estate records. Future violations could thus be avoided and the asbestos wastes would not be disturbed.

Case Closed.

C. CASES PENDING:

1. Ashland Petroleum Company (Case #500)
A Director's Warning Letter has been issued to Ashland Petroleum Company on 11-21-1984 (See the enclosures). The letter addresses the stack tests which were performed on 10-1-84 and 10-11-84. The tests show that the entity's FCC unit does not meet the VOC emission limit specified in OAC rule 3745-21-07(G)(2). Further, the letter instructs the Ashland Petroleum Company to submit an expeditions compliance plan with schedule to reduce the FCC's emissions to the required level.

This case is based on an EAR which was submitted to the EC by the Canton LAA on 10-25-84. The request was initiated because the FCC unit is being operated without a "CO boiler" and the VOC as well as CO emissions are excessive. Additionally, the FCC unit is being operated without a valid PTO (See the EC Minutes of 11-9-84).

Case Continued.

2. Oakwood Forensic Center (Case #493)
The Ohio EPA received a number of complaints about "acid smut" falling on automobiles parked in the vicinity of the Center's boilerhouse. The NWDO submitted an EAR to the EC on 8-29-1984 because of this problem (See the EC Minutes of 8-31-84). A Director's Warning Letter has been issued on 9-13-84 to Ms. Pamela S. Hyde, Director, Ohio Department of Mental Health requesting specific measures to eliminate the problem

Seventh Days to Pull Files → Grizzley Lucas Co.

WW → Ind. + Public — Paulding

Drinking Ed King (Roy Pearce) ✓

HA 2. Ben Chambers } ✓

Solid

Air Church Hall →

Dead Files

Grizzley Machine.

Gladys Watts
886 0393

→ Don North.

APPENDIX B

PRELIMINARY GROUND-WATER AND SOIL CHEMISTRY DATA

COMPOSITED SAMPLE AREA I

4
Page R-7
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-30 TO 35
Laboratory ID: 63849-115 Enseco ID: 63849-115
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	0.007	mg/L	0.006	A13ICPRCR_	07/07/8
Lead	N.D.	mg/L	0.05	A13ICPRCR_	07/07/8
Zinc	0.02	mg/L	0.01	A13ICPRCR_	07/07/8

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

COMPOSITED SAMPLE AREA II

4
Page R-8
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-36 TO 41
Laboratory ID: 63849-116 Enseco ID: 63849-116
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	0.011	mg/L	0.006	A13ICPRCR_	07/07/8
Lead	N.D.	mg/L	0.05	A13ICPRCR_	07/07/8
Zinc	0.05	mg/L	0.01	A13ICPRCR_	07/07/8

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

COMPOSITED SAMPLE AREA III

Page R-12
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-69 TO 76
Laboratory ID: 63849-120 Enseco ID: 63849-120
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	0.16	mg/L	0.006	A13ICPRCR	07/07/8
Lead	0.4 [redacted]	mg/L	0.3	A13ICPRCR	07/07/8
Zinc	1.2	mg/L	0.01	A13ICPRCR	07/07/8

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

DRAFT

COMPOSITED SAMPLE AREA IV

Page R-15
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-108 TO 113
Laboratory ID: 63849-123 Enseco ID: 63849-123
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	0.18	mg/L	0.03	A13ICPRCR	07/07/8
Lead	4.1	mg/L	0.3	A13ICPRCR	07/07/8
Zinc	1.4	mg/L	0.05	A13ICPRCR	07/07/8

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

COMPOSITED SAMPLE AREA V

Page R-9
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-42 TO 47
Laboratory ID: 63849-117 Enseco ID: 63849-117
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	0.32	mg/L	0.03	A13ICPRCR	07/07/8
Lead	5.1	mg/L	0.3	A13ICPRCR	07/07/8
Zinc	2.1	mg/L	0.05	A13ICPRCR	07/07/8

Exceeds RCRA limits for Pb — verified by reanalysis and custom spike - 102% rec.

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

DRAFT

COMPOSITED SAMPLE AREA VI

4
Page R-13
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-77 TO 84
Laboratory ID: 63849-121 Enseco ID: 63849-121
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	3.4	mg/L	0.03	A13ICPRCR	07/07/8
Lead	8.8	mg/L	0.3	A13ICPRCR	07/07/8
Zinc	9.9	mg/L	0.05	A13ICPRCR	07/07/8

Exceeds RCRA limits for Pb

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

COMPOSITED SAMPLE AREA VII

Page R-14
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-85 TO 89
Laboratory ID: 63849-122 Enseco ID: 63849-122
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	0.09 [redacted]	mg/L	0.03	A13ICPRCR	07/07/8
Lead	7.8	mg/L	0.3	A13ICPRCR	07/07/8
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Zinc	0.47	mg/L	0.05	A13ICPRCR	07/07/8

[redacted]

Exceeds RCRA limits for Pb.

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

DRAFT

COMPOSITED SAMPLE AREA VIII

Page R-10
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-48 TO 53
Laboratory ID: 63849-118 Enseco ID: 63849-118
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	0.022	mg/L	0.006	A13ICPRCR	07/07/8
Lead	N.D.	mg/L	0.05	A13ICPRCR	07/07/8
Zinc	0.19	mg/L	0.01	A13ICPRCR	07/07/8

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

DRAFT

COMPOSITED SAMPLE AREA IX

Page R-11
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR_
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: COMPOSITE OF 63849-54 TO 59
Laboratory ID: 63849-119 Enseco ID: 63849-119
Matrix: Soil Sampled: Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Copper	0.20	mg/L	0.006	A13ICPRCR_	07/07/8
Lead	0.18	mg/L	0.05	A13ICPRCR_	07/07/8
Zinc	2.0	mg/L	0.01	A13ICPRCR_	07/07/8

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

OFFSITE SOIL SAMPLE 1

Page R-5
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: OFFSITE 1
Laboratory ID: 63849-105 Enseco ID: 63849-105
Matrix: Soil Sampled: 06/13/87 Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Arsenic	N.D.	mg/L	0.1	A13ICPRCR	07/07/8
Copper	0.011	mg/L	0.006	A13ICPRCR	07/07/8
Lead	N.D.	mg/L	0.05	A13ICPRCR	07/07/8
Nickel	N.D.	mg/L	0.04	A13ICPRCR	07/07/8
Zinc	0.02	mg/L	0.01	A13ICPRCR	07/07/8

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

OFFSITE SOIL SAMPLE 2

4
Page R-6
METALS PARAMETERS
EPI TOXICITY METALS
: A13ICPRCR
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: OFFSITE 2
Laboratory ID: 63849-106 Enseco ID: 63849-106
Matrix: Soil Sampled: 06/13/87 Received: 06/16/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Arsenic	N.D.	mg/L	0.1	A13ICPRCR	07/07/8
Copper	0.011	mg/L	0.006	A13ICPRCR	07/07/8
Lead	N.D.	mg/L	0.05	A13ICPRCR	07/07/8
Nickel	N.D.	mg/L	0.04	A13ICPRCR	07/07/8
Zinc	0.08 [redacted]	mg/L	0.01	A13ICPRCR	07/07/8

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

WELL PA-5 SLUDGE PIT 1

4

Page R-1
METALS PARAMETERS
DISSOLVED METALS
: A01ICP PPD
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: SLUDGE POND 1
Laboratory ID: 63849-067 Enseco ID: 63849-067
Matrix: Water Sampled: 06/12/87 Received: 06/13/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	
Antimony	N.D.	mg/L	0.05	
Arsenic	N.D.	mg/L	0.003	0.05
Beryllium	N.D.	mg/L	0.001	
Cadmium	N.D.	mg/L	0.005	
Chromium	N.D.	mg/L	0.01	
Copper	0.011	mg/L	0.006	
Lead	0.099	mg/L	0.004	0.05
Mercury	N.D.	mg/L	0.0001	0.002
Nickel	N.D.	mg/L	0.04	
Selenium	N.D.	mg/L	0.004	0.01
Silver	N.D.	mg/L	0.005	
Thallium	N.D.	mg/L	0.008	
Zinc	0.04	mg/L	0.01	

PA-5

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

PA-5

WELL PA-5 SLUDGE PIT 1

Page R-2
METALS PARAMETERS

: A01ICPCI+D
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: SLUDGE POND 1
Laboratory ID: 63849-067 Enseco ID: 63849-067
Matrix: Water Sampled: 06/12/87 Received: 06/13/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Calcium	2C [redacted]	mg/L	0.1	A01ICPCI+D	07/07/8
Iron	N.D.	mg/L	0.05	A01ICPCI+D	07/07/8
Magnesium	422	mg/L	0.1	A01ICPCI+D	07/07/8
Potassium	56	mg/L	5	A01ICPCI+D	07/07/8
Sodium	287	mg/L	0.05	A01ICPCI+D	07/07/8

DRAFT

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

WELL PA-5 SLUDGE PIT 1

CB 6/19/87

1
Page R-1
HAZARDOUS SUBSTANCE LIST (HSL)
VOLATILE ORGANICS
EPA 624 : A01VOA_HSL
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: SLUDGE POND 1
Laboratory ID: 63849-067 Enseco ID: 63849-067
Matrix: Water Sampled: 06/12/87 Received: 06/13/87
Authorized: 06/16/87 Prepared: Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit		
Acetone	230	ug/L	25	A01VOA_HSL	06/1
Benzene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Bromoform	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Bromomethane	N.D.	ug/L	10	A01VOA_HSL	06/1
2-Butanone	N.D.	ug/L	35	A01VOA_HSL	06/1
Carbon disulfide	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Carbon tetrachloride	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Chlorobenzene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Dibromochloromethane	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Chloroethane	N.D.	ug/L	10	A01VOA_HSL	06/1
2-Chloroethyl vinyl ether	N.D.	ug/L	10	A01VOA_HSL	06/1
Chloroform	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Chloromethane	N.D.	ug/L	10	A01VOA_HSL	06/1
Bromodichloromethane	N.D.	ug/L	5.0	A01VOA_HSL	06/1
1,1-Dichloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/1
1,2-Dichloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/1
1,1-Dichloroethene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
1,2-Dichloropropane	N.D.	ug/L	5.0	A01VOA_HSL	06/1
cis-1,3-Dichloropropene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
trans-1,3-Dichloropropene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Ethyl benzene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
2-Hexanone	N.D.	ug/L	10	A01VOA_HSL	06/1
Methylene chloride	N.D.	ug/L	25	A01VOA_HSL	06/1
4-Methyl-2-pentanone	N.D.	ug/L	10	A01VOA_HSL	06/1
Styrene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
1,1,2,2-Tetrachloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/
Tetrachloroethene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Toluene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
Trans-1,2-Dichloroethene	N.D.	ug/L	5.0	A01VOA_HSL	06/1
1,1,1-Trichloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/1
1,1,2-Trichloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/1

N.D. = Not detected
1

DRAFT

WELL PA-5 SLUDGE PIT 1

1

Page R-2

HAZARDOUS SUBSTANCE LIST (HSL)

VOLATILE ORGANICS (CONT.)

EPA 624 : A01VOA_HSL

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: SLUDGE POND 1

Laboratory ID: 63849-067 Enseco ID: 63849-067

Matrix: Water Sampled: 06/12/87 Received: 06/13/87

Authorized: 06/16/87 Prepared: Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit		
Trichloroethene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Vinyl Acetate	N.D.	ug/L	10	A01VOA_HSL	06/17/
Vinyl chloride	N.D.	ug/L	10	A01VOA_HSL	06/17/
Total Xylenes	7.0	ug/L	5.0	A01VOA_HSL	06/17/
SS Toluene-D8	101	ug/L	0	A01VOA_HSL	06/17/
SS Bromofluorobenzene(BFB)	102	ug/L	0	A01VOA_HSL	06/17/
SS 1,2-Dichloroethane-D4	104	ug/L	0	A01VOA_HSL	06/17/

N.D. = Not detected

Reported by: Julie Thomson

Approved by: Michael Brooks

2

DRAFT

WELL PA-5 SLUDGE PIT 1

1

Page 6-1

PRIORITY POLLUTANT SUBSTANCE LIST (HSL)

SEMIVOLATILE ORGANICS

EPA SOP : A01BNA_HSL

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: SLUDGE POND 1

Laboratory ID: 63549-067 Ensecco ID: 63549-067

Matrix: Water Sampled: 06/12/87 Received: 06/13/87

Authorized: 06/15/87 Prepared: Analyzed: 06/30/87

CB 7/4/87

Parameter	Result	Units	Reporting Limit		
Acenaphthene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Acenaphthylene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Anthracene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(a)anthracene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(a)pyrene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(b)fluoranthene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(g,h,i)perylene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(k)fluoranthene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzyl alcohol	N.D.	ug/L	10	A01BNA_HSL	06/30
bis(2-Chloroethoxy)methane	N.D.	ug/L	10	A01BNA_HSL	06/30/
bis(2-Chloroethyl)ether	N.D.	ug/L	10	A01BNA_HSL	06/30/
bis(2-Chloroisopropyl)ether	N.D.	ug/L	10	A01BNA_HSL	06/30/
bis(2-Ethylhexyl)phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
4-Bromophenyl phenyl ether	N.D.	ug/L	10	A01BNA_HSL	06/30/
Butyl benzyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
4-Chloroaniline	N.D.	ug/L	10	A01BNA_HSL	06/30/
2-Chloronaphthalene	N.D.	ug/L	10	A01BNA_HSL	06/30/
4-Chlorophenyl phenyl ether	N.D.	ug/L	10	A01BNA_HSL	06/30/
Chrysene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Dibenz(a,h)anthracene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Dibenzofuran	N.D.	ug/L	10	A01BNA_HSL	06/30/
1,2-Dichlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
1,3-Dichlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
1,4-Dichlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
3,3'-Dichlorobenzidine	N.D.	ug/L	20	A01BNA_HSL	06/30/
Diethyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
Dimethyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
Di-n-butyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
2,4-Dinitrotoluene	N.D.	ug/L	10	A01BNA_HSL	06/30
2,6-Dinitrotoluene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Di-n-octyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/

N.D. = Not detected

1

DRAFT

WELL PA-5 SLUDGE PIT 1

1

Page R-2

HAZARDOUS SUBSTANCE LIST (HSL)

SEMIVOLATILE ORGANICS (CONT.)

EPA 625 : A01BNA_HSL

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: SLUDGE POND 1

Laboratory ID: 63849-067 Unseco ID: 63849-067

Matrix: Water Sampled: 06/12/87 Received: 06/13/87

Authorized: 06/14/87 Prepared: Analyzed: 06/30/87

Parameter	Result	Units	Reporting Limit		
Fluoranthene	N.D.	ug/L	10	A01BNA_HSL	06/
Fluorene	N.D.	ug/L	10	A01BNA_HSL	06/
Hexachlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/
Hexachlorobutadiene	N.D.	ug/L	10	A01BNA_HSL	06/
Hexachlorocyclopentadiene	N.D.	ug/L	10	A01BNA_HSL	06/
Hexachloroethane	N.D.	ug/L	10	A01BNA_HSL	06/
Indeno(1,2,3-cd)pyrene	N.D.	ug/L	10	A01BNA_HSL	06/
Isophorone	N.D.	ug/L	10	A01BNA_HSL	06/
2-Methylnaphthalene	N.D.	ug/L	10	A01BNA_HSL	06/
Naphthalene	N.D.	ug/L	10	A01BNA_HSL	06/
2-Nitroaniline	N.D.	ug/L	50	A01BNA_HSL	06/
3-Nitroaniline	N.D.	ug/L	50	A01BNA_HSL	06/
4-Nitroaniline	N.D.	ug/L	50	A01BNA_HSL	06/
Nitrobenzene	N.D.	ug/L	10	A01BNA_HSL	06/
N-Nitrosodipropylamine	N.D.	ug/L	10	A01BNA_HSL	06/
N-Nitrosodiphenylamine*	N.D.	ug/L	10	A01BNA_HSL	06/
Phenanthrene	N.D.	ug/L	10	A01BNA_HSL	06/
Pyrene	N.D.	ug/L	10	A01BNA_HSL	06/
1,2,4-Trichlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/
Benzoic acid	N.D.	ug/L	50	A01BNA_HSL	06/
2-Chlorophenol	N.D.	ug/L	10	A01BNA_HSL	06/
2,4-Dichlorophenol	N.D.	ug/L	10	A01BNA_HSL	06/
2,4-Dimethylphenol	N.D.	ug/L	10	A01BNA_HSL	06/
4,6-Dinitro-2-methylphenol	N.D.	ug/L	50	A01BNA_HSL	06/
2,4-Dinitrophenol	N.D.	ug/L	50	A01BNA_HSL	06/
2-Methylphenol	15	ug/L	10	A01BNA_HSL	06/
4-Methylphenol	N.D.	ug/L	10	A01BNA_HSL	06/
2-Nitrophenol	N.D.	ug/L	10	A01BNA_HSL	06/
4-Nitrophenol	N.D.	ug/L	50	A01BNA_HSL	06/
4-Chloro-3-methylphenol	N.D.	ug/L	10	A01BNA_HSL	06/
Pentachlorophenol	N.D.	ug/L	50	A01BNA_HSL	06/

N.D. = Not detected

3

DRAFT

WELL PA-5 SLUDGE PIT 1

1

Page R-3

HAZARDOUS SUBSTANCE LIST (HSL)

SEMIVOLATILE ORGANICS (CONT.)

GC/MS : A018NA_HSL

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: SLUDGE POND 1

Laboratory ID: 63649-067 Enseco ID: 63649-067

Matrix: Water Sampled: 06/12/87 Received: 06/13/87

Authorized: 06/15/87 Prepared: Analyzed: 06/30/87

Parameter	Result	Units	Reporting Limit		
Phenol	730	ug/L	10	A018NA_HSL	06/30
2,4,5-Trichlorophenol	N.D.	ug/L	50	A018NA_HSL	06/30
2,4,6-Trichlorophenol	N.D.	ug/L	10	A018NA_HSL	06/30
SS Nitrobenzene-D5	71	ug/L	0	A018NA_HSL	06/30
SS 2-Fluorobiphenyl	75	ug/L	0	A018NA_HSL	06/30
SS Terphenyl-D14	21	ug/L	0	A018NA_HSL	06/30
SS Phenol-D5	30	ug/L	0	A018NA_HSL	06/30
SS 2-Fluorophenol	30	ug/L	0	A018NA_HSL	06/30
SS 2,4,6-Tribromophenol	32	ug/L	0	A018NA_HSL	06/30

N.D. = Not Detected

Reported by: Aicen Ridley

Approved by: Michael Brooks

5

DRAFT

PA-6

WELL PA-6 BURN PIT

Page R-3
METALS PARAMETERS
DISSOLVED METALS
: A01ICP PPD
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: BURN PIT
Laboratory ID: 63849-068 Enseco ID: 63849-068
Matrix: Water Sampled: 06/12/87 Received: 06/13/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit		Analytical Method	Date Analyze
Antimony	N.D.	mg/L	0.05		A01ICP_PPD	07/07/8
Arsenic	N.D.	mg/L	0.003	0.05	A01FASD	07/08/8
Beryllium	N.D.	mg/L	0.001		A01ICP_PPD	07/07/8
Cadmium	N.D.	mg/L	0.005		A01ICP_PPD	07/07/8
Chromium	N.D.	mg/L	0.01		A01ICP_PPD	07/07/8
Copper	0.029	mg/L	0.006		A01ICP_PPD	07/07/8
Lead	0.023	mg/L	0.002	0.05	A01FPBD	07/08/8
Mercury	N.D.	mg/L	0.0001	0.002	A01CVHGD	07/06/8
Nickel	N.D.	mg/L	0.04		A01ICP_PPD	07/07/8
Selenium	N.D.	mg/L	0.004	0.01	A01FSED	07/08/8
Silver	N.D.	mg/L	0.005		A01ICP_PPD	07/07/8
Thallium	N.D.	mg/L	0.008		A01FTLD	07/08/8
Zinc	0.14	mg/L	0.01		A01ICP_PPD	07/07/8

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

DRAFT

PA-6

WELL PA-6 BURN PIT

Page R-4
METALS PARAMETERS

: A01ICPCI+D
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: BURN PIT
Laboratory ID: 63849-068 Enseco ID: 63849-068
Matrix: Water Sampled: 06/12/87 Received: 06/13/87
Authorized: 06/16/87 Prepared: Analyzed: 07/07/87

Parameter	Result	Units	Reporting Limit	Analytical Method	Date Analyze
Calcium	98	mg/L	0.1	A01ICPCI+D	07/07/8
Iron	N.D.	mg/L	0.05	A01ICPCI+D	07/07/8
Magnesium	431	mg/L	0.1	A01ICPCI+D	07/07/8
Potassium	7	mg/L	5	A01ICPCI+D	07/07/8
Sodium	32	mg/L	0.05	A01ICPCI+D	07/07/8

N.D. = Not detected
Reported by: Bruce Howbert Approved by: Will Pratt

DRAFT

WELL PA-6 BURN PIT

1
Page R-1
HAZARDOUS SUBSTANCE LIST (HSL)
VOLATILE ORGANICS
EPA 624 : A01VOA_HSL
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: BURN PIT
Laboratory ID: 63849-068 Ensaco ID: 63849-068
Matrix: Water Sampled: 06/12/87 Received: 06/13/87
Authorized: 06/16/87 Prepared: Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit		
Acetone	N.D.	ug/L	25	A01VOA_HSL	06/17/
Benzene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Bromoform	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Bromomethane	N.D.	ug/L	10	A01VOA_HSL	06/17/
2-Butanone	N.D.	ug/L	~~25~~ 35	A01VOA_HSL	06/17/
Carbon disulfide	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Carbon tetrachloride	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Chlorobenzene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Dibromochloromethane	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Chloroethane	N.D.	ug/L	10	A01VOA_HSL	06/17/
2-Chloroethyl vinyl ether	N.D.	ug/L	10	A01VOA_HSL	06/17/
Chloroform	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Chloromethane	N.D.	ug/L	10	A01VOA_HSL	06/17/
Bromodichloromethane	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
1,1-Dichloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
1,2-Dichloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
1,1-Dichloroethene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
1,2-Dichloropropane	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
cis-1,3-Dichloropropene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
trans-1,3-Dichloropropene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Ethyl benzene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
2-Hexanone	N.D.	ug/L	10	A01VOA_HSL	06/17/
Methylene chloride	N.D.	ug/L	25	A01VOA_HSL	06/17/
4-Methyl-2-pentanone	N.D.	ug/L	10	A01VOA_HSL	06/17/
Styrene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
1,1,2,2-Tetrachloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Tetrachloroethene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Toluene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Trans-1,2-Dichloroethene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
1,1,1-Trichloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
1,1,2-Trichloroethane	N.D.	ug/L	5.0	A01VOA_HSL	06/17/

N.D. = Not detected
1

DRAFT

WELL PA-6 BURN PIT

1
Page R-2
HAZARDOUS SUBSTANCE LIST (HSL)
VOLATILE ORGANICS (CONT.)
EPA 624 : A01VOA_HSL
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: BURN PIT
Laboratory ID: 63849-068 Enseco ID: 63849-068
Matrix: Water Sampled: 06/12/87 Received: 06/13/87
Authorized: 06/16/87 Prepared: Analyzed: 06/17/87

Parameter	Result	Units	Reporting Limit		
Trichloroethene	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
Vinyl Acetate	N.D.	ug/L	10	A01VOA_HSL	06/17/
Vinyl chloride	N.D.	ug/L	10	A01VOA_HSL	06/17/
Total Xylenes	N.D.	ug/L	5.0	A01VOA_HSL	06/17/
SS Toluene-D8	99	ug/L	0	A01VOA_HSL	06/17/
SS Bromofluorobenzene(BFB)	104	ug/L	0	A01VOA_HSL	06/17/
SS 1,2-Dichloroethane-D4	98	ug/L	0	A01VOA_HSL	06/17/

N.D. = Not detected
Reported by: Julie Thomson Approved by: Michael Brooks
2

DRAFT

WELL PA-6 BURN PIT

1

Page A-1

HAZARDOUS SUBSTANCE LIST (HSL)

SEMIVOLATILE ORGANICS

EPA ref : A01BNA_HSL

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: BURN PIT

Laboratory ID: 6F:49-06b Ensecp ID: 63849-069

Matrix: water Sampled: 06/12/97 Received: 06/13/97

Extraction: 06/17/97 Prepared: Analyzed: 06/30/97

Parameter	Result	Units	Reporting Limit		
Acenaphthene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Acenaphthylene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Anthracene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(a)anthracene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(a)pyrene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(b)fluoranthene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(g,h,i)perylene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzo(k)fluoranthene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzyl alcohol	N.D.	ug/L	10	A01BNA_HSL	06/30/
bis(2-Chloroethoxy)methane	N.D.	ug/L	10	A01BNA_HSL	06/30/
bis(2-Chloroethyl)ether	N.D.	ug/L	10	A01BNA_HSL	06/30/
bis(2-Chloroisopropyl)ether	N.D.	ug/L	10	A01BNA_HSL	06/30/
bis(2-Ethylhexyl)phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
4-Bromophenyl phenyl ether	N.D.	ug/L	10	A01BNA_HSL	06/30/
Butyl benzyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
4-Chloroaniline	N.D.	ug/L	10	A01BNA_HSL	06/30/
2-Chloronaphthalene	N.D.	ug/L	10	A01BNA_HSL	06/30/
4-Chlorophenyl phenyl ether	N.D.	ug/L	10	A01BNA_HSL	06/30/
Chrysene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Dibenz(a,h)anthracene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Dibenzofuran	N.D.	ug/L	10	A01BNA_HSL	06/30/
1,2-Dichlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
1,3-Dichlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
1,4-Dichlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
3,3'-Dichlorobenzidine	N.D.	ug/L	20	A01BNA_HSL	06/30/
Diethyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
Dimethyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
Di-n-butyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/
2,4-Dinitrotoluene	N.D.	ug/L	10	A01BNA_HSL	06/30/
2,6-Dinitrotoluene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Di-n-octyl phthalate	N.D.	ug/L	10	A01BNA_HSL	06/30/

N.D. = Not detected

1

DRAFT

WELL PA-6 BURN PIT

1

Page 8-2
HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)
SPA ID : A01BNA_HSL
Client Name: JAMES L. GRANT AND ASSOCIATES
Client ID: BURN PIT
Laboratory ID: [illegible] Ensco ID: 63949-069
Matrix: Water Sampled: 06/12/87 Received: 06/13/87
Authorized: 06/15/87 Prepared: Analyzed: 06/30/87

Parameter	Result	Units	Reporting Limit		
Fluoranthene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Fluorene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Hexachlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Hexachlorobutadiene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Hexachlorocyclopentadiene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Hexachloroethane	N.D.	ug/L	10	A01BNA_HSL	06/30/
Indeno(1,2,3-c,d)pyrene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Isophorone	N.D.	ug/L	10	A01BNA_HSL	06/30/
2-Methylnaphthalene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Naphthalene	N.D.	ug/L	10	A01BNA_HSL	06/30/
2-Nitroaniline	N.D.	ug/L	50	A01BNA_HSL	06/30/
3-Nitroaniline	N.D.	ug/L	50	A01BNA_HSL	06/30/
4-Nitroaniline	N.D.	ug/L	50	A01BNA_HSL	06/30/
Nitrobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
N-Nitroso-dipropylamine	N.D.	ug/L	10	A01BNA_HSL	06/30/
N-Nitrosodiphenylamine*	N.D.	ug/L	10	A01BNA_HSL	06/30/
Phenanthrene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Pyrene	N.D.	ug/L	10	A01BNA_HSL	06/30/
1,2,4-Trichlorobenzene	N.D.	ug/L	10	A01BNA_HSL	06/30/
Benzoic Acid	N.D.	ug/L	50	A01BNA_HSL	06/30/
2-Chlorophenol	N.D.	ug/L	10	A01BNA_HSL	06/30/
2,4-Dichlorophenol	N.D.	ug/L	10	A01BNA_HSL	06/30/
2,4-Dimethylphenol	N.D.	ug/L	10	A01BNA_HSL	06/30/
4,6-Dinitro-2-methylphenol	N.D.	ug/L	50	A01BNA_HSL	06/30/
2,4-Dinitrophenol	N.D.	ug/L	50	A01BNA_HSL	06/30/
2-Methylphenol	N.D.	ug/L	10	A01BNA_HSL	06/30/
4-Methylphenol	N.D.	ug/L	10	A01BNA_HSL	06/30/
2-Nitrophenol	N.D.	ug/L	10	A01BNA_HSL	06/30/
4-Nitrophenol	N.D.	ug/L	50	A01BNA_HSL	06/30/
4-Chloro-3-methylphenol	N.D.	ug/L	10	A01BNA_HSL	06/30/
Pentachlorophenol	N.D.	ug/L	50	A01BNA_HSL	06/30/

N.D. = Not detected

DRAFT

WELL PA-6 BURN PIT

Page A-3

HAZARDOUS SUBSTANCE LIST (HSL)

SEMIVOLATILE ORGANICS (CONT.)

SAS #[illegible] : A[illegible]_HSL

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: BURN PIT

Laboratory ID: [illegible] Enseco ID: 63749-069

Matrix: Water Sampled: 06/12/87 Received: 06/13/87

Extracted: 06/14/87 Prepared: Analyzed: 06/30/87

Parameter	Result	Units	Reporting Limit		
Phenol	N.D.	ug/L	10	A01BNA_HSL	06/30/[illegible]
2,4,6-Trichlorophenol	N.D.	ug/L	50	A01BNA_HSL	06/30/[illegible]
2,4,5-Trichlorophenol	N.D.	ug/L	10	A01BNA_HSL	06/30/[illegible]
SS Nitrobenzene-D5	70.	ug/L	0	A01BNA_HSL	06/30/[illegible]
SS 2-Fluorobiphenyl	72.	ug/L	0	A01BNA_HSL	06/30/[illegible]
SS Terphenyl-D14	34.	ug/L	0	A01BNA_HSL	06/30/[illegible]
SS Phenol-D5	23	ug/L	0	A01BNA_HSL	06/30/[illegible]
SS 2-Fluorophenol	24	ug/L	0	A01BNA_HSL	06/30/[illegible]
SS 2,4,6-Tribromophenol	24.	ug/L	0	A01BNA_HSL	06/30/[illegible]

N.D. = Not detected

Reported by: Aiden Ridley

Approved by: Michael Brooks

DRAFT

JAMES L. GRANT & ASSOCIATES, INC.
geotechnical engineering • management • computer science
DENVER TECHNOLOGICAL CENTER #30
8301 EAST PRENTICE AVENUE, SUITE 402
ENGLEWOOD, COLORADO/80111
(303) 779-0576

Dr. JAMES L. GRANT
PRESIDENT

ASSOCIATES
STEPHEN L. WAMPLER
MARY A. BISHOP
SUSAN L. GRANT
L. RUSSELL FREEMAN

July 18, 1987

Dr. Carlos Stern
Carlos Stern and Associates, Inc.
1406 North Johnson Street
Arlington, Virginia 22201

Subject: Transmittal of Supplemental Data Report
Paulding (OH) Friction Products Facility
JLGA Project Communication 807123.06

Dear Dr. Stern:

Enclosed is a draft of a Supplemental Data Report for the Paulding, Ohio Friction Products Facility. This report includes additional laboratory data obtained during the week of July 12.

We appreciate the opportunity to work with you on this project. Please feel free to contact us if you have any questions or suggestions upon your review of this program.

Very truly yours,

JAMES L. GRANT & ASSOCIATES

Richard L. Henry

Richard L. Henry
Senior Hydrogeologist

James L. Grant

James L. Grant
President

RLH/JLG

Enclosure

cc Bruce Holcomb, Esq. w/ enclosure

SUPPLEMENTIAL DATA REPORT

Friction Products Facility
Paulding, Ohio

Prepared for

CARLOS STERN AND ASSOCIATES, INC.

Arlington, Virginia

Prepared By

James L. Grant and Associates
Englewood, Colorado
July 18, 1987

TABLE OF CONTENTS

1. INTRODUCTION 1-1

2. LABORATORY ANALYSES 2-1
  2.1 Asbestos Determinations 2-1
  2.2 Total Lead Analyses 2-1
  2.3 Stoddard's Solvent Analyses 2-2
  2.4 Cation Exchange Properties of Clay Soils 2-2

Appendix A SOIL CHEMISTRY DATA

LIST OF TABLES

Table 1 Asbestos Content of Selected Soil Samples 2-3
Table 2 Total Lead in Soils 2-4
Table 3 Stoddard's Solvent Analyses 2-5

LIST OF FIGURES

Figure 1 Temporary Well and Boring Locations 2-7
Figure 2 Shallow Soil Sample Locations 2-8

1. INTRODUCTION

This report summarizes the results of chemical and physical analyses of soil samples from the Paulding, Ohio Friction Products Facility. The data presented below are results received since the initial Data Summary Report was issued on July 11, 1987. This data, in conjunction with the previously reported data, provides an almost complete summary of the soil and ground-water samples submitted for chemical and physical analysis to date. Outstanding data include the cation exchange analyses, major ion analyses of ground-water from wells PA-5 and PA-6, and the results of a Stoddard's Solvent scan on soil sample PAB-7-4. Sample locations are shown on Figures 1 and 2.

2. LABORATORY ANALYSES

2.1 Asbestos Determinations

Nineteen soil samples were submitted for the determination of asbestos content. The nineteen samples included eleven composite samples from the site subareas, and eight samples from soil borings PA-5-3, PA-7-1, PA-8-2, PA-9-2, PAB-2-1, PAB-3-1, PAB-4-1, and PAB-5-1. The asbestos determinations were performed by Hager Laboratories, Incorporated of Denver, Colorado. Table 1 lists the results of the asbestos determinations.

Each sample was analyzed following EPA Method 600/M4-82-020. Duplicate portions of each soil sample were immersed in liquid media of known index of refraction on a microscope slide and observed at 100 power using a McCrone Dispersion Staining Objective with polarizing light. Characteristics of the fibers under polarizing light and under dispersion staining conditions using four media were compared to similarly prepared samples of known asbestos types. Estimates of the asbestos fiber content were made by comparing the quantity of non-asbestos material to asbestos fibers. The detection limit for bulk samples is one percent (1%) asbestos fibers.

2.2 Total Lead Analyses

Thirty-nine (39) soil samples were submitted for analyses of total lead content using EPA Methods 3050 and 6010.[1] The 39

---

[1] U. S. Environmental Protection Agency, November, 1986, Test Methods for Evaluating Solid Waste, Volume 1A: Laboratory Manual Physical/Chemical Methods, SW-846, Third Edition.

samples analyzed are listed in Table 2. The analyses were performed by Rocky Mountain Analytical Laboratory of Denver, Colorado.

The analytical results for the total lead determinations are presented in Table 2. The detection limit is 5 mg/kg. Leachable lead content may not be comparable directly to total lead content, however, the results of these soil analyses can be compared qualitatively to the EP Toxicity test results reported in the previous data summary. Soil samples from the soil borings (designated with the PAB prefix) were chosen to represent the upper six feet of the soil horizon in two foot increments. The intervals represented by the sample number are shown on the boring logs which were included in the Data Summary issued on July 11, 1987.

2.3 Stoddard's Solvent Analyses

Boring PAB-3 was drilled adjacent to an abandoned underground storage tank which was reported to possibly contain "mineral spirits." Soil samples from this boring exhibited weak to strong odor through most of its extent. In order to determine the organic constituents in these samples, a GC/MS scan for the components of Stoddard's Solvent was run. Four samples were selected from the soil borings for analysis. Samples PAB-3-2 and PAB-3-3 were selected because of the strong odor exhibited by these samples and PAB-3-7 was selected because it was the lowermost sample obtained in boring PAB-3 and did not exhibit an odor. An additional sample was selected from boring PA-7 to provide a background sample. Sample PA-7-4 is the lowermost sample and consists of hard silty clay till.

Samples PAB-3-2 and PAB-3-3 were composited and analyzed as a single sample. Samples PAB-3-7 and PA-7-4 were analyzed individually. The results of the analyses are presented in Table 3 and Appendix A. The results for sample PA-7-4 are not available at this time.

2.4 Cation Exchange Properties of Clay Soils

Two samples were selected for analysis to provide data concerning the cation exchange capacity for the local silty clay soils which are prevalent in the site subsurface. The results of these analyses are not available at this time.

TABLE 1

Asbestos Content of Selected Soil Samples

Sample Number	Asbestos Content	Comments
I	not detected	5-15 % non-asbestos fibers
II	not detected	1-5 % non-asbestos fibers
III	not detected	
IV	not detected	1-5 % non-asbestos fibers
V	not detected	
VI	not detected	
VII	not detected	1-5 % non-asbestos fibers
VIII	not detected	
IX	not detected	
Offsite I	not detected	
Offsite II	not detected	1-5 % non-asbestos fibers
PA-5-3	1 - 5 %	*
PA-7-1	5 - 15 %	*
PA-8-2	5 - 15 %	*
PA-9-2	5 - 15 %	*
PAB-2-1	not detected	1-5 % non-asbestos fibers
PAB-3-1	not detected	
PAB-4-1	not detected	
PAB-5-1	1 - 5 %	*

* asbestos content is expressed as percent (%) chrysotile asbestos.

TABLE 2

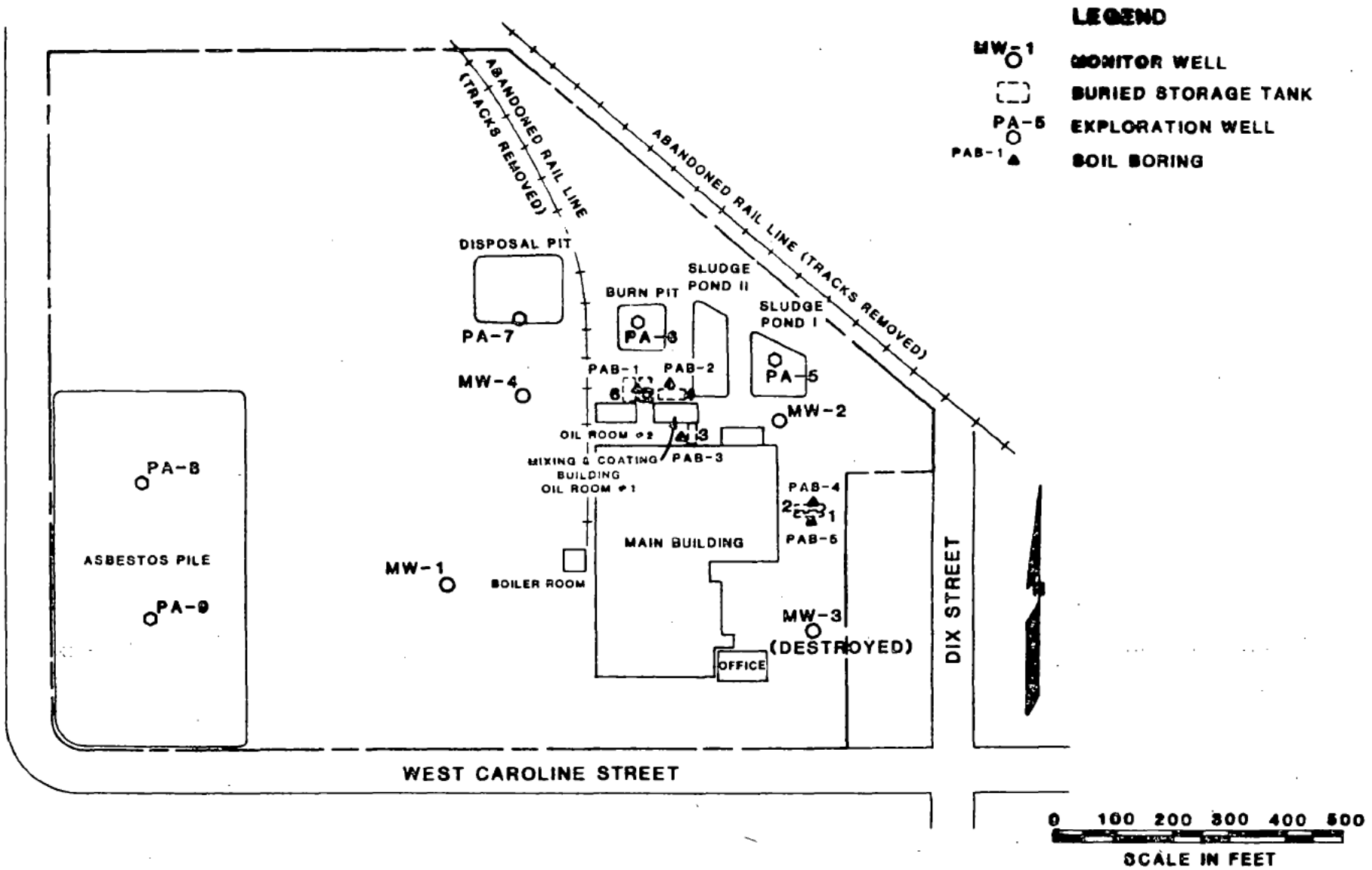
Total Lead in Soils

WELL OR AREA NO.	TOTAL LEAD (mg/kg)		FREQUENCY DISTRIBUTION INTERVALS	NO SAMPLES
IV-3	320		50	18
IV-4	31		100	2
IV-6	280		250	0
			500	5
V-2	2200		750	0
V-4	260		1000	2
V-6	3500		1500	1
			2000	2
VI-3	6100		3000	3
VI-5	410		4000	1
VI-7	33		5000	1
			7500	1
VII-1	24000		10000	0
VII-3	930		20000	1
VII-5	30		30000	1
			40000	0
PAB-2-1	48		50000	1
PAB-2-2	21			
PAB-2-3	62		TOTAL	39
PAB-3-1	25			
PAB-3-2	31			
PAB-3-3	20			
PAB-4-1	30			
PAB-4-2	46			
PAB-4-3	18			
PAB-5-1	15000			
PAB-5-2	62			
PAB-5-3	27			
PA-5-1	34	Sludge Pond 1		
PA-5-2	1200			
PA-5-3	2600			
PA-5-6	41000			
PA-5-8	440			
PA-7-1	1600	Disposal Pit		
PA-7-2	320			
PA-7-3	24			
PA-7-4	20			
PA-8-1	2200	Asbestos Pile		
PA-8-2	4600			
PA-8-4	17			
PA-9-2	1700	Asbestos Pile		
PA-9-3	44			
PA-9-5	43			

TABLE 3

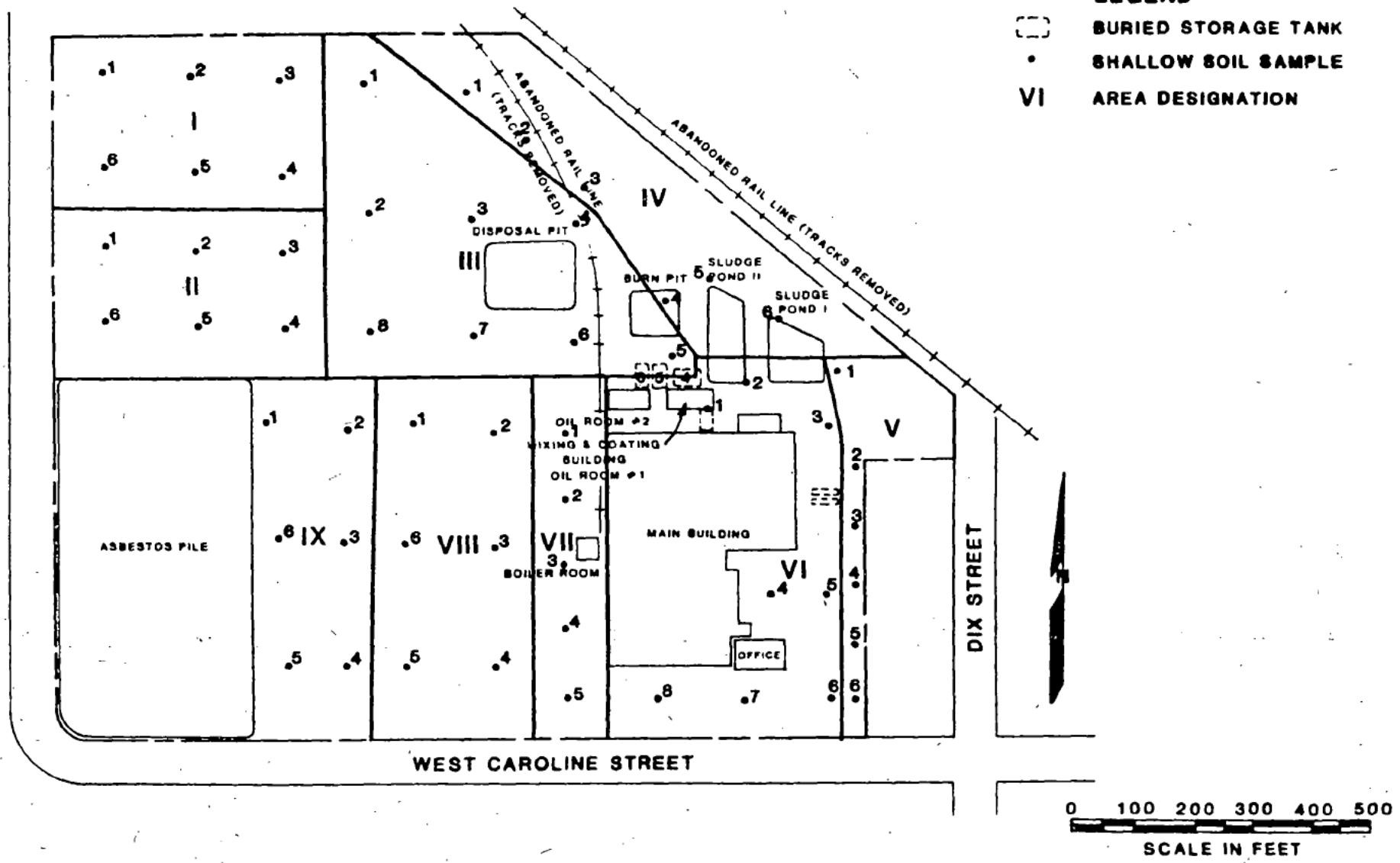
Stoddard's Solvent Analyses

SAMPLE NO	COMPOUND	CONCENTRATION (cumulative %)
COMPOSITE OF PAB-3-2 PAB-3-3	C8+	0
	C10+	38.7
	C12+	95
	C14+	0
	C16+	0
	C18+	0
	C20+	0
	C22+	0
	C24+	0
	C26+	100
	C28+	0
	C30+	0
	C32+	0
	TOTAL	320000 ug/kg
PAB-3-7	C8+	0
	C10+	2.3
	C12+	19.5
	C14+	39
	C16+	63.8
	C18+	78.2
	C20+	93.2
	C22+	100
	C24+	0
	C26+	0
	C28+	0
	C30+	0
	C32+	0
	TOTAL	4200 ug/kg



JAMES L. GRANT & ASSOCIATES
geotechnical engineering • management • computer science
ENGLEWOOD, COLORADO

FIGURE 1
TEMPORARY WELL AND BORING LOCATIONS



JAMES L. GRANT & ASSOCIATES
geotechnical engineering • management • computer science
ENGLEWOOD, COLORADO

FIGURE 2
SHALLOW SOIL SAMPLE LOCATIONS

APPENDIX A

SOIL CHEMISTRY DATA

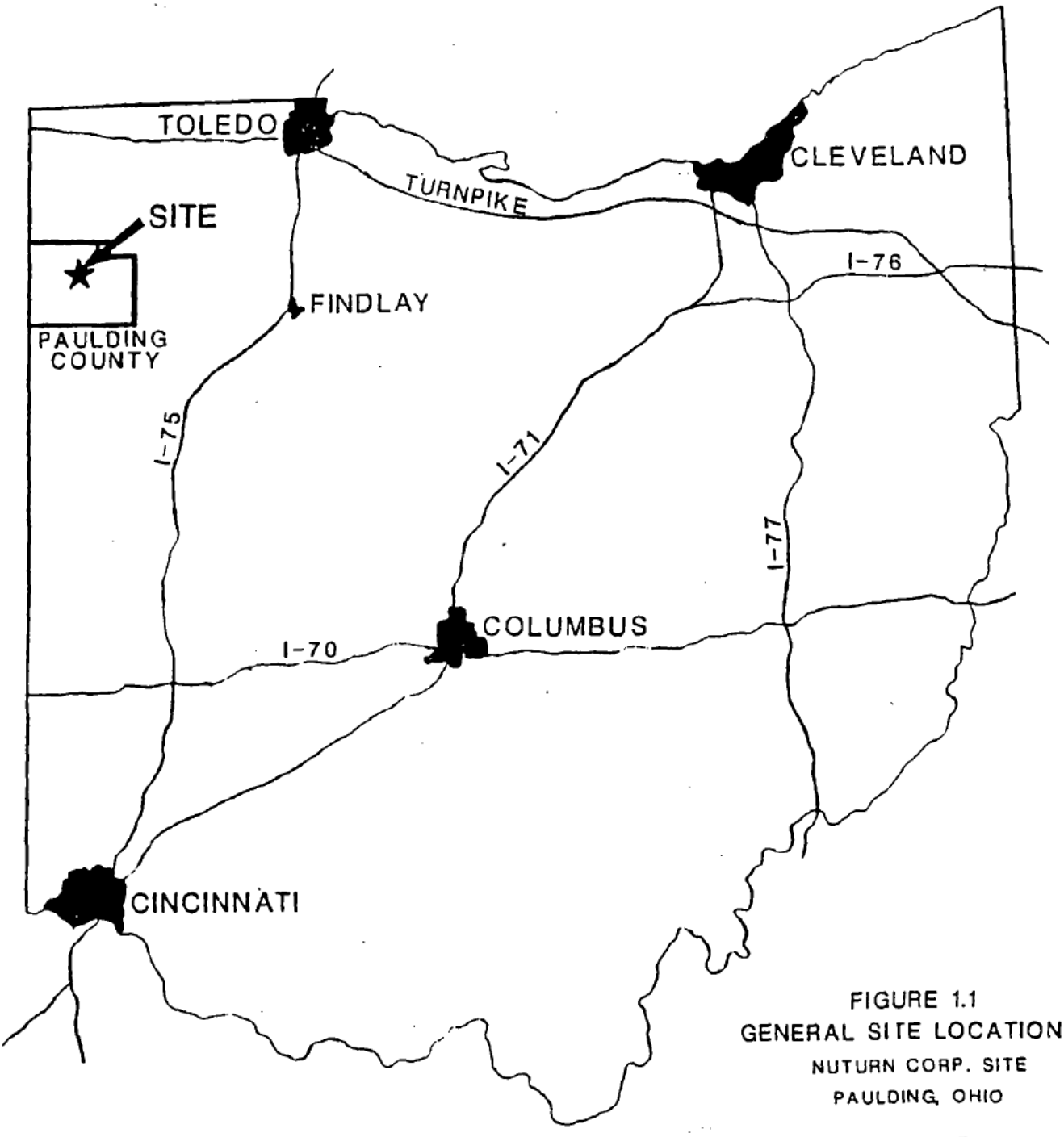


FIGURE 1.1
GENERAL SITE LOCATION MAP
NUTURN CORP. SITE
PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY
SALARIED EMPLOYEE PENSION PLAN
GREYHOUND TOWER
PHOENIX, ARIZONA

DRAWN BY	B.D.	CHECKED BY/DATE		REVISIONS	BY	DATE	DRAWING NO. 2801 A-968-L
DATE	10/28	APPROVED BY/DATE					

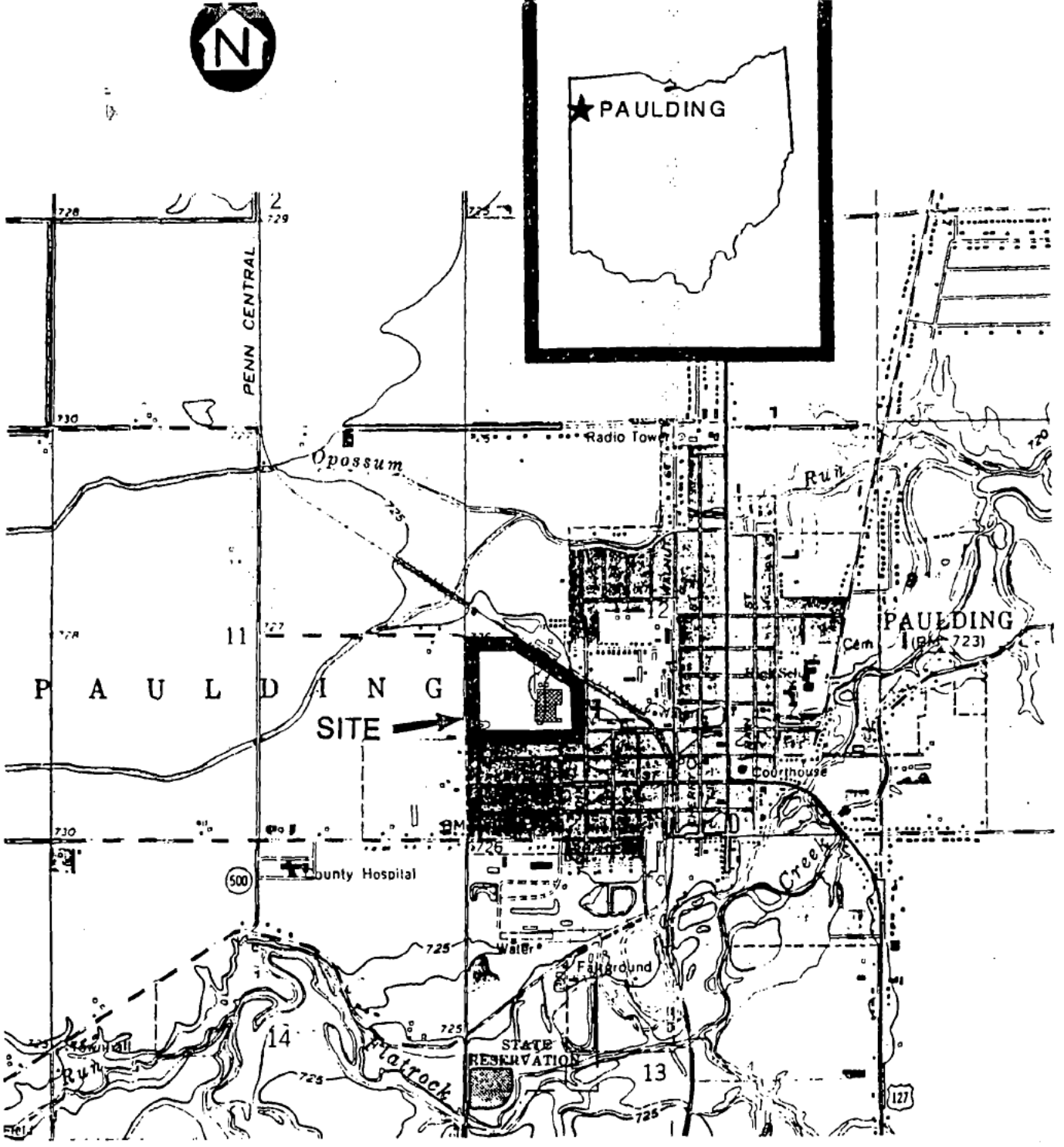
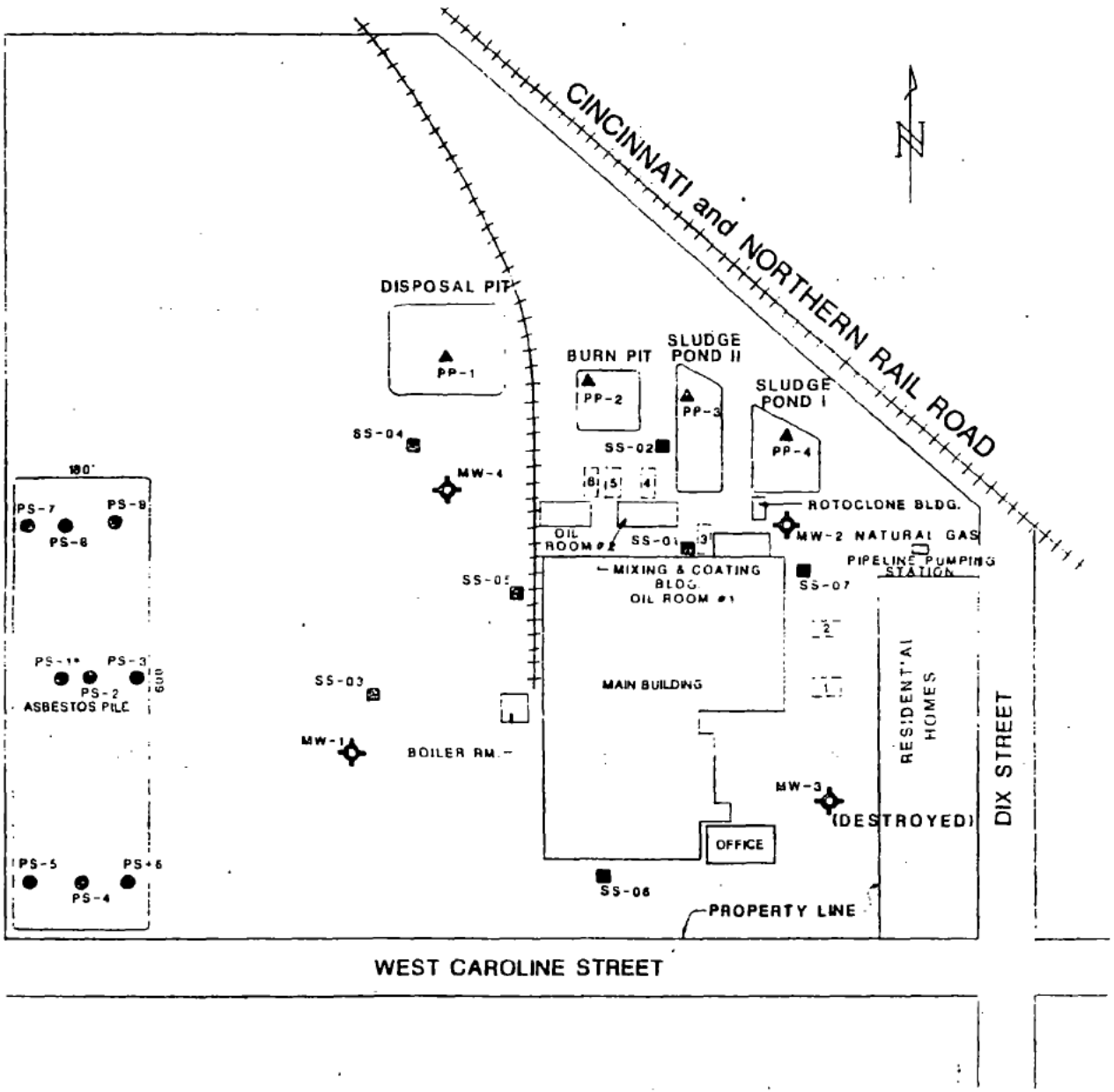


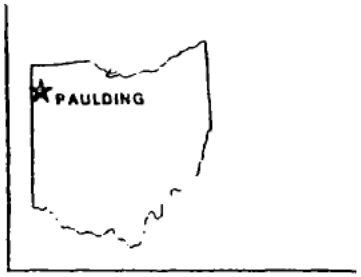
FIGURE 1.2
SITE LOCATION
NUTURN CORP. SITE
PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY
SALARIED EMPLOYEE PENSION FUND
GREYHOUND TOWER
PHOENIX, ARIZONA

DRAWN BY	CHECKED BY/DATE	REVISIONS	BY	DATE	DRAWING NO.
DATE	APPROVED BY/DATE				





LEGEND

- MONITOR WELLS
- SOIL BORINGS
- SURFACE SOIL SAMPLES
- SHALLOW SOIL BORINGS
- BURIED STORAGE TANKS

*PS-1 SAMPLE SPLIT FOR ANALYSIS PS-1A, PS-1B

SCALE

25

50 0 50 100 200

FIGURE 3.1
PRELIMINARY INVESTIGATION
JUNE, 1985
NUTURN CORP. SITE
PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY
SALARIED EMPLOYEE PENSION FUND
GREYHOUND TOWER
PHOENIX, ARIZONA

DRAWN BY	B.D.	CHECKED BY/DATE	C.J.C. 10/23
DATE	10/18	APPROVED BY/DATE	

DRAWING NO. 2801
B-968-A

DATE | BY | REVISIONS

4.0 REGIONAL GEOLOGIC SETTING

OHM conducted a review of available literature to gain a comprehensive understanding of the occurrence and movement of ground water through the naturally deposited soils. The literature search involved contacting the Ohio Department of Natural Resources (ODNR), the Division of the Geological Survey, and the Division of Water to obtain published literature and topographic base maps for the area.

4.1 REGIONAL GEOLOGY

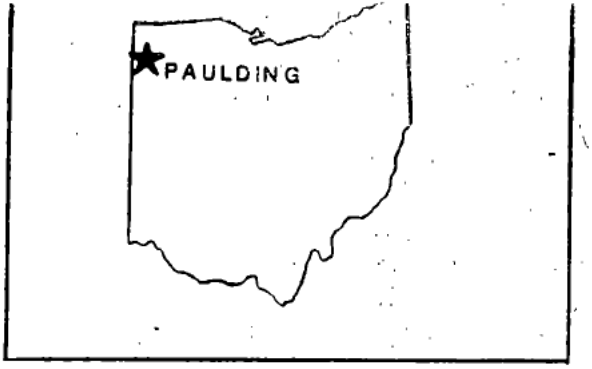
The bedrock geology is defined by Traverse Group and Dundee Limestone of Devonian Age. The Traverse Group has been subdivided into the Silica Formation overlain by the Ten Mile Creek Dolomite. The Dundee Limestone is characterized by alternating layers of limestone and dolomite beds. Figure 4.1 is a regional bedrock geologic map for Northwestern Ohio. Figure 4.2 is a borehole well log for Well M-31 drilled by the Ohio Division of Water in 1969.

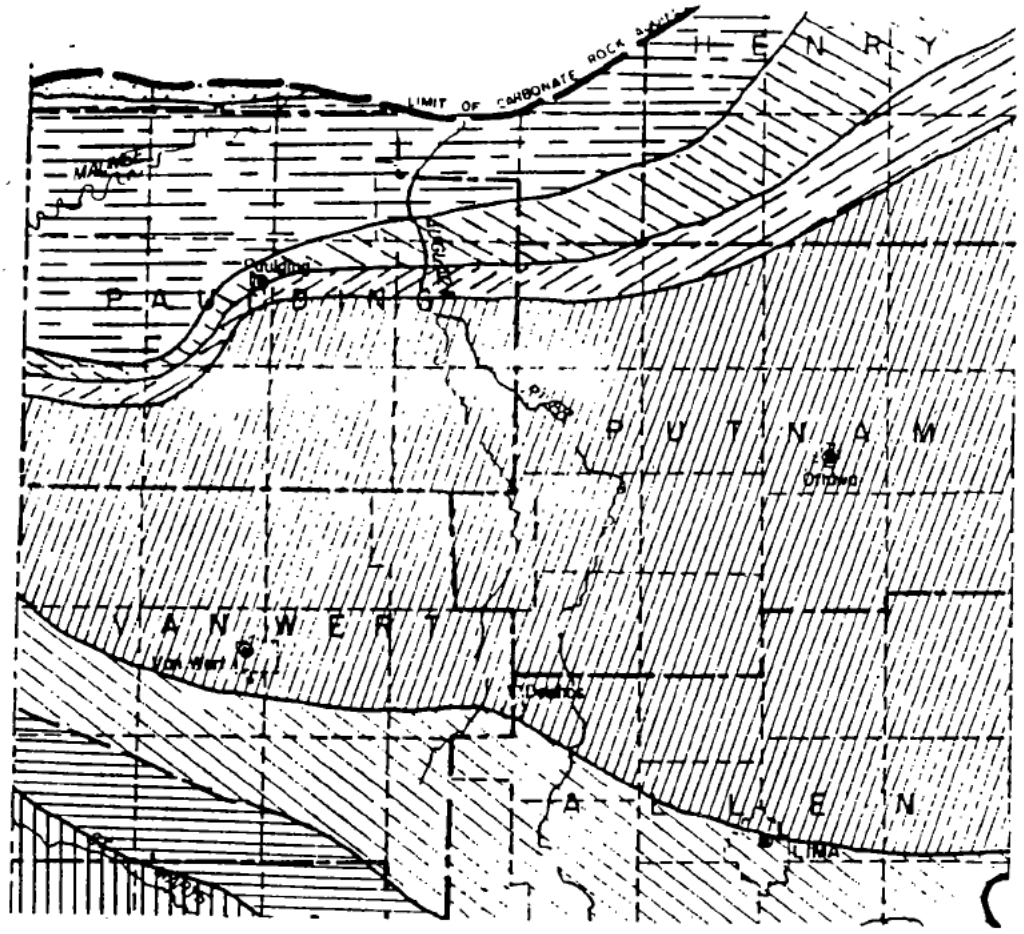
The geology of the glacial till is subtle and complex. These soils consist of laterally and horizontally discontinuous lithologies deposited as the massive glacial ice sheets retreated from the North American Continent. Lithologically, the glacial till consists of unconsolidated deposits of gravels, sands, silts, and clays which are heterogeneously mixed. These deposits are found as ground moraines, lateral moraines, end moraines, kames, eskers, or glacial outwash. In Paulding County, the topographic feature has been defined as ground moraine with a variable amount of sand and gravel.

4.2 REGIONAL HYDROGEOLOGY

Hydrologically, the Dundee Limestone is water bearing throughout its entire thickness; the primary water-bearing zone is at the base of the limestone. The formation ranges from 30 to 53 feet thick. The overlying Traverse Group is generally not considered to be a water-bearing zone. Yields from the formation are generally less than 5 gallons per minute (gpm). The overlying glacial till is composed primarily of clay and is not considered a water-bearing zone.

Pump-test data obtained from the ODNR Division of Water indicate the limestone-dolomite aquifer in the vicinity of Paulding, Ohio, will produce a sustained yield of 100 gpm. The transmissivity of the aquifer is in the range of 5,000 gallons per day per foot with a storage coefficient of 10^{-4}.





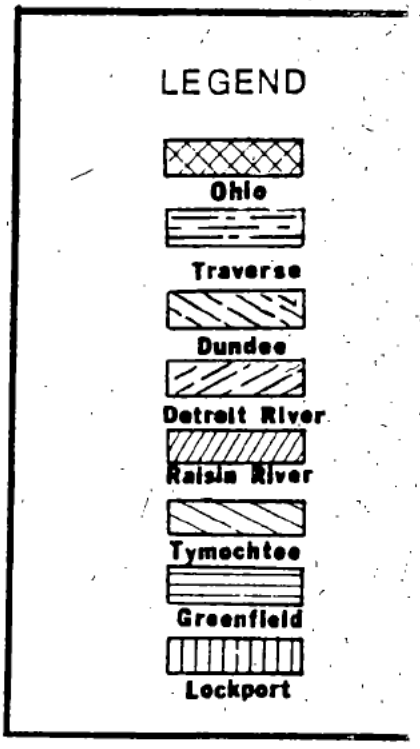


FIGURE 4.1

GEOLOGIC MAP

NUTURN CORP. SITE

PAULDING, OHIO

PREPARED FOR

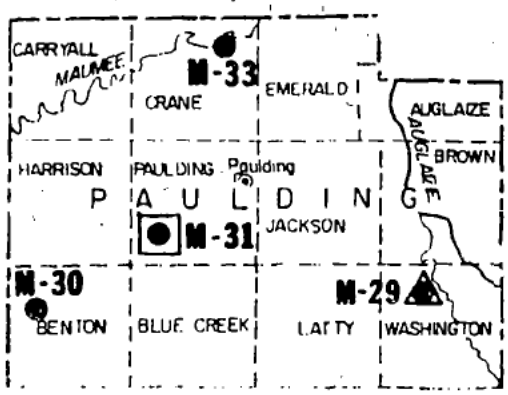
ARMOUR AND COMPANY

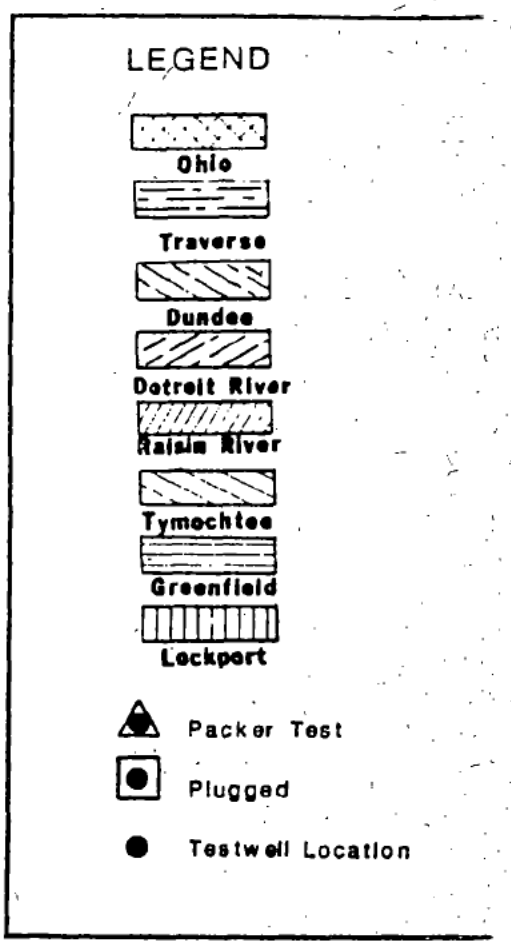
SALARIED EMPLOYEE PENSION FUND

GREYHOUND TOWER

PHOENIX, ARIZONA

DRAWING NO. 2801-A-968-J		
REVISIONS	BY	DATE
CHECKED BY/DATE		
APPROVED BY/DATE		
DRAWN BY	B.D.	
DATE	10/28	





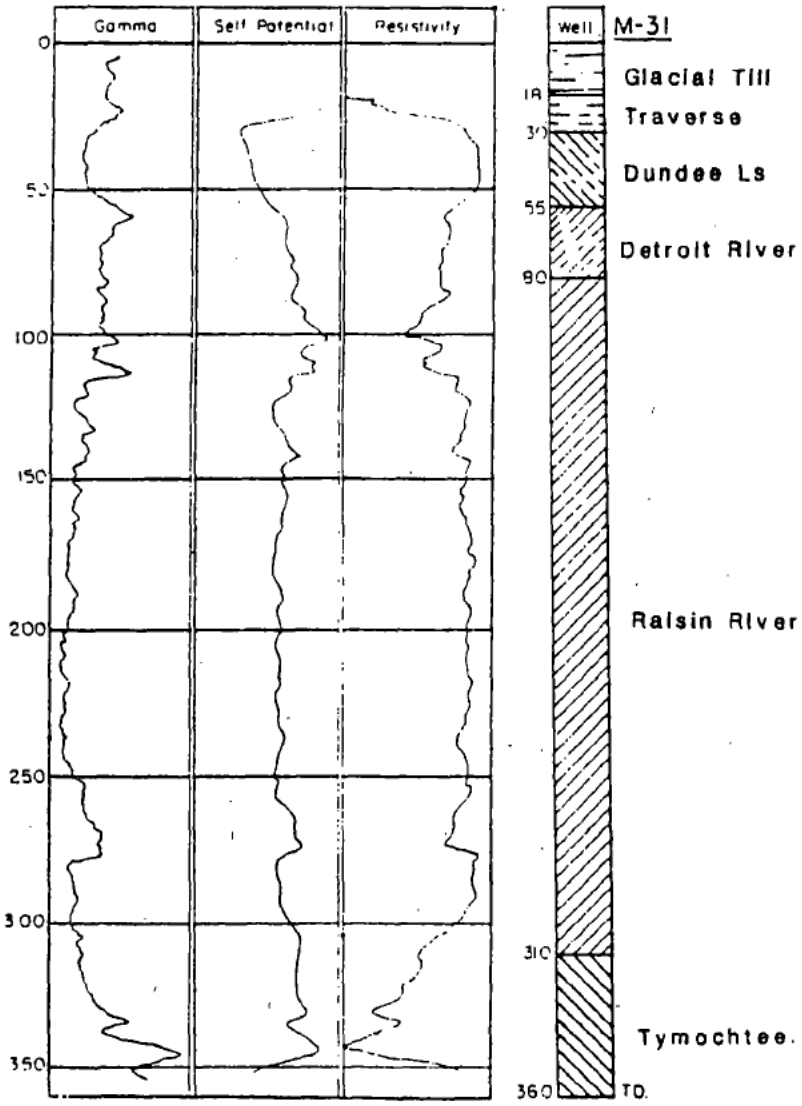


FIGURE 4.2
SOIL BORING LOG
NUTURN CORP. SITE
PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY
SALARIED EMPLOYEE PENSION FUND
GREYHOUND TOWER
PHOENIX, ARIZONA

DRAWING NO. 2801 A-968-K		
DATE		
BY		
REVISIONS		
CHECKED BY/DATE		
APPROVED BY/DATE		
B.D.	10/28	
DRAWN BY	DATE	

Chemical data obtained from well M-31 indicate the ground water is hard (i.e., high in calcium and magnesium), with a high disolved-solids content and specific conductance. In addition, the ODNR report indicates that water from the upper section of the limestone aquifer has a low hydrogen sulfide content, but water from the lower sections of the aquifer have a high hydrogen sulfide content.

During the 72-hour pump test, one of the observation wells that was originally free of hydrogen sulfide became black with a high iron sulfide content. As a result, M-31 was plugged to protect the upper section of the limestone aquifer.

5.0 SITE ENVIRONMENTAL SETTING

The Paulding site topography exhibits mostly flat conditions, except for the mound containing the asbestos pile at the southwest corner of the property. The former Cincinnati and Northern Railroad tracks that bordered the property on the northeast and a trunk line adjacent to the main building are now abandoned with only their ballast grade remaining.

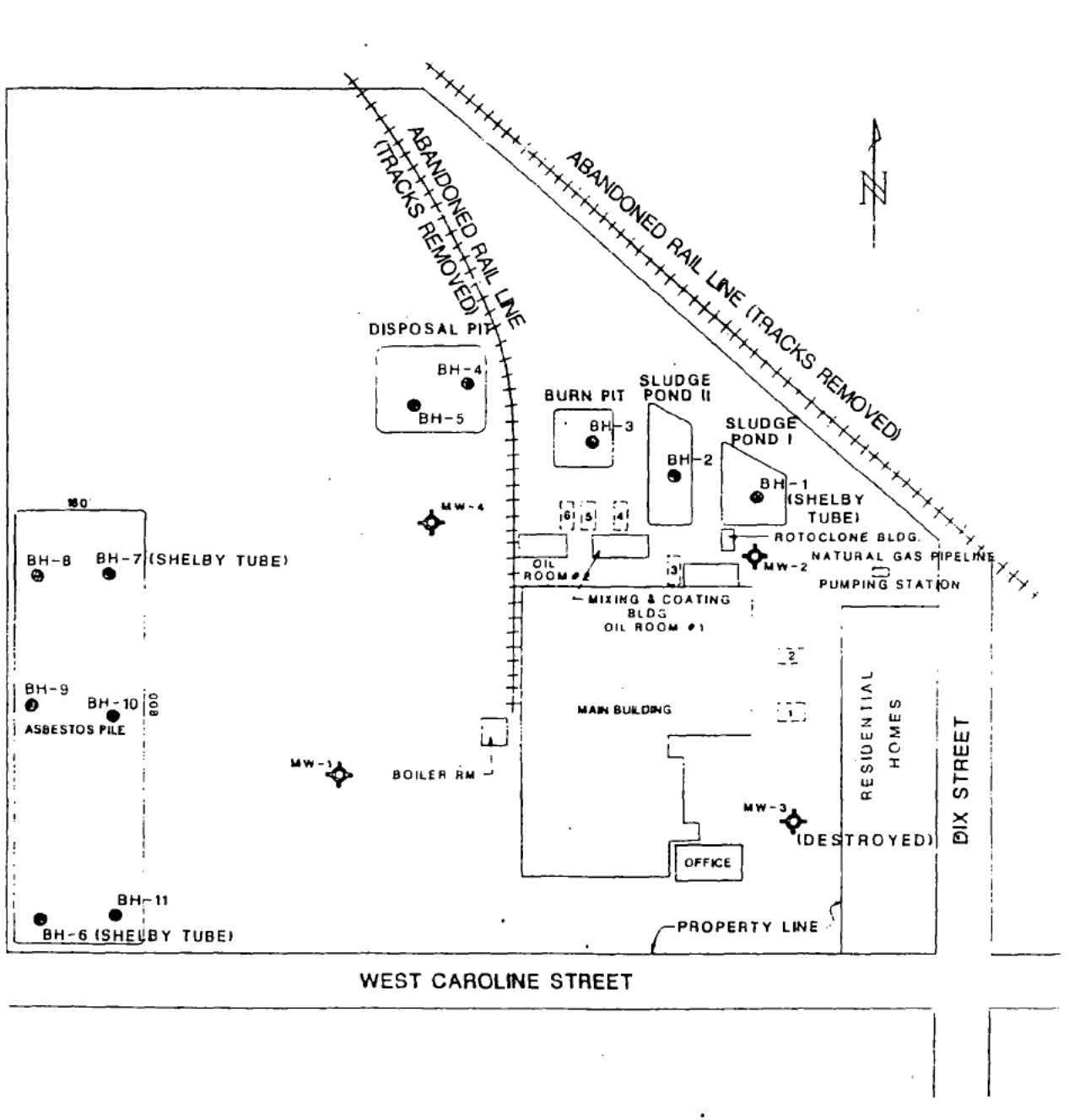
A Stokley canning facility is located north of the site. Residential homes and a natural gas pipeline pumping station are situated east of the main building. Residential homes are found south of the site. West of the site is farmland. Gravel roads and parking areas surround the main building. Between the asbestos pile and the main building are low areas where surface water has collected. The ground surface across the whole site, including the asbestos pile, sludge ponds, railroad grade, and disposal areas is overgrown with various grasses and forbs. Scattered groups of young cottonwood trees are found east of the asbestos pile.

5.1 SITE TASKS

To define the extent of the contamination throughout the property, OHM developed a detailed sampling program. The sampling program involved the following tasks:

- Construct, sample, and analyze four groundwater monitoring wells (MW-3 is destroyed)
- Sample and analyze five underground storage tanks
- Sample and analyze the asbestos pile (split spoon)
- Sample and analyze the burn, disposal, and sludge pond areas (split spoon)
- Sample and analyze surficial soils (split spoon)
- Sample and analyze the manufacturing facility (wipe samples)

The preliminary field work was conducted from June 3 to June 5, 1985. Figure 3.1 in Section 3.0 shows the monitoring well locations, the locations of underground tanks, and the surface soil sampling points. The final investigation work was conducted on December 17 and December 18, 1985. Figure 5.1 details the soil boring locations.



LEGEND

MONITOR WELLS

SOIL BORINGS

BURIED STORAGE TANKS

SCALE

25

50 0 50 100 200

FIGURE 5.1

FINAL INVESTIGATION BOR

DECEMBER, 1985

NUTURN CORP. SITE

PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY

SALARIED EMPLOYEE PENSION FUND

GREYHOUND TOWER

PHOENIX, ARIZONA

DRAWN BY	B.D.	CHECKED BY/DATE		REVISIONS	BY	DATE	DRAWING NO. 2801 B-988-A
DATE	10/18	APPROVED BY/DATE	C.J.C. 10/23				

5.2 SITE GEOLOGY

The preliminary assessment work of June 1985 consisted of four monitoring well boreholes and nine soil borings drilled into the asbestos pile. The final investigation was completed in December 1985, with an additional 11 soil boreholes (BH) placed across the site at each of the disposal areas. The well logs and soil boring logs are found in Appendix A.

Based on observations of the soil borings, the variable thicknesses of the fill and waste materials across the site are underlain by a uniform dense clay deposit of glacial origin (till). This clay till contains small amounts of fine sand, silt, and fine gravel; it is inorganic and has low to medium plasticity.

The final soil borings conducted on December 17 and 18, 1985, will be used to describe the surficial geology of the following areas:

- Sludge Pond I
- Sludge Pond II
- Burn Pit
- Disposal Pit
- Asbestos Pile

Figure 5.1 details the locations of these soil borings. During each soil boring, a split spoon soil sample was taken at 2.5-foot intervals drilled with hollow-stem augers. Between each use the split spoon sampler was decontaminated with a soapy water bath and brushing, followed by a rinse. These split spoon soil samples were photographed for documentation. Those samples containing asbestos wastes were put into 8-ounce jars for analysis. (The sample, split spoon, and photograph log can be found in Appendix A). Three shelby tubes of "undisturbed" soil samples were taken at the bottom of the following boreholes:

- BH-1 (downgradient at Sludge Pond I)
- BH-7 (upgradient at north end asbestos pile)
- BH-11 (upgradient at south end asbestos pile)

The shelby tube samples were taken to CTI and Associates, Inc. (CTI) laboratory in Novi, Michigan, for determination of the soil's in situ permeability. (Permeability test results can be found in Appendix B.)

The asbestos pile is located to the west of the manufacturing facility, paralleling the western border of the property. The mound is approximately 600 feet long along the north-south axis and 180 feet long along the east-west axis. The mound is approximately 8 feet high with side slopes of approximately 1:4. During the final investigation, six

soil borings were drilled by CTI with a CME 45 drill rig under the supervision of an OHM hydrogeologist. Two borings were constructed in a line through the southern, northern, and central sections of the asbestos pile.

Based on information gathered by the soil borings, no uniform thickness of the asbestos sludge wastes was observed in the asbestos pile. The thickness of the clay cap and/or topsoil above the first layer of asbestos sludge varied from approximately 6 to 8 inches (BH-6, BH-7, BH-8, and BH-10) to over 2 feet (BH-9 and BH-11). The thickness of the asbestos sludge layer also varied from each soil boring location. The two soil borings (BH-8 and BH-7) at the north end of the disposal pile indicated a uniform waste sludge thickness of 5 feet. The two soil borings conducted in the center of the pile showed a sharp contrast in sludge thickness from 1 foot (BH-9) to 8 feet (BH-10). Finally, the two borings completed at the southern end of the disposal pile exhibited the greatest contrast in sludge thickness. BH-6 showed approximately 12 feet of black waste sludge, while BH-11 revealed two 1-foot-thick horizons of sludge situated between a 2-foot layer of clay fill. Each of the soil borings were terminated into the native clay till.

In addition, OHM advanced borings to explore the depth and characteristics of the disposal pit, burn pit, and Sludge Ponds I and II. Two soil borings were conducted in the disposal pit, and the thickness of the waste materials and depth to native soil varied considerably between the boreholes. BH-4 showed a 1-foot layer of asbestos sludge beneath a 2-foot clay cap with the native clay till soil appearing at a depth of 3 feet. BH-5 revealed three distinct horizons of waste materials and sludge beneath a 2-foot clay cap. The thickness of the waste horizons is from 6 to 10 inches each, with a layer of clay fill between waste layers. The native clay till soil was contacted at a depth of approximately 8 feet.

BH-3 was placed in the center of the burn pit. Beneath the 8 inches of clay topsoil is a 6-foot layer of black sludge, orange-colored asbestos fragments, and 3/16-inch wire mesh. This waste layer extends to a depth of approximately 7 feet, where contact with the native clay till occurs.

BH-2 was located in the center of sludge Pond II. A 7-foot layer of clay fill covers a 5-foot-thick layer of asbestos sludge. The waste sludge layer contacts the native clay till at a depth of approximately 12 feet. BH-1 was augered in the center of Sludge Pond I. A 6-foot layer of clay fill covers a 7-foot-thick layer of asbestos sludge. The waste sludge layer interface with the native clay till occurs at a depth of approximately 13 feet. All soil boring logs can be found in Appendix A.

5.3 SITE HYDROGEOLOGY

To define the direction and movement of ground-water flow in the glacial lithologies, OHM developed a static water level map (Figure 5.2) for the NUTURN site. The static water level map shows that the ground water flows northeast; however, since the underlying sediments consist mainly of clay till, the hydraulic conductivity is very low (1.2×10^{-6} to 6.2×10^{-8} cm/sec) according to CTI. Based on results of the laboratory permeability tests (three shelby tube soil samples), the clay till will serve to act as an impermeable barrier preventing off-site subsurface migration of heavy metals or asbestos minerals.

Ground water was contacted at each of the 11 soil borings conducted during the final investigation of December 1985. Depth to the water table ranged from 3 to 9 feet across the waste disposal areas. The ground water flows northeast at a hydraulic gradient of 0.007 feet per foot.

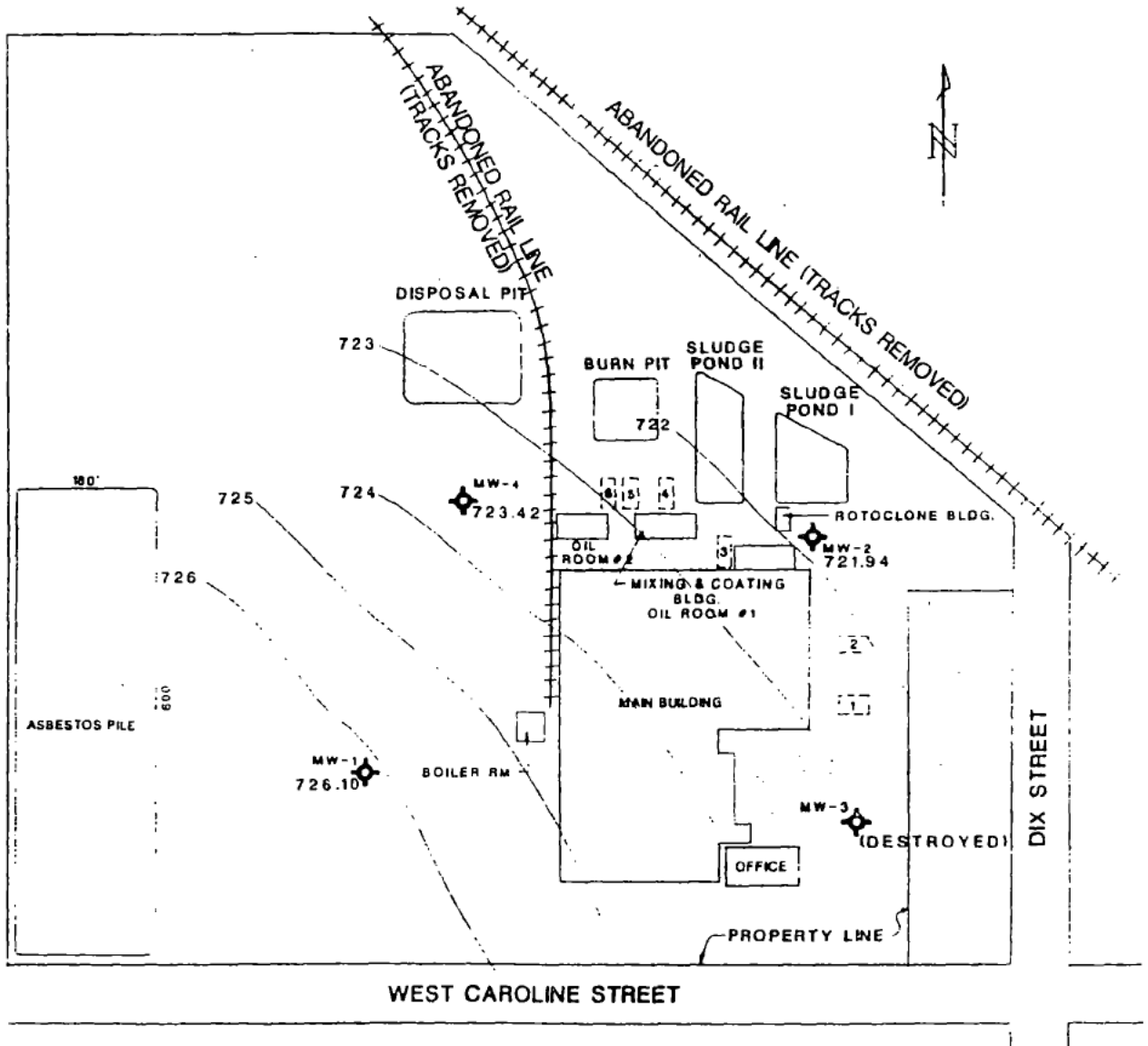
5.3.1 Field Permeability Testing

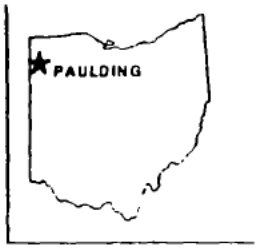
During the final field investigation at the site, OHM performed permeability (hydraulic conductivity) measurements of the glacial till. Falling head (slug) tests were conducted in MW-1 and MW-4. The test entailed the addition of a slug of water of known volume to the well. Water levels were measured at the time of slug addition and at selected intervals over time using an electronic hydrologic transducer. Logarithmic water well readings were taken for 150 minutes from each well during the tests.

The water level observations recorded in the field were used to calculate permeability values. The calculations assume the flow of water through the soil is laminar and obeys Darcy's Law: $v = ki$, where v = flow velocity, k = coefficient of permeability, and i = hydraulic gradient. The approach used was to impose a known hydraulic gradient and measure the resulting flow. A slug of water is added to the static water level within the well, imposing a hydraulic gradient. As the imposed head decreases, the decrease in level is measured in correspondence with time.

The permeability of the screened interval is computed by the application of a theoretically derived equation from Hvorslev (1951), shown below.

$$K_v = \frac{\frac{\pi}{11} \times \frac{D}{M} + L}{t_2 - t_1} \quad Ln \left(\frac{H_1}{H_2}\right)$$





LEGEND

MONITOR WELLS

WATER CONTOL

BURIED STORAGE

SCALE

25

50 0 50 100 200

FIGURE 5.
CONTOURS TAK
WATER LEVE
DEC. 17, 19
NUTURN CORP.
PAULDING, OHI

PREPARED FO

ARMOUR AND COM
SALARIED EMPLOYEE PE
GREYHOUND TOW
PHOENIX, ARIZO

DRAWN BY	B.D.	CHECKED BY/DATE		REVISIONS	BY	DATE	DRAWING NO. 2801 B-868-A
DATE	10/18	APPROVED BY/DATE	C.J.C. 10/23				

K_v = vertical permeability
D = inside diameter of casing
M = K_n/K_v
L = screen length
t = time
H = height of water column

It was assumed that horizontal permeability was consistent with vertical permeability. The results are as follows:

Well No.	K_v (cm/sec)
1	3.1×10^{-2}
4	1.2×10^{-2}

These permeability values are indicative of sand, and not of the clay glacial till (10^{-6} to 10^{-8} cm/sec) found in the Paulding, Ohio, site (determined by geotechnical test on shelby tube). Therefore, it can be assumed that these slug tests were not indicative of field clay permeabilities, since the resultant values are apparently comparable to the clean sand and gravel filter pack found in the annulus.

Laboratory permeameter tests were conducted on the three shelby tube samples obtained on site by CTI (see Table 5.1).

TABLE 5.1

SOIL SHELBY TUBE TEST RESULTS

Soil Borehole Number	Location	Depth (in feet)	Coefficient of Permeability (cm/sec)	Soil Material
BH-1	Sludge Pond I	13.5-15.5	1.2×10^{-6}	clay till
BH-6	Asbestos Pile SW Corner	13.5-15.5	6.2×10^{-8}	clay till
BH-7	Asbestos Pile NE Corner	9.0-11.0	3.4×10^{-8}	clay till

NOTE: Permeability value obtained at a consolidation pressure of 1/2 ton per square foot (ASTM Test Method D-2438-68).

5.4 SITE HYDROGEOCHEMISTRY

To evaluate the occurrence and distribution of the possible pollutants in the subsurface, OHM obtained a variety of samples from various surface disposal areas, the building complex, underground tanks, and soil around the buildings.

The soil and water samples were tested for priority pollutant metals and organics as well as for zinc and copper. The surface scrapings from inside the building complex were tested for asbestos content. For details of the soil sample locations, refer to Figures 3.1 and 5.1. For details of the building wipe samples, see Figure 5.3, Grab Sample Locations.

5.4.1 Monitoring Well Samples

Four monitoring wells were constructed at the locations shown on Figure 5.1. The detailed well-completion reports are located in Appendix A. The wells were an average of 20 feet deep, including 5 feet of 2-inch diameter Schedule 40 PVC screen and 15 feet of 2-inch diameter casing. The casing and screen were constructed with threaded flush joints. The screen was gravel packed. The well annulus was capped with bentonite and then grouted flush with the land surface. The wells were constructed using a mobile B-53 drill rig, using the hollow-stem-auger method. No drilling fluid or water was introduced into the boreholes. During construction of each borehole, dense olive/brown clay was encountered from land surface to total depth. Water samples from each well were analyzed for priority-pollutant organics.

5.4.2 Surficial Samples

OHM obtained seven surface soil samples at various points around the building perimeter. Each soil sample was obtained with a split spoon sampler and represents the upper 1 1/2 feet of soil at the site. All seven of the shallow soil borings showed high levels of copper and zinc; Figure 3.1 details the location of these sampling points during the preliminary investigation. Table 5.2 presents this data.

TABLE 5.2

COPPER AND ZINC RESULTS
SHALLOW SOIL SAMPLES
(All concentrations are reported in parts per million [ppm])

Sample No.	Copper	Zinc
2801-SS1	50.4	323
2801-SS2	14,400.0	7,640
2801-SS3	45.2	120
2801-SS4	3,940.0	3,680
2801-SS5	540.0	574
2801-SS6	2,860.0	2,280
2801-SS7	2,720.0	1,910

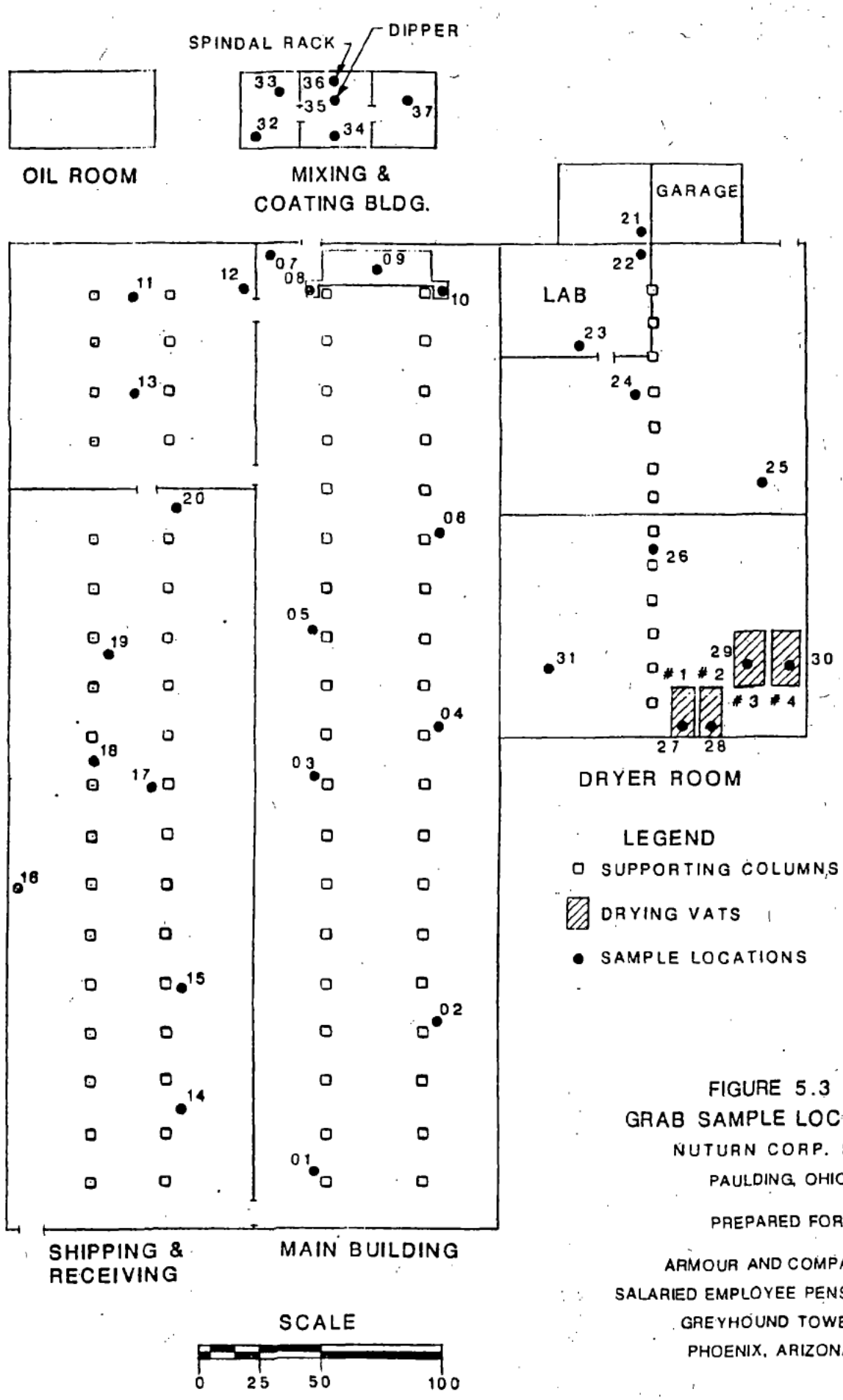


FIGURE 5.3
GRAB SAMPLE LOCATIONS
NUTURN CORP. SITE
PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY
SALARIED EMPLOYEE PENSION FUND
GREYHOUND TOWER
PHOENIX, ARIZONA

DRAWN BY	B.D.	CHECKED BY/DATE		REVISIONS	BY	DATE	DRAWING NO. 2801 A-968-F
DATE	10/22	APPROVED BY/DATE	C.J.C. 10/23				

5.4.3 Asbestos Pile Sample

One soil sample (No. 2801-PS1B) collected from the asbestos pile (6 feet deep) was sampled for priority pollutant metals. This soil boring sample contained high levels of copper, lead, and zinc. In addition, the soil contained high levels of antimony, arsenic, chromium, and nickel. Analysis of the soil for the priority pollutant organics revealed phenanthrene and bis (2-ethylhexyl) phthalate were encountered in very low levels. Table 5.3 summarizes the asbestos pile material analytical results. Additional information is found on Pages 3, 14, 20, and 26 of the OHM Analytical Report (see Appendix B).

TABLE 5.3

ASBESTOS PILE MATERIAL ANALYTICAL RESULTS
(All concentrations are reported in ppm)

Compound	Concentration
Antimony	22.20
Arsenic	2.21
Chromium	62.10
Copper	2,010.00
Lead	2,030.00
Nickel	270.00
Zinc	2,530.00
Bis (2-ethylhexyl) phthalate	0.50
Phenanthrene	1.00
Asbestos minerals estimated	20%

5.4.5 Underground Tank Samples

Six underground storage tanks were identified on site. Five of the six tanks were sampled. Fuel Oil Tank No. 6 (TN-6) could not be sampled because the cap on the filler neck could not be opened. Table 5.5 presents the data from the tanks.

The samples from the fuel oil and mineral spirits tanks included flakes of rust and scum. With the exception of TN-1 and TN-4, all tanks contained phased product and water.

Table 5.4 provides a summary of the organic compounds identified in each of the underground storage tanks. Based on observation only, Tank 1 (TS-1) and TS-2 were approximately half full; TS-3 was empty; and Tanks TS-4 and TS-5 were approximately one quarter full.

TABLE 5.4

GC/MS SCREEN RESULTS
(ALL CONCENTRATIONS ARE REPORTED IN mg/l)
UNDERGROUND STORAGE TANKS

Compound Name	TS-5	TS-01	TS-2	TS-2A	TS-3	TS-4
Alkyl Substituted Cyclohexanes	---	5,925	3,095	1,447	---	---
Other Allylcyclic Compounds	---	1,150	---	---	---	---
Alkyl Benzenes	37.6	19,465	515	500	---	---
Alkyl Substituted Napthalene	---	128.5	---	---	---	33.0
Short to Medium Chain (C_6-C_{15}) Saturated + Unsaturated Aliphatic Hydrocarbons	---	28,679	25,862	19,000	---	367.0

mg/l = ppm (parts per million)

TABLE 5.5

UNDERGROUND STORAGE TANK DATA

Tank No.	Location (from the blueprint)	Size (in gal.)	Contents	Sample No.
1	East of Bldg. Adjacent to Oven Rooms (South)	10,000	Fuel Oil	TS-01
2	East of Bldg. Adjacent to Oven Rooms (North)	10,000	Fuel Oil	TS-02 TS2A
3	North of Bldg. Adjacent to Main Factory	10,000	Mineral Spirits	TS-03
4	North of Oil Room No. 1	8,000	"Naptha Gas" Solvent	TS-04
5	Between Oil Rooms 1 & 2 (West)	8,000	Fuel Oil	TS-05
6	Between Oil Rooms 1 & 2 (East)	8,000	Fuel Oil	Not Sampled

NOTE: Locations of these tanks can be found in Figure 3.1

5.4.6 Sampling of the Manufacturing Facility

Thirty-seven wipe (swab) samples were collected within the manufacturing facility for analysis of asbestos dust contamination. Using swab material held by forceps, an area was selected and stroked several times to obtain a dust sample. The swab was transferred to a sterile container and tightly sealed for transport to the analytical laboratory. A visual inspection of the facility was also conducted in which no electrical transformers were observed.

Asbestos samples were analyzed by McCrone Environmental Services, Norcross, Georgia. For the wipe sample locations, refer to Figure 5.3. Wipe sample analytical results are presented in Appendix B as dust sample analysis.

The main manufacturing facility appeared to have been cleaned of gross asbestos fiber contamination. Up to 2 percent asbestos was noted in samples obtained from the floor, mainly from areas where water had pooled and evaporated. The fire department had "washed out" the building at some time after it was abandoned. During the visual inspection, OHM encountered dissolved pipe coating which appeared to be asbestos. Sample No. 18, which contains 85 percent asbestos, was taken from the pile of pipe coating.. The area of gross asbestos contamination (Sample No. 36 - 92 percent) is the coating and drying room, identified as Oil Room No. 1 on Figure 3.1. The spindle racks, coating vats, and drying towers are still intact and are completely coated with resin and asbestos fibers.

5.4.7 Asbestos Waste Sampling

During the December site investigation, 11 soil borings were performed. From these borings, 19 waste samples were obtained and placed in sterile 8-ounce jars and tightly sealed. These samples were sent to Asbestos Management Incorporated, New Boston, Michigan, to be analyzed. The analysis method used was Polarized Light Microscopy, and appropriate chain-of-custody forms accompanied all samples. The samples were obtained from near the static water level and from near the bottom waste/clay interface. The results can be found in Appendix B.

The analyses indicate the highest amounts of asbestos (Chrysotile) are from the Burn Pit (BH-3) and from the west side of the Asbestos Pile (BH-9) (see Figure 5.1). The analyses from the waste areas range from 0 to 22 percent Chrysotile with the remainder being non-fiberous material and cellulose.

APPENDIX A

WELL LOGS AND SOIL BORING LOGS

Photographs
Sample and Split Spoon Log

PART 1

OHM

PAGE ___ OF ___

JOB NO. #2801	BORE HOLE NO. MW-1
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT B-53 Drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Frank Lowe
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION 725.19'	TOTAL DEPTH 18'
WELL CASING 2"PVC	SCREEN TYPE 2"PVC
LENGTH 5'	SLOT .01"

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SS	
				DIAMETER			2"OD	
				HAMMER WEIGHT			140 lbs	
				FALL			30"	

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
0				CLAY - Olive/brown dense little silt, trace of sand	CL	
2						
4						
6						
8						
10						
12						
14						
16						
18					TD18'	
20						

PART 1

OHM

JOB NO. 2801	BORE HOLE NO. MW-2
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT B-53 Drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Frank Lowe
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION 726.12	TOTAL DEPTH 22.2'
WELL CASING 2" PVC	SCREEN TYPE 2" PVC
LENGTH 5'	SLOT .01"

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SS	
				DIAMETER			2" OD	
				HAMMER WEIGHT			140 lbs	
				FALL			30"	

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOV-ERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	BORE HOLE LOG: REMARKS	GRAPHIC LOG
0				CLAY - Olive/ Brown, dence, little silt, trace of sand	CL	
2						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
					TD 22.2'	

PART 1

OHM

JOB NO. 2801	BORE HOLE NO. MW-3
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT B-53 Drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Frank Lowe
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION	TOTAL DEPTH 20'
WELL CASING 2" PVC	SCREEN TYPE 2" PVC
LENGTH 5'	SLOT .01"

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SS	
				DIAMETER			2" OD	
				HAMMER WEIGHT			140 lbs	
				FALL			30"	

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOV-ERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
0				CLAY - Olive/ Brown, Dense, Little silt, Trace of sand	CL	
2						
4						
6						
8						
10						
12						
14						
16						
18						
20					TD 20'	

PART 1

OHM

JOB NO. 2801	BORE HOLE NO. MW-4
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT B-53 Drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Frank Lowe
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION 724.91	TOTAL DEPTH 17.7'
WELL CASING 2" PVC	SCREEN TYPE 2" PVC
LENGTH 5'	SLOT .01"

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SS	
				DIAMETER			2" OD	
				HAMMER WEIGHT			140 lbs	
				FALL			30"	

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
0				CLAY - Olive/brown, dense, little silt, trace of sand	CL	
2						
4						
6						
8						
10						
12						
14						
16						
18						
20					TD @ 17.7'	

PART 1

OHM

JOB NO. 2801	BORE HOLE NO. PS-1
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT Little Beaver Drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Brian Tiell
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION	TOTAL DEPTH 8'
WELL CASING	SCREEN TYPE
LENGTH	SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE				
				DIAMETER				
				HAMMER WEIGHT				
				FALL				

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
0				CLAY - Grey/tan		
				Black Material, Fibrous		
2						
				Black material fibrous some natural clay @ 3.75"		
4				Black material fibrous, some metal flakes	Water	
6	PS-1A PA-1B			Black material, fibrous, metal flakes	Very wet	
				Clay - Black		
8						
					TD @ 8'	
10						
12						

PART 1

OHM

JOB NO. 2801	BORE HOLE NO. PS-2
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT Little Beaver Drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Brian Tiell
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION	TOTAL DEPTH 3'
WELL CASING	SCREEN TYPE
LENGTH	SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE				
				DIAMETER				
				HAMMER WEIGHT				
				FALL				

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
0				CLAY - Grey/tan, organic material		
				CLAY - Grey/tan, dense, mottled, some mixed black material		
2						
3					TD @ 3'	
4						

PART 1

OHM

OB NO. 2801	BORE HOLE NO. PS-3
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
RILLING CONTRACTOR OHM	DRILLING EQUIPMENT Little Beaver Drill Rig
YDROGEOLOGIST Susan Klinzing	DRILLER Brian Tiell
ATE START/TIME / DATE FINISH/TIME	SURFACE ELEVATION / TOTAL DEPTH 4'
ELL CASING / SCREEN TYPE	LENGTH / SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE				
				DIAMETER				
				HAMMER WEIGHT				
				FALL				

EMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOV -ERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
0				CLAY - Grey/tan, dense		
2				Black material- asbestos, metal flakes		
				Black material- asbestos		
				Clay - Brown/Black		
4					TD @ 4'	

PART 1

OHM

JOB NO. 2801	BORE HOLE NO. PS-4
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT Little Beaver Drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Brian Tiell
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION	TOTAL DEPTH 9'
WELL CASING	SCREEN TYPE
LENGTH	SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE				
				DIAMETER				
				HAMMER WEIGHT				
				FALL				

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
0				CLAY - Grey/tan		
				Black material, fibrous		
2						
4						
6						
8				Clay/brown/black		
10					TD	

PART 1

JOB NO. 2801	BORE HOLE NO. PS-5
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT Little Beaver drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Brian Tiell
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION	TOTAL DEPTH 11.5'
WELL CASING	SCREEN TYPE
LENGTH	SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE				
				DIAMETER				
				HAMMER WEIGHT				
				FALL				

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
0				CLAY - Grey/tan		
				Black material, fibrous	damp	
2						
4						
6				Black material, fibrous	wet	
8						
10				CLAY - Olive brown, trace of silt and clay		
12					TD @ 11.5'	

PART 1

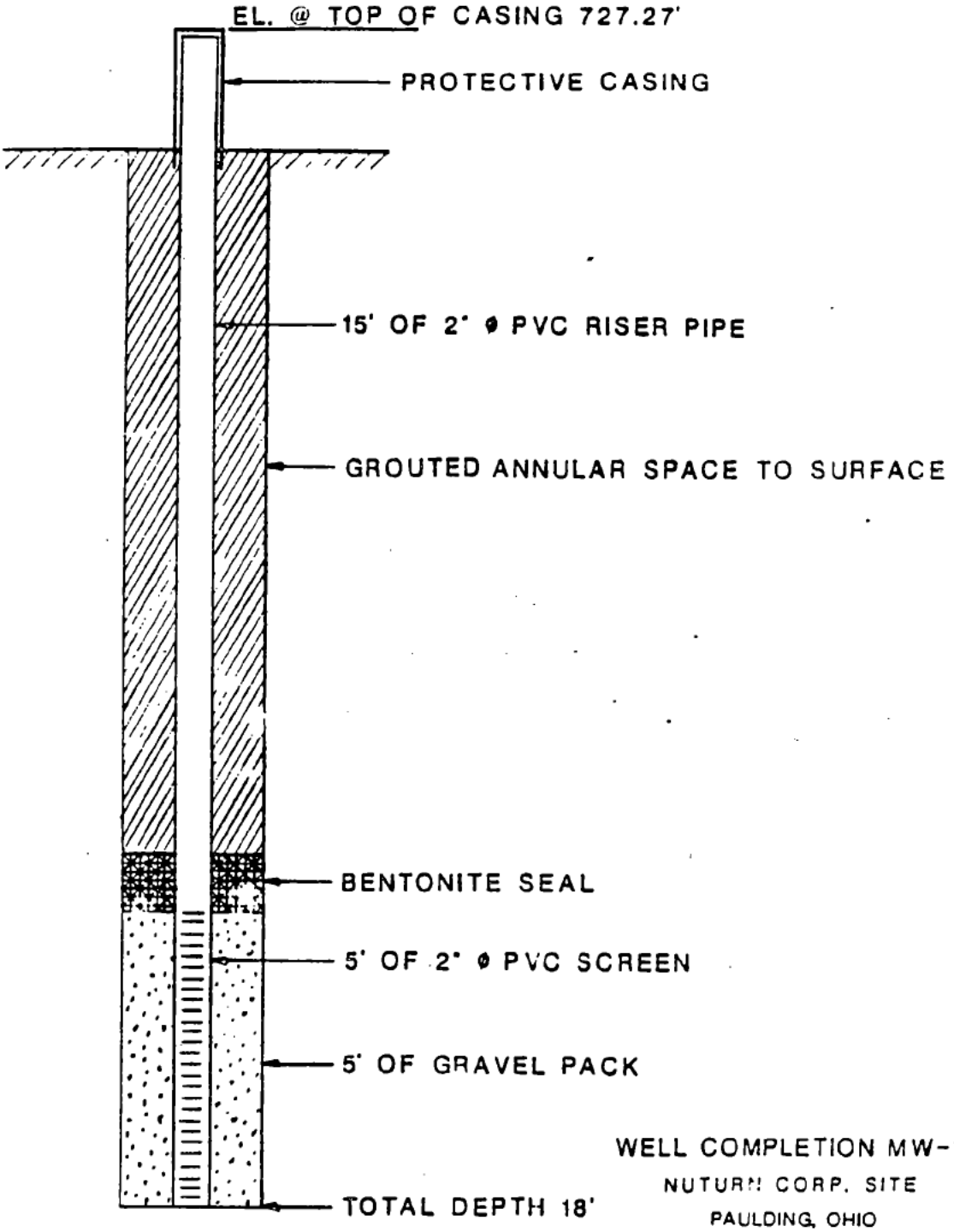
OHM

JOB NO. 2801	BORE HOLE NO. PP #1
PROJECT Nuturn Corp. Site	LOCATION Paulding, OH
DRILLING CONTRACTOR OHM	DRILLING EQUIPMENT Little Beaver Drill Rig
HYDROGEOLOGIST Susan Klinzing	DRILLER Brian Tiell
DATE START/TIME	DATE FINISH/TIME
SURFACE ELEVATION	TOTAL DEPTH 9'
WELL CASING	SCREEN TYPE
LENGTH	SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE				
				DIAMETER				
				HAMMER WEIGHT				
				FALL				

REMARKS

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOV-ERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	BORE HOLE LOG: REMARKS	GRAPHIC LOG
0				TRASH - Possible burn material		
2						
4						
6				CLAY		
8						
10					TD @ 9'	



WELL COMPLETION MW-1

NUTURN CORP. SITE

PAULDING, OHIO

PREPARED FOR

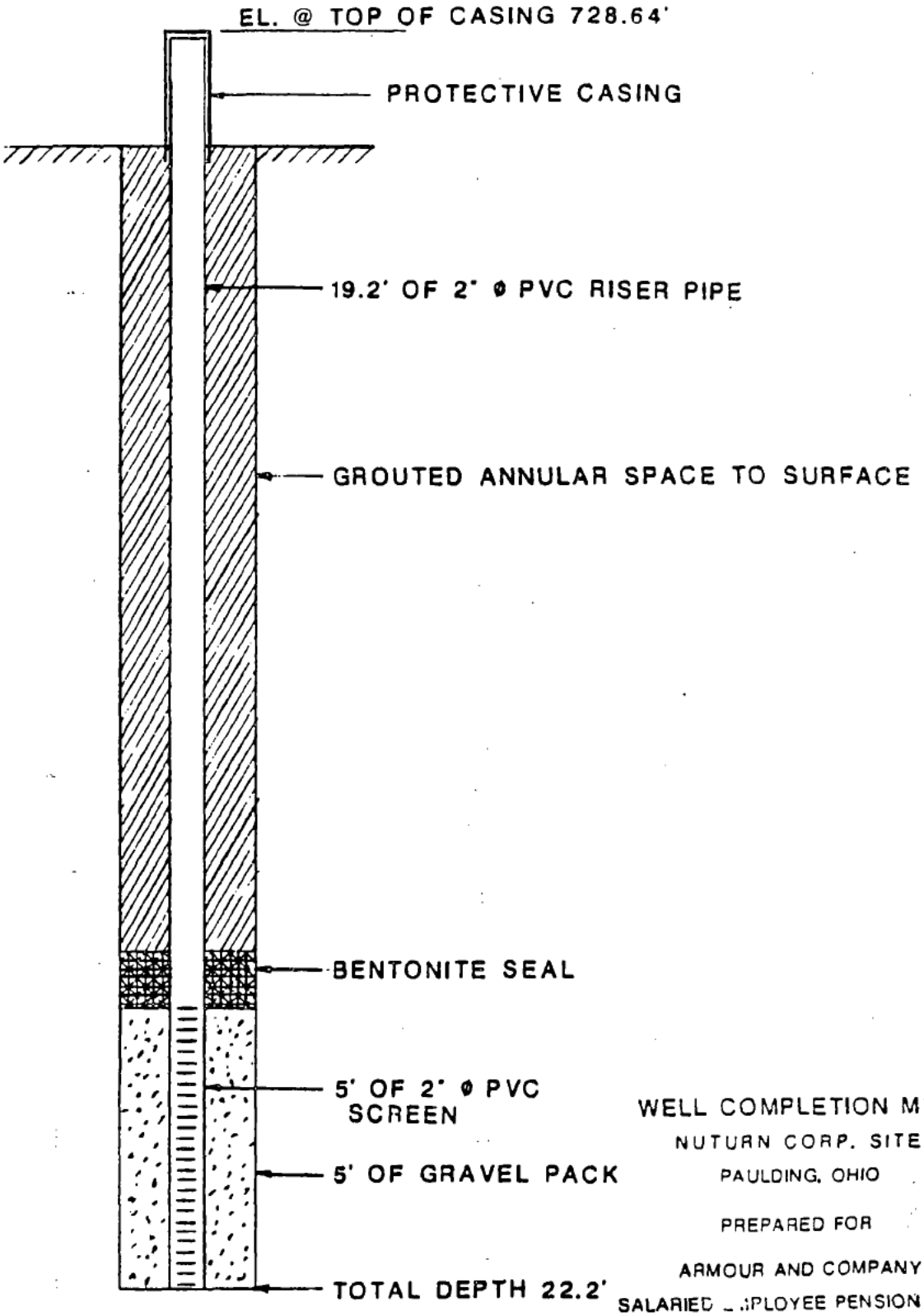
ARMOUR AND COMPANY

SALARIED EMPLOYEE PENSION FUN

GREYHOUND TOWER

PHOENIX, ARIZONA

DRAWN BY	B.D.	CHECKED BY/DATE		REVISIONS		DRAWING NO. A-968-B
DATE	10/21	APPROVED BY/DATE	C.J.C. 10/23			

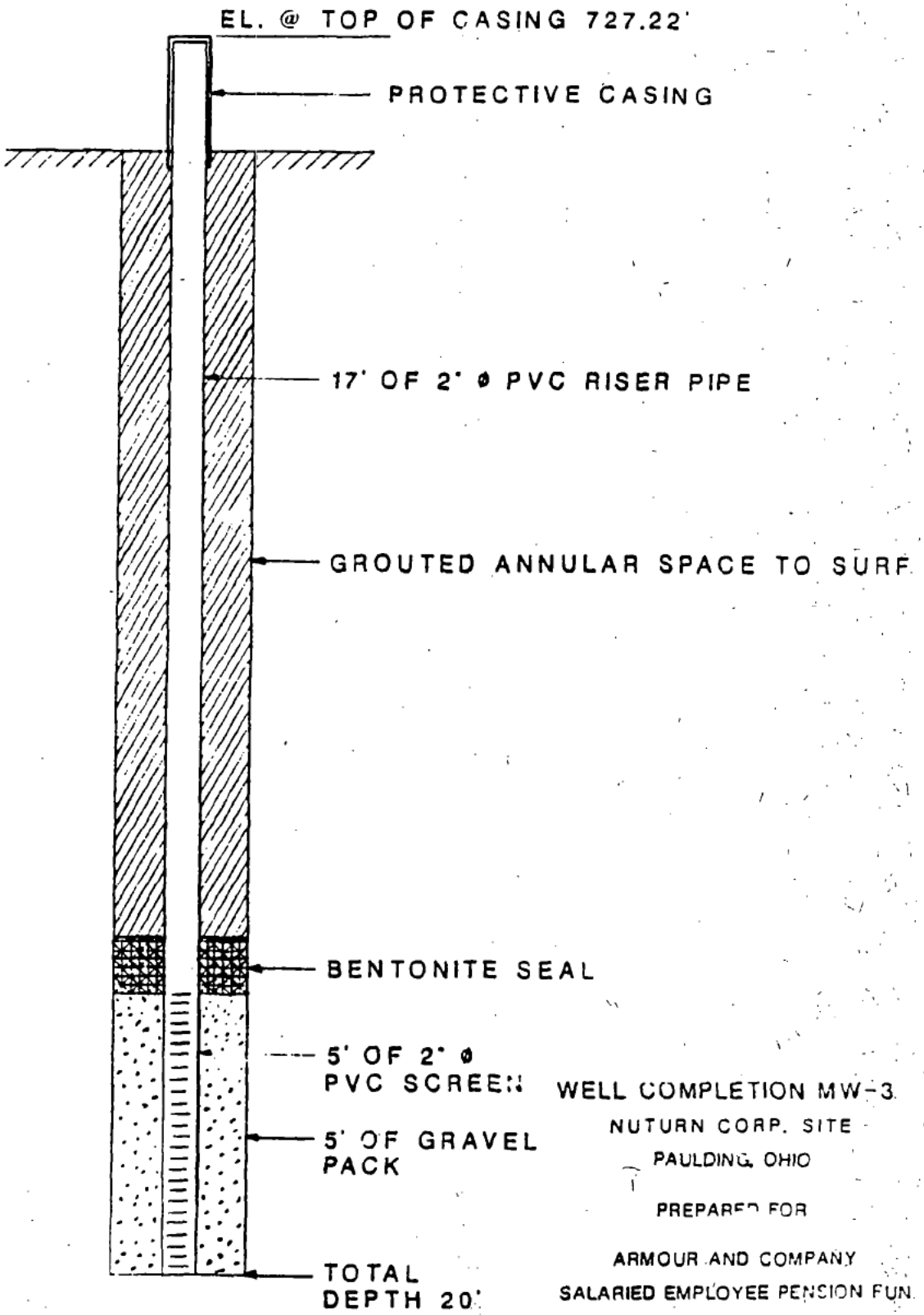


WELL COMPLETION MW
NUTURN CORP. SITE
PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY
SALARIED EMPLOYEE PENSION F
GREYHOUND TOWER
PHOENIX, ARIZONA

DRAWN BY	B.D.	CHECKED BY/DATE		C.J.C.	10/23	REVISIONS	BY	DATE	DRAWING NO. 2801
DATE	10/21	APPROVED BY/DATE							A-868-C

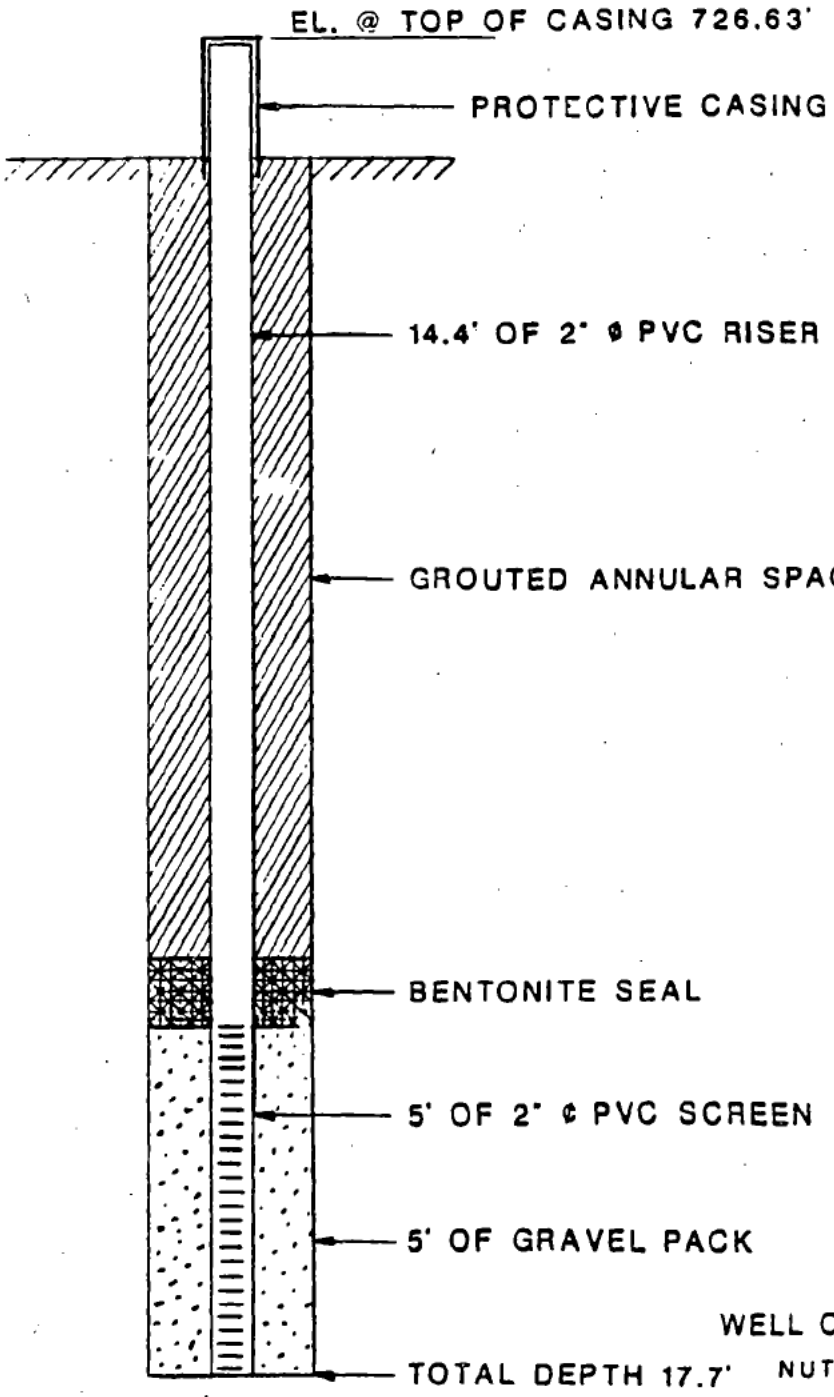


WELL COMPLETION MW-3
NUTURN CORP. SITE
PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY
SALARIED EMPLOYEE PENSION FUN
GREYHOUND TOWER
PHOENIX, ARIZONA

DRAWN BY	B.D.	CHECKED BY/DATE		REVISIONS	BY	DATE	DRAWING NO. 2801
DATE	10/23	APPROVED BY/DATE	C.J.C. 10/23				A-968-E



WELL COMPLETION MW-4

NUTURN CORP. SITE

PAULDING, OHIO

PREPARED FOR

ARMOUR AND COMPANY

SALARIED EMPLOYEE PENSION FUND

GREYHOUND TOWER

PHOENIX, ARIZONA

DRAWN BY	B.U.	CHECKED BY/DATE	C.J.C.	10/23	A-968-D
DATE	10/21	APPROVED BY/DATE			

PART 1

OHM

JOB NO. 2801

BORE HOLE NO. 1

PROJECT Armour & Co.	LOCATION Paulding, OH
DRILLING CONTRACTOR CTI	DRILLING EQUIPMENT CME 45
HYDROGEOLOGIST T. Mangan/R. Beckwith	DRILLER R. Near
DATE START/TIME 12-17-85/1300 — DATE FINISH/TIME 12-17-85/1400	SURFACE ELEVATION — TOTAL DEPTH 16.5
WELL CASING — SCREEN TYPE	LENGTH — SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	Shelby
12-17-85	1320	5.0'	COLD	DIAMETER			2" OD	4" OD
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS Borehole located center Sludge Pond I

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG — LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Brown clay topsoil		
2						
		1-2-3	8"	Soft, mottled brown CLAY, tr. m-f sand	SS Sample OHM # 2801-06	
4				Soft, mottled brown CLAY, tr. f. gravel	▽	
6	-06	2-2-2	8"		SS Sample	
8		1-0-0	10"	Very soft black m-f flakes and fiberous asbestos sludge, tr. green material	SS Sample	
10		1-0-0	18"		SS Sample	
12						
	-07	1-8-7	16"			
14				Still brown CLAY, tr. f. sand and silt (TILL)	SS Sample OHM # 2801-07	
16				Mottled brown-gray CLAY, some f. gravel (TILL)	Shelby Tube sample (15.0-16.5) EOB	

PART 1

OHM

JOB NO. 2801

BORE HOLE NO. 2

PROJECT Armour & Co.	LOCATION Paulding, OH
DRILLING CONTRACTOR CTI	DRILLING EQUIPMENT CME 45
HYDROGEOLOGIST T. Mangan/ R. Beckwith	DRILLER R. Near
DATE START/TIME 12-17-85/1500 — DATE FINISH/TIME 12-17-85/1530	SURFACE ELEVATION — TOTAL DEPTH 16.5
WELL CASING — SCREEN TYPE	LENGTH — SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	
12-17-85	1515	5.0'	COLD	DIAMETER			2" OD	
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS Borehole located Sludge Pond II

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG — LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
2				Brown clay topsoil		
4		2-3-4	6"	Firm brown CLAY, tr. f. gravel	SS Sample	
6		2-2-4	10"		▽ SS Sample	
8	-08	1-0-1	12"	Very soft dark gray-black m-f flakes and fiberous asbestos sludge	SS Sample OHM # 2801-08	
10		1-0-1	16"		SS Sample	
12	-09	11-17-20	18"	Hard mottled brn-gray CLAY, some m-f sand, tr. f-gravel (TILL)	SS Sample OHM # 2801-09	
14		7-10-15	16"	Very stiff mottled brn.-gray CLAY, some m-f sand, some f. gravel (TILL)	SS Sample EOB	
16						

PART 1

OHM

JOB NO. 2801

BORE HOLE NO. 3

PROJECT Armour & Co.	LOCATION Paulding, OH
DRILLING CONTRACTOR CTI	DRILLING EQUIPMENT CME 45
HYDROGEOLOGIST T. Mangan/R. Beckwith	DRILLER R. Near
DATE START/TIME 12-17-85/1600 — DATE FINISH/TIME 12-17-85/1630	SURFACE ELEVATION — TOTAL DEPTH 11.5'
WELL CASING — SCREEN TYPE	LENGTH — SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	
12-17-85	1615	5.0'	COLD	DIAMETER			2"OD	
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS Borehole located center Burn Pile

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG — LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Brown clay topsoil		
2						
	-10	6-5-3	12"	Black, dk gray, orange asbestos fragmats with 3/16" wire mesh	SS Sample OHM # 2801-10	
4						
		9-8-7	6"		SS Sample	
6						
8	-11	3-5-13	12"	Very stiff to hard mottled brown-gray CLAY, some c-f sand and silt (TILL)	SS Sample OHM # 2801-11	
10		12-15-26	16"			
12					SS Sample EOB	

PART 1

OHM

JOB NO. 2801

BORE HOLE NO. 4

PROJECT Armour & Co.	LOCATION Paulding, OH
DRILLING CONTRACTOR CTI	DRILLING EQUIPMENT CME 45
HYDROGEOLOGIST T. Mangan/R.Beckwith	DRILLER R. Near
DATE START/TIME 12-17-85/1640 / DATE FINISH/TIME 12-17-85/1700	SURFACE ELEVATION / TOTAL DEPTH 9.0'
WELL CASING / SCREEN TYPE	LENGTH / SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	
12-17-85	1650	6.5'	COLD	DIAMETER			2" OD	
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS Borehole located E side Disposal Pit

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Reddish-brown clay topsoil		
2				Dk gray-blk fiberous asbestos sludge		
		4-5-8	16"		SS Sample OHM # 2801-12	
4						
		6-8-11	16"	Very stiff mottled brn-gray CLAY, some c-f sand and silt (TILL)	SS Sample ▽	
6						
8		7-11-22	16"	Hard mottled brn-gray CLAY, some c-f sand and silt (TILL)	SS Sample	
10					EOB	

PART 1

JOB NO. 2801

OHM

BORE HOLE NO. 5

PROJECT: Armour & Co.	LOCATION: Paulding, OH
DRILLING CONTRACTOR: CTI	DRILLING EQUIPMENT: CME 45
HYDROGEOLOGIST: T. Mangan/R. Beckwith	DRILLER: R. Near
DATE START/TIME: 12-18-85/0900	DATE FINISH/TIME: 12-18-85/0920
SURFACE ELEVATION:	TOTAL DEPTH: 9.0'
WELL CASING:	SCREEN TYPE:
LENGTH:	SLOT:

GROUND WATER

DATE	TIME	DEPTH	WEATHER
12-18-85	0910	6.0'	COLD

	CASING	CORE	SAMPLER	TUBE
TYPE			SPT	
DIAMETER			2" OD	
HAMMER WEIGHT			140	
FALL			30"	

REMARKS: Borehole located center Disposal Pit

BORE HOLE LOG

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Dark brown clay topsoil		
2				Blk, dk brn debris, glass		
	-13	4-4-7	16"	Stiff brown, gray CLAY and silt, some m-f sand	SS Sample OHM # 2801-13	
4						
		4-6-8	2"	Blk debris	SS Sample ▽	
6				Brn, gray CLAY, some silt		
				Dk gray-blk fiberous asbestos sludge		
8	-14	4-8-12	16"	Very stiff mottled brn-gray CLAY, some f. gravel and c-f sand, silt (TILL)	SS Sample OHM # 2801-14 EOB	
10						

PART 1

OHM

JOB NO. 2801

BORE HOLE NO. 6

PROJECT: Armour & Co.	LOCATION: Paulding, OH
DRILLING CONTRACTOR: CTI	DRILLING EQUIPMENT: CME 45
HYDROGEOLOGIST: T. Mangan/R. Beckwith	DRILLER: R. Near
DATE START/TIME: 12-18-85/0945	DATE FINISH/TIME: 12-18-85/1030
SURFACE ELEVATION:	TOTAL DEPTH: 16.0'
WELL CASING:	SCREEN TYPE:
LENGTH:	SLOT:

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH.	WEATHER	TYPE			SPT	Shelby
12-18-85	0955	5.0'	COLD	DIAMETER			2" OD	4" OD
				HAMMER WEIGHT		-	140	
				FALL			30"	

REMARKS: Borehole lacated SW corner Asbestos Pile

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Brown clay topsoil		
2						
		1-1-3	16"	Soft dark gray-black, m-f flakes and fiberous asbestos sludge	SS Sample	
4					▽	
6	-15	1-0-1	18"		SS Sample OHM # 2801-15	
8		1-1-1	18"	Very soft dark gray-black, m-f flakes and fiberous asbestos sludge, trace reddish-orange particles	SS Sample	
10		1-1-1	18"		SS Sample	
12						
14	-16	1-9-13	16"	Very stiff mottled brown-gray CLAY, some m-f sand and silt (TILL)	SS Sample OHM # 2801-16 Shelby Tube sample (15.0-16.0')	
16					EOB	

PART 1

JOB NO. 2801

OHM

BORE HOLE NO. 7

PROJECT: Armour & Co.	LOCATION: Paulding, OH
DRILLING CONTRACTOR: CTI	DRILLING EQUIPMENT: CME 45
HYDROGEOLOGIST: T. Mangan/R. Beckwith	DRILLER: R. Near
DATE START/TIME: 12-18-85/1045 — DATE FINISH/TIME: 12-18-85/1115	SURFACE ELEVATION: — TOTAL DEPTH: 11.0'
WELL CASING: — SCREEN TYPE:	LENGTH: — SLOT:

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	Shelby
12-18-85	1055	6.0'	COLD	DIAMETER			2" OD	4" OD
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS: Borehole located NE corner Asbestos Pile

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Brown clay topsoil		
2				Soft dark gray-black, m-f flakes and fiberous asbestos sludge, tr. reddish-orange particles		
4		2-2-2	18"		SS Sample	
6	-17	1-1-6	16"		SS Sample ▽ OHM # 2801-17	
				Firm mottled brown-gray CLAY, some m-f sand and silt (TILL)		
8	-18	3-4-5	16"		SS Sample OHM # 2801-18	
10					Shelby Tube sample (10.0-11.0')	
12					EOB	

PART 1

OHM

JOB NO. 2801

BORE HOLE NO. 8

PROJECT Armour & Co.	LOCATION Paulding, OH
DRILLING CONTRACTOR CTI	DRILLING EQUIPMENT CME 45
HYDROGEOLOGIST T. Mangan/R. Beckwith	DRILLER R. Near
DATE START/TIME 12-18-85/1130 — DATE FINISH/TIME 12-18-85/1150	SURFACE ELEVATION — TOTAL DEPTH 9.0'
WELL CASING — SCREEN TYPE	LENGTH — SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	
12-18-85	1140	6.0'	COLD	DIAMETER			2" OD	
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS

Borehole located NW corner Asbestos Pile

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOV-ERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Brown clay topsoil		
2				Soft dark gray-black, m-f flakes and fiberous asbestos sludge, some reddish-orange particles		
		2-1-4	16"		SS Sample	
4						
	-19	1-1-7	18"		SS Sample ▽ OHM # 2801-19	
6				Stiff mottled brn-gray CLAY, some m-f sand and silt (TILL)		
8		3-5-7	16"		SS Sample EOB	
10						

PART 1

JOB NO. 2801

OHM

BORE HOLE NO. 9

PROJECT Armour & Co.	LOCATION Paulding, OH
DRILLING CONTRACTOR CTI	DRILLING EQUIPMENT CME 45
HYDROGEOLOGIST T. Mangan/R. Beckwith	DRILLER R. Near
DATE START/TIME 12-18-85/1200	DATE FINISH/TIME 12-18-85/1215
SURFACE ELEVATION	TOTAL DEPTH 9.0'
WELL CASING	SCREEN TYPE
LENGTH	SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	
12-18-85	1210	5.5'	COLD	DIAMETER			2" OD	
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS

Borehole located half-way on W side Asbestos Pile

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Brown clay topsoil		
2						
		2-4-5	16"	Firm brn-tan CLAY, tr.f. sand and silt	SS Sample	
4						
				Dk gry-blk flakes & fiberous asbestos	sludge ▽	
	-20	4-7-10	18"	Very stiff mottled brn-tan CLAY, tr.f. sand and silt, some red staining	SS Sample OHM #2801-20	
6						
8		4-3-5	16"	Firm mottled brn-gray CLAY, tr. m-f sand and silt (TILL)	SS Sample	
					EOB	
10						

PART 1

JOB NO. 2801

OHM

BORE HOLE NO. 10

PROJECT Armour & Co.	LOCATION Paulding, OH
DRILLING CONTRACTOR CTI	DRILLING EQUIPMENT CME 45
HYDROGEOLOGIST T. Mangan/R. Beckwith	DRILLER R. Near
DATE START/TIME 12-18-85/1220 / DATE FINISH/TIME 12-18-85/1245	SURFACE ELEVATION / TOTAL DEPTH 11.5'
WELL CASING / SCREEN TYPE	LENGTH / SLOT

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	
12-18-85	1235	3.0'	COLD	DIAMETER			2" OD	
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS Borehole located half-way on E side Asbestos Pile

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Brn clay topsoil		
2						
	-21	2-3-4	18"	Very soft, dark gray-black, m-f flakes and fiberous asbestos sludge, trace reddish-orange particles	▽ SS Sample OHM # 2801-21	
4						
6		1-1-1	18"		SS Sample	
8		1-0-1	18"		SS Sample	
10	-22	7-10-15	16"	Very stiff mottled brn-gray CLAY, tr. c-f sand and silt (TILL)	SS Sample OHM # 2801-22	
12					EOB	

PART 1

JOB NO. 2801

OHM

BORE HOLE NO. 11

PROJECT: Armour & Co.	LOCATION: Paulding, OH
DRILLING CONTRACTOR: CTI	DRILLING EQUIPMENT: CME 45
HYDROGEOLOGIST: T. Mangan/R. Beckwith	DRILLER: R. Near
DATE START/TIME: 12-18-85/1255 — DATE FINISH/TIME: 12-18-85/1315	SURFACE ELEVATION: — TOTAL DEPTH: 11.5'
WELL CASING: — SCREEN TYPE:	LENGTH: — SLOT:

GROUND WATER					CASING	CORE	SAMPLER	TUBE
DATE	TIME	DEPTH	WEATHER	TYPE			SPT	
12-18-85	1310	9.0'	COLD	DIAMETER			2" OD	
				HAMMER WEIGHT			140	
				FALL			30"	

REMARKS: Borehole located SE corner Asbestos Pile

DEPTH	SAMPLE NO.	BLOW COUNT PER 6"	RECOVERY	BORE HOLE LOG: LITHOLOGIC DESCRIPTION	REMARKS	GRAPHIC LOG
				Brown clay topsoil		
2						
		2-3-5	18"	Dk gry-blk, m-f flakes & fiberous asbestos sludge	SS Sample	
4				Mottled brn-tan CLAY, some silt		
6	-23	3-6-6	18"	Same asbestos sludge	SS Sample OHM # 2801-23	
8	-24	3-5-7	18"	Stiff mottled brn-gray CLAY, some f. sand and silt (TILL)	SS Sample OHM # 2801-24 ▽	
10		3-5-6	16"	Stiff mottled brn-gray CLAY, tr.f. gravel, some c-f sand and silt (TILL)	SS Sample EOB	
12						

PROJECT NO. 2801
ARMOUR AND CO., PAULDING, OHIO
SAMPLE AND SPLIT SPOON LOG
DECEMBER 18, 1985

SAMPLE #	LOCATION AND DEPTH	MATERIAL	PICTURE #
		SLUDGE POND I	
	BH-1 SS ~ 2.5'	CLAY FILL CAP	03
2801-06	BH-1 SS ~ 5.0'	H_2O TABLE-CLAY/SLUDGE INTERFACE	04
	BH-1 SS ~ 7.5'	SOFT FIBROUS SLUDGE	05
	BH-1 SS ~ 10.0'	SOFT FIBROUS SLUDGE	06
2801-07	BH-1 SS ~ 12.5'	SLUDGE/CLAY INTERFACE	07

4" O.D. SHELBY TUBE INSERTED 13.5' TO 15.5' ~ RECOVERED 60 % OF TILL SAMPLE

		SLUDGE POND II	
	BH-2 SS ~ 2.5'	CLAY CAP FILL	08
	BH-2 SS ~ 5.0'	CLAY FILL	09
2801-08	BH-2 SS ~ 7.5'	SOFT FIBROUS SLUDGE	10
	BH-2 SS ~ 10.0'	SOFT FIBROUS SLUDGE	11
2801-09	BH-2 SS ~ 12.5'	SLUDGE/CLAY TILL INTERFACE	12
	BH-2 SS ~ 15.0'	GLACIAL TILL	13
		BURN PIT	
2801-10	BH-3 SS ~ 2.5'	INTERFACE CLAY FILL/ ASBESTOS PADS	14
	BH-3 SS ~ 5.0'	ASBESTOS SCREEN AND PADS AND BRICKS	15
2801-11	BH-3 SS ~ 7.5'	ASBESTOS PADS/CLAY TILL INTERFACE	16
	BH-3 SS ~ 10.0'	CLAY TILL	17

PROJECT NO. 2801
ARMOUR AND CO., PAULDING, OHIO
SAMPLE AND SPLIT SPOON LOG
DECEMBER 18, 1985

SAMPLE #	LOCATION AND DEPTH	MATERIAL	PICTURE #
		DISPOSAL PIT	
2801-12	BH-4 SS ~ 2.5'	ASBESTOS FIBER/CLAY FILL	18
	BH-4 SS ~ 5.0'	CLAY FILL	19
	BH-4 SS ~ 7.5'	H_2O TABLE CLAY TILL	20
		DISPOSAL PIT	
2801-13	BH-5 SS ~ 2.5'	CLAY/ASBESTOS BRAKE PADS	21
	BH-5 SS ~ 5.0'	FIBER AND CLAY H_2O TABLE	22
2801-14	BH-5 SS ~ 7.5'	INTERFACE FIBER/CLAY TILL	23
		ASBESTOS PILE - SW CORNER	
	BH-6 SS ~ 2.5'	BLACK SLUDGE FIBROUS	24
2801-15	BH-6 SS ~ 5.0'	H_2O TABLE - BLACK SLUDGE	A-1
	BH-6 SS ~ 7.5'	BLACK SLUDGE	A-2
	BH-6 SS ~ 10.0'	BLACK SLUDGE/BRICK AND CLAY	A-3
2801-16	BH-6 SS ~ 12.5'	INTERFACE BLACK SLUDGE/ CLAY TILL	A-4

4" DIAMETER SHELBY TUBE INSERTED 13.5' TO 15.5' 40% RECOVERED CLAY TILL

		ASBESTOS PILE - NE CORNER	
	BH-7 SS ~ 2.5'	CLAY/BLACK SLUDGE	A-5
2801-17	BH-7 SS ~ 5.0'	BLACK SLUDGE - CLAY	A-6
2801-18	BH-7 SS ~ 7.5'	SLUDGE/CLAY INTERFACE	A-7

BH-7 4" DIAMETER SHELBY TUBE INSERTED AT 9.0 TO 11.0' 75% RECOVERED NATIVE CLAY TILL

PROJECT NO. 2801
ARMOUR AND CO., PAULDING, OHIO
SAMPLE AND SPLIT SPOON LOG
DECEMBER 18, 1985

SAMPLE #	LOCATION AND DEPTH	MATERIAL	PICTURE #
		ASBESTOS PILE - NW CORNER	
	BH-8 SS ~ 2.5'	BLACK GRIT AND SLUDGE	A-8
2801-19	BH-8 SS ~ 5.0'	INTERFACE SLUDGE/CLAY TILL	A-9
	BH-8 SS ~ 7.5'	PEBBLY CLAY TILL	A-10
		CENTER OF ASBESTOS PILE - WEST SIDE	
	BH-9 SS ~ 2.5'	CLAY FILL CAP	A-11
2801-20	BH-9 SS ~ 5.0'	CLAY RED STAIN/SLUDGE H_2O	A-12
	BH-9 SS ~ 7.5'	NATIVE CLAY TILL	A-13
		CENTER OF ASBESTOS PILE - EAST SIDE	
2801-21	BH-10 SS ~ 2.5'	H_2O TABLE BLACK FIBER SLUDGE	A-14
	BH-10 SS ~ 5.0'	BLACK SLUDGE	A-15
	BH-10 SS ~ 7.5'	BLACK SLUDGE	A-16
2801-22	BH-10 SS ~ 10.0'	INTERFACE SLUDGE/CLAY TILL	A-17
		ASBESTOS PILE - SE CORNER	
	BH-11 SS ~ 2.5'	CLAY FILL CAP	A-18
2801-23	BH-11 SS ~ 5.0'	BLACK SLUDGE AND CLAY	A-19
2801-24	BH-11 SS ~ 7.5'	CLAY TILL	A-20
	BH-11 SS ~ 10.0'	CLAY TILL	A-21

TOTAL OF 11 SOIL BORINGS

1 BORING	SLUDGE POND I W/ SHELBY TUBE
1 BORING	SLUDGE POND II
2 BORINGS	DISPOSAL PIT
1 BORING	BURN PIT
6 BORINGS	ASBESTOS PILE W/ 2 SHELBY TUBES

QC LOT ASSIGNMENT REPORT
INORGANICS - METALS

Laboratory Sample Number	QC Matrix	Test	QC Lot Number LCS
64052-001	Standard Soil	ICPT	ICPT094AA
64052-002	Standard Soil	ICPT	ICPT094AA
64052-003	Standard Soil	ICPT	ICPT094AA
64052-004	Standard Soil	ICPT	ICPT094AA
64052-005	Standard Soil	ICPT	ICPT094AA
64052-006	Standard Soil	ICPT	ICPT094AA
64052-007	Standard Soil	ICPT	ICPT094AA
64052-008	Standard Soil	ICPT	ICPT094AA
64052-009	Standard Soil	ICPT	ICPT094AA
64052-010	Standard Soil	ICPT	ICPT094AA
64052-011	Standard Soil	ICPT	ICPT094AA
64052-012	Standard Soil	ICPT	ICPT094AA
64052-013	Standard Soil	ICPT	ICPT094AA
64052-014	Standard Soil	ICPT	ICPT094AA
64052-015	Standard Soil	ICPT	ICPT094AA
64052-016	Standard Soil	ICPT	ICPT094AA
64052-017	Standard Soil	ICPT	ICPT094AA
64052-018	Standard Soil	ICPT	ICPT094AA
64052-019	Standard Soil	ICPT	ICPT094AA
64052-020	Standard Soil	ICPT	ICPT094AA
64052-021	Standard Soil	ICPT	ICPT095AA
64052-022	Standard Soil	ICPT	ICPT095AA
64052-023	Standard Soil	ICPT	ICPT095AA
64052-024	Standard Soil	ICPT	ICPT095AA
64052-025	Standard Soil	ICPT	ICPT095AA
64052-026	Standard Soil	ICPT	ICPT095AA
64052-027	Standard Soil	ICPT	ICPT095AA
64052-028	Standard Soil	ICPT	ICPT095AA
64052-029	Standard Soil	ICPT	ICPT095AA
64052-030	Standard Soil	ICPT	ICPT095AA
64052-031	Standard Soil	ICPT	ICPT095AA
64052-032	Standard Soil	ICPT	ICPT095AA
64052-033	Standard Soil	ICPT	ICPT095AA
64052-034	Standard Soil	ICPT	ICPT095AA
64052-035	Standard Soil	ICPT	ICPT095AA
64052-036	Standard Soil	ICPT	ICPT095AA
64052-037	Standard Soil	ICPT	ICPT095AA
64052-038	Standard Soil	ICPT	ICPT095AA
64052-039	Standard Soil	ICPT	ICPT095AA

LABORATORY CONTROL SAMPLE REPORT
INORGANICS - METALS

Analyte	Concentration Spiking	Measured LCS1	Measured LCS2	Accuracy(%) LCS1	LCS2	Limits	Precision(RPD) LCS	Limits
Test: ICPT on Standard Soil QC Lot: ICPT094AA Concentration Units: (mg/kg)								
Antimony	0.50	0.49	0.50	98	100	75-125	2.0	20
Arsenic	0.50	0.48	0.46	96	92	75-125	4.3	20
Barium	2.0	2.0	2.0	100	100	75-125	0.0	20
Beryllium	0.05	0.049	0.047	98	94	75-125	4.2	20
Cadmium	0.05	0.047	0.042	94	84	75-125	11.2	20
Chromium	0.20	0.22	0.22	110	110	75-125	0.0	20
Cobalt	0.50	0.50	0.48	100	96	75-125	4.1	20
Copper	0.25	0.27	0.26	108	104	75-125	3.8	20
Lead	0.50	0.50	0.48	100	96	75-125	4.1	20
Manganese	0.50	0.56	0.52	112	104	75-125	7.4	20
Nickel	0.50	0.52	0.49	104	98	75-125	5.9	20
Silver	0.05	0.038	0.046	76	92	75-125	19.0	20
Tin	0.50	0.61	0.60	122	120	75-125	1.7	20
Vanadium	0.50	0.51	0.51	102	102	75-125	0.0	20
Zinc	0.50	0.53	0.51	106	102	75-125	3.8	20
Test: ICPT on Standard Soil QC Lot: ICPT095AA Concentration Units: (mg/kg)								
Antimony	0.50	0.49	0.50	98	100	75-125	2.0	20
Arsenic	0.50	0.46	0.46	92	92	75-125	0.0	20
Barium	2.0	2.0	2.0	100	100	75-125	0.0	20
Beryllium	0.05	0.046	0.048	92	96	75-125	4.3	20
Cadmium	0.05	0.045	0.045	90	90	75-125	0.0	20
Chromium	0.20	0.22	0.23	110	115	75-125	4.4	20
Cobalt	0.50	0.48	0.50	96	100	75-125	4.1	20
Copper	0.25	0.31	0.33	124	132#	75-125	6.3	20
Lead	0.50	0.48	0.50	96	100	75-125	4.1	20
Manganese	0.50	0.51	0.53	102	106	75-125	3.8	20
Nickel	0.50	0.49	0.51	98	102	75-125	4.0	20
Silver	0.05	0.043	0.042	86	84	75-125	2.4	20
Tin	0.50	0.63	0.64	126#	128#	75-125	1.6	20
Vanadium	0.50	0.49	0.51	98	102	75-125	4.0	20
Zinc	0.50	0.55	0.58	110	116	75-125	5.3	20

= Recovery outside standard QC limits.

SAMPLE DESCRIPTION INFORMATION

for

JAMES L. GRANT AND ASSOCIATES

RMAL Sample No.	Sample Description	Sample Type	Date Sampled	Date Received
63984-001	PAB-3-2 & PAB-3-3	Soil	06/10/87	06/11/87
63984-002	PAB-3-7	Soil	06/10/87	06/11/87
63984-003	PA-7-4	Soil	06/10/87	06/11/87

ANALYTICAL TESTS ASSIGNED

for

JAMES L. GRANT AND ASSOCIATES

RMAL Sample No.	Analysis Description	Custom Test*
63984-001	BOILING POINT DISTRIBUTION FOR SOLIDS	NO
63984-002	BOILING POINT DISTRIBUTION FOR SOLIDS	NO

*This test has been customized in terms of analyte list or detection limit to accommodate special needs of the client.

BOILING POINT DISTRIBUTION FOR SOLIDS

D2887-84

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-3-2 & PAB-3-3

Laboratory ID: 63984-001 Enseco ID: 63984-001

Matrix: Soil Sampled: 06/10/87 Received: 06/11/87

Authorized: 06/29/87 Prepared: 07/01/87 Analyzed: 07/13/87

Parameter	Result	Units (as received)	Reporting Limit
C10+	38.7	Cumulative %	0
C12+	95.0	Cumulative %	0
C14+	0	Cumulative %	0
C16+	0	Cumulative %	0
C18+	0	Cumulative %	0
C20+	0	Cumulative %	0
C22+	0	Cumulative %	0
C24+	0	Cumulative %	0
C26+	100	Cumulative %	0
C28+	0	Cumulative %	0
C30+	0	Cumulative %	0
C32+	0	Cumulative %	0
Total	320000	ug/kg	13000
C8+	0	Cumulative %	0

N.D. = Not detected

Reported by: Mike Faught Approved by: Maureen McDevitt

Sample: 63984-001

BOILING POINT DISTRIBUTION FOR SOLIDS

D2887-84

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-3-7

Laboratory ID: 63984-002 Enseco ID: 63984-002

Matrix: Soil Sampled: 06/10/87 Received: 06/11/87

Authorized: 06/29/87 Prepared: 07/01/87 Analyzed: 07/13/87

Parameter	Result	Units (as received)	Reporting Limit
C10+	2.3	Cumulative %	0
C12+	19.5	Cumulative %	0
C14+	39.0	Cumulative %	0
C16+	63.8	Cumulative %	0
C18+	78.2	Cumulative %	0
C20+	93.2	Cumulative %	0
C22+	100	Cumulative %	0
C24+	0	Cumulative %	0
C26+	0	Cumulative %	0
C28+	0	Cumulative %	0
C30+	0	Cumulative %	0
C32+	0	Cumulative %	0
Total	4200	ug/kg	3300
C8+	0	Cumulative %	0

N.D. = Not detected

Reported by: Mike Faught Approved by: Maureen McDevitt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-3-1

Laboratory ID: 64052-001 Enseco ID: 64052-001

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	25	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-001

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-3-2

Laboratory ID: 64052-002 Enseco ID: 64052-002

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	31	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-3-3

Laboratory ID: 64052-003 Enseco ID: 64052-003

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	20	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-003

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-5-1

Laboratory ID: 64052-004 Enseco ID: 64052-004

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	34	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-004

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-5-2

Laboratory ID: 64052-005 Enseco ID: 64052-005

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	1200	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-005

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-5-3

Laboratory ID: 64052-006 Enseco ID: 64052-006

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	2600	mg/kg	30	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-006

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-5-6

Laboratory ID: 64052-007 Enseco ID: 64052-007

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	41000	mg/kg	30	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-007

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-5-8

Laboratory ID: 64052-008 Enseco ID: 64052-008

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	440	mg/kg	10	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-008

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-7-1

Laboratory ID: 64052-009 Enseco ID: 64052-009

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	1600	mg/kg	10	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-009

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-7-2

Laboratory ID: 64052-010 Enseco ID: 64052-010

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	320	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-010

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-7-3

Laboratory ID: 64052-011 Enseco ID: 64052-011

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	24	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-011

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-7-4

Laboratory ID: 64052-012 Enseco ID: 64052-012

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	20	mg/kg	10	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-012

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-8-1

Laboratory ID: 64052-013 Enseco ID: 64052-013

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	2200	mg/kg	10	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-013

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-8-2

Laboratory ID: 64052-014 Enseco ID: 64052-014

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	4600	mg/kg	10	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-8-4

Laboratory ID: 64052-015 Enseco ID: 64052-015

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	17	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-015

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-9-2

Laboratory ID: 64052-016 Enseco ID: 64052-016

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	1700	mg/kg	10	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-016

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-9-3

Laboratory ID: 64052-017 Enseco ID: 64052-017

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	44	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PA-9-5

Laboratory ID: 64052-018 Enseco ID: 64052-018

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	43	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-018

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: V-2

Laboratory ID: 64052-019 Enseco ID: 64052-019

Matrix: Solid Sampled: 06/07/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	2200	mg/kg	10	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-019

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: V-4

Laboratory ID: 64052-020 Enseco ID: 64052-020

Matrix: Solid Sampled: 06/07/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	260	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: V-6

Laboratory ID: 64052-021 Enseco ID: 64052-021

Matrix: Solid Sampled: 06/07/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	3500	mg/kg	5	6010	07/15/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-021

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-2-1

Laboratory ID: 64052-023 Enseco ID: 64052-023

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	48	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-023

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-2-2

Laboratory ID: 64052-024 Enseco ID: 64052-024

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	21	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-2-3

Laboratory ID: 64052-022 Enseco ID: 64052-022

Matrix: Solid Sampled: 06/08/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	62	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-022

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: VI-3

Laboratory ID: 64052-025 Enseco ID: 64052-025

Matrix: Solid Sampled: 06/13/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	6100	mg/kg	10	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: VI-5

Laboratory ID: 64052-026 Enseco ID: 64052-026

Matrix: Solid Sampled: 06/13/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	810	mg/kg	30	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-026

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: VI-7

Laboratory ID: 64052-027 Enseco ID: 64052-027

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	33	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-027

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: VII-1

Laboratory ID: 64052-028 Enseco ID: 64052-028

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	24000	mg/kg	30	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: VII-3

Laboratory ID: 64052-029 Enseco ID: 64052-029

Matrix: Solid Sampled: 06/13/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	930	mg/kg	30	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-029

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: VII-5

Laboratory ID: 64052-030 Enseco ID: 64052-030

Matrix: Solid Sampled: 06/09/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	30	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-030

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-5-1

Laboratory ID: 64052-031 Enseco ID: 64052-031

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	15000	mg/kg	10	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-031

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-5-2

Laboratory ID: 64052-032 Enseco ID: 64052-032

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	62	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-032

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-5-3

Laboratory ID: 64052-033 Enseco ID: 64052-033

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	27	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-033

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-4-1

Laboratory ID: 64052-034 Enseco ID: 64052-034

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	30	mg/kg	10	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-034

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-4-2

Laboratory ID: 64052-035 Enseco ID: 64052-035

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	46	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-035

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: PAB-4-3

Laboratory ID: 64052-036 Enseco ID: 64052-036

Matrix: Solid Sampled: 06/10/87 Received: 07/10/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	18	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-036

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: IV-3

Laboratory ID: 64052-037 Enseco ID: 64052-037

Matrix: Solid Sampled: Received: 07/13/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	320	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: IV-4

Laboratory ID: 64052-038 Enseco ID: 64052-038

Matrix: Solid Sampled: Received: 07/13/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	31	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-038

METALS PARAMETERS
TOTAL METALS

Client Name: JAMES L. GRANT AND ASSOCIATES

Client ID: IV-6

Laboratory ID: 64052-039 Enseco ID: 64052-039

Matrix: Solid Sampled: Received: 07/13/87

Authorized: 07/10/87

Parameter	Result	Units (as received)	Reporting Limit	Analytical Method	Analyzed
Lead	280	mg/kg	5	6010	07/17/87

N.D. = Not detected

Approved by: Will Pratt

Sample: 64052-039

SAMPLE DESCRIPTION INFORMATION

for

JAMES L. GRANT AND ASSOCIATES

RMAL Sample No.	Sample Description	Sample Type	Date Sampled	Date Received
64052-001	PAB-3-1	Solid	06/10/87	07/10/87
64052-002	PAB-3-2	Solid	06/10/87	07/10/87
64052-003	PAB-3-3	Solid	06/10/87	07/10/87
64052-004	PA-5-1	Solid	06/09/87	07/10/87
64052-005	PA-5-2	Solid	06/09/87	07/10/87
64052-006	PA-5-3	Solid	06/09/87	07/10/87
64052-007	PA-5-6	Solid	06/09/87	07/10/87
64052-008	PA-5-8	Solid	06/09/87	07/10/87
64052-009	PA-7-1	Solid	06/09/87	07/10/87
64052-010	PA-7-2	Solid	06/09/87	07/10/87
64052-011	PA-7-3	Solid	06/09/87	07/10/87
64052-012	PA-7-4	Solid	06/09/87	07/10/87
64052-013	PA-8-1	Solid	06/09/87	07/10/87
64052-014	PA-8-2	Solid	06/09/87	07/10/87
64052-015	PA-8-4	Solid	06/09/87	07/10/87
64052-016	PA-9-2	Solid	06/10/87	07/10/87
64052-017	PA-9-3	Solid	06/10/87	07/10/87
64052-018	PA-9-5	Solid	06/10/87	07/10/87
64052-019	V-2	Solid	06/07/87	07/10/87
64052-020	V-4	Solid	06/07/87	07/10/87
64052-021	V-6	Solid	06/07/87	07/10/87
64052-022	PAB-2-3	Solid	06/08/87	07/10/87
64052-023	PAB-2-1	Solid	06/10/87	07/10/87
64052-024	PAB-2-2	Solid	06/10/87	07/10/87
64052-025	VI-3	Solid	06/13/87	07/10/87
64052-026	VI-5	Solid	06/13/87	07/10/87
64052-027	VI-7	Solid	06/09/87	07/10/87
64052-028	VII-1	Solid	06/09/87	07/10/87
64052-029	VII-3	Solid	06/13/87	07/10/87
64052-030	VII-5	Solid	06/09/87	07/10/87
64052-031	PAB-5-1	Solid	06/10/87	07/10/87
64052-032	PAB-5-2	Solid	06/10/87	07/10/87
64052-033	PAB-5-3	Solid	06/10/87	07/10/87
64052-034	PAB-4-1	Solid	06/10/87	07/10/87
64052-035	PAB-4-2	Solid	06/10/87	07/10/87
64052-036	PAB-4-3	Solid	06/10/87	07/10/87
64052-037	IV-3	Solid	-	07/13/87
64052-038	IV-4	Solid	-	07/13/87
64052-039	IV-6	Solid	-	07/13/87

ANALYTICAL TESTS ASSIGNED

for

JAMES L. GRANT AND ASSOCIATES

RMAL Sample No.	Analysis Description	Custom Test*
64052-001	ICP SUITE TOTAL METALS	YES
64052-002	ICP SUITE TOTAL METALS	YES
64052-003	ICP SUITE TOTAL METALS	YES
64052-004	ICP SUITE TOTAL METALS	YES
64052-005	ICP SUITE TOTAL METALS	YES
64052-006	ICP SUITE TOTAL METALS	YES
64052-007	ICP SUITE TOTAL METALS	YES
64052-008	ICP SUITE TOTAL METALS	YES
64052-009	ICP SUITE TOTAL METALS	YES
64052-010	ICP SUITE TOTAL METALS	YES
64052-011	ICP SUITE TOTAL METALS	YES
64052-012	ICP SUITE TOTAL METALS	YES
64052-013	ICP SUITE TOTAL METALS	YES

*This test has been customized in terms of analyte list or detection limit to accommodate special needs of the client.

ANALYTICAL TESTS ASSIGNED (cont.)

for

JAMES L. GRANT AND ASSOCIATES

RMAL Sample No.	Analysis Description	Custom Test*
64052-014	ICP SUITE TOTAL METALS	YES
64052-015	ICP SUITE TOTAL METALS	YES
64052-016	ICP SUITE TOTAL METALS	YES
64052-017	ICP SUITE TOTAL METALS	YES
64052-018	ICP SUITE TOTAL METALS	YES
64052-019	ICP SUITE TOTAL METALS	YES
64052-020	ICP SUITE TOTAL METALS	YES
64052-021	ICP SUITE TOTAL METALS	YES
64052-022	ICP SUITE TOTAL METALS	YES
64052-023	ICP SUITE TOTAL METALS	YES
64052-024	ICP SUITE TOTAL METALS	YES
64052-025	ICP SUITE TOTAL METALS	YES
64052-026	ICP SUITE TOTAL METALS	YES

*This test has been customized in terms of analyte list or detection limit to accommodate special needs of the client.

ANALYTICAL TESTS ASSIGNED (cont.)

for

JAMES L. GRANT AND ASSOCIATES

RMAL Sample No.	Analysis Description	Custom Test*
64052-027	ICP SUITE TOTAL METALS	YES
64052-028	ICP SUITE TOTAL METALS	YES
64052-029	ICP SUITE TOTAL METALS	YES
64052-030	ICP SUITE TOTAL METALS	YES
64052-031	ICP SUITE TOTAL METALS	YES
64052-032	ICP SUITE TOTAL METALS	YES
64052-033	ICP SUITE TOTAL METALS	YES
64052-034	ICP SUITE TOTAL METALS	YES
64052-035	ICP SUITE TOTAL METALS	YES
64052-036	ICP SUITE TOTAL METALS	YES
64052-037	ICP SUITE TOTAL METALS	YES
64052-038	ICP SUITE TOTAL METALS	YES
64052-039	ICP SUITE TOTAL METALS	YES

*This test has been customized in terms of analyte list or detection limit to accommodate special needs of the client.

APPENDIX B

ANALYTICAL REPORTS

OHM
McCrone Environmental Services, Inc.
Asbestos Management, Inc.
CTI and Associates, Inc.

PROJECT 2801

SUMMARY REPORT OF ANALYTICAL SERVICES

I. INTRODUCTION

O.H. Materials Co.'s (OHM) Corporate Laboratory received a number of samples These samples were acquired by OHM's technical personnel and transferred to the laboratory complete with chain-of-custody records, copies of which are attached for reference. The samples were analyzed for priority pollutant organics.

II. ANALYTICAL METHODOLOGY

1. Purgeable Organics

A. Water Samples

The water samples were prepared and analyzed according to USEPA Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, July 1982; Method 624, Purgeable Organics.

B. Soil Samples

Volatile analysis of soil samples was performed according to USEPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW 846, July 1982; Method 8240, GC/MS Methods for Volatile Organics.

2. Priority Pollutant Metals in Solid Samples

The soil samples were prepared and analyzed according to USEPA Test Methods for Evaluating Solid Wastes, Physical Chemical Methods, SW 846, 2nd edition, July 1982. Samples were prepared by Method 3050, Acid Digestion Procedure for Flame Atomic Absorption Spectroscopy for the following metals: antimony, beryllium, cadmium, chromium, copper, lead, nickel, silver, thallium, and zinc. Sample analyses for these metals were performed by Section 7, Inorganic Analytical Methods for Direct Aspiration Methods. Arsenic and selenium were prepared and analyzed by Method 7061 and Method 7741, Gaseous Hydride Methods. Mercury was prepared and analyzed by Method 7471, Mercury in Liquid Wastes, (Manual Cold-Vapor Techniques.)

PROJECT 2801

SUMMARY REPORT OF ANALYTICAL SERVICES

3. Semi-Volatile Priority Pullutants

A. Water Analysis

Semi-volatile analysis of the water samples were prepared and analyzed according to USEPA Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, Method 625, Base/Neutral, Acids, and Pesticides.

B. Soil Analysis

Semi-volatile analysis of the soil samples were prepared and analyzed according to USEPA Test Methods for Evaluating Solid Wastes, Physical Chemical Methods, SW 846, 2nd edition, July 1982; Method 3540 Soxhlet Extraction and Method 8270, GC/MS Method for semi-volatile organics: Capillary Column Techniques.

4. Copper and Zinc

Solid samples were prepared and analyzed according to USEPA Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, SW 846, 2nd edition, July 1982; Method 3050, Acid Digestion of Sludges, and analyzed by Method 7210, Atomic Absorption, Direct Aspiration Method for Copper; and Method 7950, Atomic Absorption, Direct Aspiration Method for Zinc.

III. ANALYTICAL RESULTS

Table I details the priority pollutant metal results; Table II details the copper and zinc results; Table III details the volatile organic results; Table IV details the acid extractable results; Table V details the base/neutral extractable results; Table VI details the pesticide and PCB results; and Table VII details the GC/MS screen results.

PROJECT 2801
TABLE I - PRIORITY POLLUTANT METAL RESULTS

SAMPLE IDENTIFIER: Soil; Asbestos Pile at 6'
OHM SAMPLE NO: 2801-PS1B

Compound Name	Concentration mg/kg	Detection Limit mg/kg
Antimony	22.2	20.0
Arsenic	2.21	0.20
Beryllium	BDL	4.00
Cadmium	BDL	2.00
Chromium (Total)	62.1	10.0
Copper	2,010	1.00
Lead	2,030	4.00
Mercury	BDL	0.04
Nickel	270	4.00
Selenium	BDL	0.20
Silver	BDL	2.00
Thallium	BDL	20.0
Zinc	2,530	1.00

mg/kg = ppm (parts-per-million)
BDL = Below Detection Limit

PROJECT 2801

TABLE II - COPPER AND ZINC RESULTS
(All concentrations are reported in mg/kg)

Sample #	Copper	Zinc
2801-SS1	50.4	323
2801-SS2	14,400	7,640
2801-SS3	45.2	120
2801-SS4	3,940	3,680
2801-SS5	540	574
2801-SS6	2,860	2,280
2801-SS7	2,720	1,910

mg/kg = ppm (parts-per-million).

PROJECT 2801
TABLE III - VOLATILE ORGANIC RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #1
OHM SAMPLE NO: 2801-01

Compound Name	Concentration ug/l	Detection Limit ug/l
Benzene	BDL	1.0
Bromomethane	BDL	1.0
Bromodichloromethane	BDL	1.0
Bromoform	BDL	1.0
Carbon Tetrachloride	BDL	1.0
Chlorobenzene	BDL	1.0
Chloroethane	BDL	1.0
2-Chloroethylvinyl ether	BDL	1.0
Chloroform	BDL	1.0
Chloromethane	BDL	1.0
Dibromochloromethane	BDL	1.0
1,1-Dichloroethane	BDL	1.0
1,2-Dichloroethane	BDL	1.0
1,1-Dichloroethene	BDL	1.0
Trans-1,2-Dichloroethene	BDL	1.0
1,2-Dichloropropane	BDL	1.0
Cis-1,3-Dichloropropene	BDL	1.0
Trans-1,3-Dichloropropene	BDL	1.0
Ethylbenzene	BDL	1.0
Methylene Chloride	BDL	10.0
1,1,2,2-Tetrachloroethane	BDL	1.0
Tetrachloroethene	1.3	1.0
1,1,1-Trichloroethane	BDL	1.0
1,1,2-Trichloroethane	BDL	1.0
Trichloroethene	BDL	1.0
Toluene	BDL	2.0
Vinyl Chloride	1.4	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE III - VOLATILE ORGANIC RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #2
OHM SAMPLE NO: 2801-02

Compound Name	Concentration ug/l	Detection Limit ug/l
Benzene	BDL	1.0
Bromomethane	BDL	1.0
Bromodichloromethane	BDL	1.0
Bromoform	BDL	1.0
Carbon Tetrachloride	BDL	1.0
Chlorobenzene	BDL	1.0
Chloroethane	BDL	1.0
2-Chloroethylvinyl ether	BDL	1.0
Chloroform	BDL	1.0
Chloromethane	BDL	1.0
Dibromochloromethane	BDL	1.0
1,1-Dichloroethane	BDL	1.0
1,2-Dichloroethane	BDL	1.0
1,1-Dichloroethene	BDL	1.0
Trans-1,2-Dichloroethene	BDL	1.0
1,2-Dichloropropane	BDL	1.0
Cis-1,3-Dichloropropene	BDL	1.0
Trans-1,3-Dichloropropene	BDL	1.0
Ethylbenzene	BDL	1.0
Methylene Chloride	BDL	10.0
1,1,2,2-Tetrachloroethane	BDL	1.0
Tetrachloroethene	BDL	1.0
1,1,1-Trichloroethane	BDL	1.0
1,1,2-Trichloroethane	BDL	1.0
Trichloroethene	BDL	1.0
Toluene	BDL	2.0
Vinyl Chloride	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE III - VOLATILE ORGANIC RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #3
OHM SAMPLE NO: 2801-03

Compound Name	Concentration ug/l	Detection Limit ug/l
Benzene	BDL	1.0
Bromomethane	BDL	1.0
Bromodichloromethane	BDL	1.0
Bromoform	BDL	1.0
Carbon Tetrachloride	BDL	1.0
Chlorobenzene	BDL	1.0
Chloroethane	BDL	1.0
2-Chloroethylvinyl ether	BDL	1.0
Chloroform	BDL	1.0
Chloromethane	BDL	1.0
Dibromochloromethane	BDL	1.0
1,1-Dichloroethane	BDL	1.0
1,2-Dichloroethane	BDL	1.0
1,1-Dichloroethene	BDL	1.0
Trans-1,2-Dichloroethene	BDL	1.0
1,2-Dichloropropane	BDL	1.0
Cis-1,3-Dichloropropene	BDL	1.0
Trans-1,3-Dichloropropene	BDL	1.0
Ethylbenzene	BDL	1.0
Methylene Chloride	BDL	10.0
1,1,2,2-Tetrachloroethane	BDL	1.0
Tetrachloroethene	BDL	1.0
1,1,1-Trichloroethane	BDL	1.0
1,1,2-Trichloroethane	BDL	1.0
Trichloroethene	BDL	1.0
Toluene	BDL	2.0
Vinyl Chloride	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE III - VOLATILE ORGANIC RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #4
OHM SAMPLE NO: 2801-04

Compound Name	Concentration ug/l	Detection Limit ug/l
Benzene	BDL	1.0
Bromomethane	BDL	1.0
Bromodichloromethane	BDL	1.0
Bromoform	BDL	1.0
Carbon Tetrachloride	BDL	1.0
Chlorobenzene	BDL	1.0
Chloroethane	BDL	1.0
2-Chloroethylvinyl ether	BDL	1.0
Chloroform	BDL	1.0
Chloromethane	BDL	1.0
Dibromochloromethane	BDL	1.0
1,1-Dichloroethane	BDL	1.0
1,2-Dichloroethane	BDL	1.0
1,1-Dichloroethene	BDL	1.0
Trans-1,2-Dichloroethene	BDL	1.0
1,2-Dichloropropane	BDL	1.0
Cis-1,3-Dichloropropene	BDL	1.0
Trans-1,3-Dichloropropene	BDL	1.0
Ethylbenzene	BDL	1.0
Methylene Chloride	BDL	10.0
1,1,2,2-Tetrachloroethane	BDL	1.0
Tetrachloroethene	BDL	1.0
1,1,1-Trichloroethane	BDL	1.0
1,1,2-Trichloroethane	BDL	1.0
Trichloroethene	BDL	1.0
Toluene	BDL	2.0
Vinyl Chloride	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE III - VOLATILE ORGANIC RESULTS

SAMPLE IDENTIFIER: Water Travel Blank
OHM SAMPLE NO: 2801-05

Compound Name	Concentration ug/l	Detection Limit ug/l
Benzene	BDL	1.0
Bromomethane	BDL	1.0
Bromodichloromethane	BDL	1.0
Bromoform	BDL	1.0
Carbon Tetrachloride	BDL	1.0
Chlorobenzene	BDL	1.0
Chloroethane	BDL	1.0
2-Chloroethylvinyl ether	BDL	1.0
Chloroform	BDL	1.0
Chloromethane	BDL	1.0
Dibromochloromethane	BDL	1.0
1,1-Dichloroethane	BDL	1.0
1,2-Dichloroethane	BDL	1.0
1,1-Dichloroethene	BDL	1.0
Trans-1,2-Dichloroethene	BDL	1.0
1,2-Dichloropropane	BDL	1.0
Cis-1,3-Dichloropropene	BDL	1.0
Trans-1,3-Dichloropropene	BDL	1.0
Ethylbenzene	BDL	1.0
Methylene Chloride	BDL	10.0
1,1,2,2-Tetrachloroethane	BDL	1.0
Tetrachloroethene	BDL	1.0
1,1,1-Trichloroethane	BDL	1.0
1,1,2-Trichloroethane	BDL	1.0
Trichloroethene	BDL	1.0
Toluene	BDL	2.0
Vinyl Chloride	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE IV - ACID EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #1
OHM SAMPLE NO: 2801-01

Compound Name	Concentration ug/l	Detection Limit ug/l
4-Chloro-3-Methylphenol	BDL	1.0
2-Chlorophenol	BDL	1.0
2,4-Dichlorophenol	BDL	1.0
2,4-Dimethylphenol	BDL	1.0
2,4-Dinitrophenol	BDL	1.0
2-Methyl-4,6-Dinitrophenol	BDL	1.0
2-Nitrophenol	BDL	1.0
4-Nitrophenol	BDL	1.0
Pentachlorophenol	BDL	1.0
Phenol	BDL	1.0
2,4,6-Trichlorophenol	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE IV - ACID EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #2
OHM SAMPLE NO: 2801-02

Compound Name	Concentration ug/l	Detection Limit ug/l
4-Chloro-3-Methylphenol	BDL	1.0
2-Chlorophenol	BDL	1.0
2,4-Dichlorophenol	BDL	1.0
2,4-Dimethylphenol	BDL	1.0
2,4-Dinitrophenol	BDL	1.0
2-Methyl-4,6-Dinitrophenol	BDL	1.0
2-Nitrophenol	BDL	1.0
4-Nitrophenol	BDL	1.0
Pentachlorophenol	BDL	1.0
Phenol	BDL	1.0
2,4,6-Trichlorophenol	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE IV - ACID EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #3
OHM SAMPLE NO: 2801-03

Compound Name	Concentration ug/l	Detection Limit ug/l
4-Chloro-3-Methylphenol	BDL	1.0
2-Chlorophenol	BDL	1.0
2,4-Dichlorophenol	BDL	1.0
2,4-Dimethylphenol	BDL	1.0
2,4-Dinitrophenol	BDL	1.0
2-Methyl-4,6-Dinitrophenol	BDL	1.0
2-Nitrophenol	BDL	1.0
4-Nitrophenol	BDL	1.0
Pentachlorophenol	BDL	1.0
Phenol	BDL	1.0
2,4,6-Trichlorophenol	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE IV - ACID EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #4
OHM SAMPLE NO: 2801-04

Compound Name	Concentration ug/l	Detection Limit ug/l
4-Chloro-3-Methylphenol	BDL	1.0
2-Chlorophenol	BDL	1.0
2,4-Dichlorophenol	BDL	1.0
2,4-Dimethylphenol	BDL	1.0
2,4-Dinitrophenol	BDL	1.0
2-Methyl-4,6-Dinitrophenol	BDL	1.0
2-Nitrophenol	BDL	1.0
4-Nitrophenol	BDL	1.0
Pentachlorophenol	BDL	1.0
Phenol	BDL	1.0
2,4,6-Trichlorophenol	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE IV - ACID EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Solid; Asbestos Pile at 6'
OHM SAMPLE NO: 2801-PS1B

Compound Name	Concentration mg/kg	Detection Limit mg/kg
4-Chloro-3-Methylphenol	BDL	0.5
2-Chlorophenol	BDL	0.5
2,4-Dichlorophenol	BDL	0.5
2,4-Dimethylphenol	BDL	0.5
2,4-Dinitrophenol	BDL	0.5
2-Methyl-4,6-Dinitrophenol	BDL	0.5
2-Nitrophenol	BDL	0.5
4-Nitrophenol	BDL	0.5
Pentachlorophenol	BDL	0.5
Phenol	BDL	0.5
2,4,6-Trichlorophenol	BDL	0.5

mg/kg = ppm (parts-per-million)
BDL = Below Detection Limit

PROJECT 2801
TABLE IV - ACID EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Soil Sample
OHM SAMPLE NO: 2801-SS01

Compound Name	Concentration mg/kg	Detection Limit mg/kg
4-Chloro-3-Methylphenol	BDL	0.5
2-Chlorophenol	BDL	0.5
2,4-Dichlorophenol	BDL	0.5
2,4-Dimethylphenol	BDL	0.5
2,4-Dinitrophenol	BDL	0.5
2-Methyl-4,6-Dinitrophenol	BDL	0.5
2-Nitrophenol	BDL	0.5
4-Nitrophenol	BDL	0.5
Pentachlorophenol	BDL	0.5
Phenol	4.0	0.5
2,4,6-Trichlorophenol	BDL	0.5

mg/kg = ppm (parts-per-million)
BDL = Below Detection Limit

PROJECT 2801 - TABLE V - BASE/NEUTRAL EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #1
OHM SAMPLE NO: 2801-01

Compound Name	Concentration ug/l	Detection Limit ug/l
Acenaphthene	BDL	1.0
Acenaphthylene	BDL	1.0
Anthracene	BDL	1.0
Benzo(a)anthracene	BDL	1.0
Benzo(b)fluoranthene	BDL	1.0
Benzo(k)fluoranthene	BDL	1.0
Benzo(a)pyrene	BDL	1.0
Benzo(g,h,i)perylene	BDL	1.0
Benzidine	BDL	1.0
Bis(2-chloroethyl)ether	BDL	1.0
Bis(2-chloroethoxy)methane	BDL	1.0
Bis(2-ethylhexyl)phthalate	258	1.0
Bis(2-chloroisopropyl)ether	BDL	1.0
4-Bromophenyl phenyl ether	BDL	1.0
Butyl benzyl phthalate	BDL	1.0
2-Chloronaphthalene	BDL	1.0
4-Chlorophenyl phenyl ether	BDL	1.0
Chrysene	BDL	1.0
Dibenzo(a,h)anthracene	BDL	1.0
Di-n-butylphthalate	BDL	1.0
1,3-Dichlorobenzene	BDL	1.0
1,4-Dichlorobenzene	BDL	1.0
1,2-Dichlorobenzene	BDL	1.0
3,3-Dichlorobenzidine	BDL	1.0
Diethylphthalate	BDL	1.0
Dimethylphthalate	BDL	1.0
2,4-Dinitrotoluene	BDL	1.0
2,6-Dinitrotoluene	BDL	1.0
Dioctylphthalate	BDL	1.0
1,2-Diphenyl hydrazine	BDL	1.0
Fluoranthene	BDL	1.0
Fluorene	BDL	1.0
Hexachlorobenzene	BDL	1.0
Hexachlorobutadiene	BDL	1.0
Hexachloroethane	BDL	1.0
Hexachlorocyclopentadiene	BDL	1.0
Indeno-(1,2,3-cd)pyrene	BDL	1.0
Isophorone	BDL	1.0
Naphthalene	BDL	1.0
Nitrobenzene	BDL	1.0
N-Nitrosodimethylamine	BDL	1.0
N-Nitrosodi-n-propylamine	BDL	1.0
N-Nitrosodiphenylamine	BDL	1.0
Phenanthrene	BDL	1.0
Pyrene	BDL	1.0
1,2,4-Trichlorobenzene	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801 - TABLE V - BASE/NEUTRAL EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #2
OHM SAMPLE NO: 2801-02

Compound Name	Concentration ug/l	Detection Limit ug/l
Acenaphthene	BDL	1.0
Acenaphthylene	BDL	1.0
Anthracene	BDL	1.0
Benzo(a)anthracene	BDL	1.0
Benzo(b)fluoranthene	BDL	1.0
Benzo(k)fluoranthene	BDL	1.0
Benzo(a)pyrene	BDL	1.0
Benzo(g,h,i)perylene	BDL	1.0
Benzidine	BDL	1.0
Bis(2-chloroethyl)ether	BDL	1.0
Bis(2-chloroethoxy)methane	BDL	1.0
Bis(2-ethylhexyl)phthalate	152	1.0
Bis(2-chloroisopropyl)ether	BDL	1.0
4-Bromophenyl phenyl ether	BDL	1.0
Butyl benzyl phthalate	BDL	1.0
2-Chloronaphthalene	BDL	1.0
4-Chlorophenyl phenyl ether	BDL	1.0
Chrysene	BDL	1.0
Dibenzo(a,h)anthracene	BDL	1.0
Di-n-butylphthalate	BDL	1.0
1,3-Dichlorobenzene	BDL	1.0
1,4-Dichlorobenzene	BDL	1.0
1,2-Dichlorobenzene	BDL	1.0
3,3-Dichlorobenzidine	BDL	1.0
Diethylphthalate	BDL	1.0
Dimethylphthalate	BDL	1.0
2,4-Dinitrotoluene	BDL	1.0
2,6-Dinitrotoluene	BDL	1.0
Dioctylphthalate	BDL	1.0
1,2-Diphenyl hydrazine	BDL	1.0
Fluoranthene	BDL	1.0
Fluorene	BDL	1.0
Hexachlorobenzene	BDL	1.0
Hexachlorobutadiene	BDL	1.0
Hexachloroethane	BDL	1.0
Hexachlorocyclopentadiene	BDL	1.0
Indeno-(1,2,3-cd)pyrene	BDL	1.0
Isophorone	BDL	1.0
Naphthalene	BDL	1.0
Nitrobenzene	BDL	1.0
N-Nitrosodimethylamine	BDL	1.0
N-Nitrosodi-n-propylamine	BDL	1.0
N-Nitrosodiphenylamine	BDL	1.0
Phenanthrene	BDL	1.0
Pyrene	BDL	1.0
1,2,4-Trichlorobenzene	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801 - TABLE V - BASE/NEUTRAL EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #3
OHM SAMPLE NO: 2801-03

Compound Name	Concentration ug/l	Detection Limit ug/l
Acenaphthene	BDL	1.0
Acenaphthylene	BDL	1.0
Anthracene	BDL	1.0
Benzo(a)anthracene	BDL	1.0
Benzo(b)fluoranthene	BDL	1.0
Benzo(k)fluoranthene	BDL	1.0
Benzo(a)pyrene	BDL	1.0
Benzo(g,h,i)perylene	BDL	1.0
Benzidine	BDL	1.0
Bis(2-chloroethyl)ether	BDL	1.0
Bis(2-chloroethoxy)methane	BDL	1.0
Bis(2-ethylhexyl)phthalate	115	1.0
Bis(2-chloroisopropyl)ether	BDL	1.0
4-Bromophenyl phenyl ether	BDL	1.0
Butyl benzyl phthalate	BDL	1.0
2-Chloronaphthalene	BDL	1.0
4-Chlorophenyl phenyl ether	BDL	1.0
Chrysene	BDL	1.0
Dibenzo(a,h)anthracene	BDL	1.0
Di-n-butylphthalate	BDL	1.0
1,3-Dichlorobenzene	BDL	1.0
1,4-Dichlorobenzene	BDL	1.0
1,2-Dichlorobenzene	BDL	1.0
3,3-Dichlorobenzidine	BDL	1.0
Diethylphthalate	BDL	1.0
Dimethylphthalate	BDL	1.0
2,4-Dinitrotoluene	BDL	1.0
2,6-Dinitrotoluene	BDL	1.0
Dioctylphthalate	BDL	1.0
1,2-Diphenyl hydrazine	BDL	1.0
Fluoranthene	BDL	1.0
Fluorene	BDL	1.0
Hexachlorobenzene	BDL	1.0
Hexachlorobutadiene	BDL	1.0
Hexachloroethane	BDL	1.0
Hexachlorocyclopentadiene	BDL	1.0
Indeno-(1,2,3-cd)pyrene	BDL	1.0
Isophorone	BDL	1.0
Naphthalene	BDL	1.0
Nitrobenzene	BDL	1.0
N-Nitrosodimethylamine	BDL	1.0
N-Nitrosodi-n-propylamine	BDL	1.0
N-Nitrosodiphenylamine	BDL	1.0
Phenanthrene	BDL	1.0
Pyrene	BDL	1.0
1,2,4-Trichlorobenzene	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801 - TABLE V - BASE/NEUTRAL EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #4
OHM SAMPLE NO: 2801-04

Compound Name	Concentration ug/l	Detection Limit ug/l
Acenaphthene	BDL	1.0
Acenaphthylene	BDL	1.0
Anthracene	BDL	1.0
Benzo(a)anthracene	BDL	1.0
Benzo(b)fluoranthene	BDL	1.0
Benzo(k)fluoranthene	BDL	1.0
Benzo(a)pyrene	BDL	1.0
Benzo(g,h,i)perylene	BDL	1.0
Benzidine	BDL	1.0
Bis(2-chloroethyl)ether	BDL	1.0
Bis(2-chloroethoxy)methane	BDL	1.0
Bis(2-ethylhexyl)phthalate	241	1.0
Bis(2-chloroisopropyl)ether	BDL	1.0
4-Bromophenyl phenyl ether	BDL	1.0
Butyl benzyl phthalate	BDL	1.0
2-Chloronaphthalene	BDL	1.0
4-Chlorophenyl phenyl ether	BDL	1.0
Chrysene	BDL	1.0
Dibenzo(a,h)anthracene	BDL	1.0
Di-n-butylphthalate	BDL	1.0
1,3-Dichlorobenzene	BDL	1.0
1,4-Dichlorobenzene	BDL	1.0
1,2-Dichlorobenzene	BDL	1.0
3,3-Dichlorobenzidine	BDL	1.0
Diethylphthalate	BDL	1.0
Dimethylphthalate	BDL	1.0
2,4-Dinitrotoluene	BDL	1.0
2,6-Dinitrotoluene	BDL	1.0
Dioctylphthalate	3.3	1.0
1,2-Diphenyl hydrazine	BDL	1.0
Fluoranthene	BDL	1.0
Fluorene	BDL	1.0
Hexachlorobenzene	BDL	1.0
Hexachlorobutadiene	BDL	1.0
Hexachloroethane	BDL	1.0
Hexachlorocyclopentadiene	BDL	1.0
Indeno-(1,2,3-cd)pyrene	BDL	1.0
Isophorone	BDL	1.0
Naphthalene	BDL	1.0
Nitrobenzene	BDL	1.0
N-Nitrosodimethylamine	BDL	1.0
N-Nitrosodi-n-propylamine	BDL	1.0
N-Nitrosodiphenylamine	BDL	1.0
Phenanthrene	BDL	1.0
Pyrene	BDL	1.0
1,2,4-Trichlorobenzene	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801 - TABLE V - BASE/NEUTRAL EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Asbestos Pile at 6'
OHM SAMPLE NO: 2801-PS1B

Compound Name	Concentration mg/kg	Detection Limit mg/kg
Acenaphthene	BDL	0.5
Acenaphthylene	BDL	0.5
Anthracene	BDL	0.5
Benzo(a)anthracene	BDL	0.5
Benzo(b)fluoranthene	BDL	0.5
Benzo(k)fluoranthene	BDL	0.5
Benzo(a)pyrene	BDL	0.5
Benzo(g,h,i)perylene	BDL	0.5
Benzidine	BDL	0.5
Bis(2-chloroethyl)ether	BDL	0.5
Bis(2-chloroethoxy)methane	BDL	0.5
Bis(2-ethylhexyl)phthalate	0.5	0.5
Bis(2-chloroisopropyl)ether	BDL	0.5
4-Bromophenyl phenyl ether	BDL	0.5
Butyl benzyl phthalate	BDL	0.5
2-Chloronaphthalene	BDL	0.5
4-Chlorophenyl phenyl ether	BDL	0.5
Chrysene	BDL	0.5
Dibenzo(a,h)anthracene	BDL	0.5
Di-n-butylphthalate	BDL	0.5
1,3-Dichlorobenzene	BDL	0.5
1,4-Dichlorobenzene	BDL	0.5
1,2-Dichlorobenzene	BDL	0.5
3,3-Dichlorobenzidine	BDL	0.5
Diethylphthalate	BDL	0.5
Dimethylphthalate	BDL	0.5
2,4-Dinitrotoluene	BDL	0.5
2,6-Dinitrotoluene	BDL	0.5
Dioctylphthalate	BDL	0.5
1,2-Diphenyl hydrazine	BDL	0.5
Fluoranthene	BDL	0.5
Fluorene	BDL	0.5
Hexachlorobenzene	BDL	0.5
Hexachlorobutadiene	BDL	0.5
Hexachloroethane	BDL	0.5
Hexachlorocyclopentadiene	BDL	0.5
Indeno-(1,2,3-cd)pyrene	BDL	0.5
Isophorone	BDL	0.5
Naphthalene	BDL	0.5
Nitrobenzene	BDL	0.5
N-Nitrosodimethylamine	BDL	0.5
N-Nitrosodi-n-propylamine	BDL	0.5
N-Nitrosodiphenylamine	BDL	0.5
Phenanthrene	1.0	0.5
Pyrene	BDL	0.5
1,2,4-Trichlorobenzene	BDL	0.5

mg/kg = ppm (parts-per-million)
BDL = Below Detection Limit

PROJECT 2801 - TABLE V - BASE/NEUTRAL EXTRACTABLE RESULTS

SAMPLE IDENTIFIER: Soil Sample
OHM SAMPLE NO: 2801-SS01

Compound Name	Concentration mg/kg	Detection Limit mg/kg
Acenaphthene	4.8	0.5
Acenaphthylene	BDL	0.5
Anthracene	8.6	0.5
Benzo(a)anthracene	10.4	0.5
Benzo(b)fluoranthene	11.3	0.5
Benzo(k)fluoranthene	BDL	0.5
Benzo(a)pyrene	2.2	0.5
Benzo(g,h,i)perylene	BDL	0.5
Benzidine	BDL	0.5
Bis(2-chloroethyl)ether	BDL	0.5
Bis(2-chloroethoxy)methane	BDL	0.5
Bis(2-ethylhexyl)phthalate	BDL	0.5
Bis(2-chloroisopropyl)ether	BDL	0.5
4-Bromophenyl phenyl ether	BDL	0.5
Butyl benzyl phthalate	BDL	0.5
2-Chloronaphthalene	BDL	0.5
4-Chlorophenyl phenyl ether	BDL	0.5
Chrysene	10.4	0.5
Dibenzo(a,h)anthracene	BDL	0.5
Di-n-butylphthalate	BDL	0.5
1,3-Dichlorobenzene	BDL	0.5
1,4-Dichlorobenzene	BDL	0.5
1,2-Dichlorobenzene	BDL	0.5
3,3-Dichlorobenzidine	BDL	0.5
Diethylphthalate	BDL	0.5
Dimethylphthalate	BDL	0.5
2,4-Dinitrotoluene	BDL	0.5
2,6-Dinitrotoluene	BDL	0.5
Dioctylphthalate	BDL	0.5
1,2-Diphenyl hydrazine	BDL	0.5
Fluoranthene	21.9	0.5
Fluorene	7.0	0.5
Hexachlorobenzene	BDL	0.5
Hexachlorobutadiene	BDL	0.5
Hexachloroethane	BDL	0.5
Hexachlorocyclopentadiene	BDL	0.5
Indeno-(1,2,3-cd)pyrene	BDL	0.5
Isophorone	BDL	0.5
Naphthalene	19.1	0.5
Nitrobenzene	BDL	0.5
N-Nitrosodimethylamine	BDL	0.5
N-Nitrosodi-n-propylamine	BDL	0.5
N-Nitrosodiphenylamine	BDL	0.5
Phenanthrene	40.6	0.5
Pyrene	14.5	0.5
1,2,4-Trichlorobenzene	BDL	0.5

mg/kg = ppm (parts-per-million)
BDL = Below Detection Limit

PROJECT 2801
TABLE VI - PESTICIDES AND PCB RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #1
OHM SAMPLE NO: 2801-01

Compound Name	Concentration ug/l	Detection Limit ug/l
PESTICIDES		
Aldrin	BDL	1.0
BHC-alpha	BDL	1.0
BHC-beta	BDL	1.0
BHC-gamma	BDL	1.0
BHC-delta	BDL	1.0
Chlordane	BDL	1.0
4,4'-DDD	BDL	1.0
4,4'-DDE	BDL	1.0
4,4'-DDT	BDL	1.0
Dieldrin	BDL	1.0
Endosulfan-alpha	BDL	1.0
Endosulfan-beta	BDL	1.0
Endosulfan Sulfate	BDL	1.0
Endrin	BDL	1.0
Endrin Aldehyde	BDL	1.0
Heptachlor	BDL	1.0
Heptachlor Epoxide	BDL	1.0
Toxaphene	BDL	1.0
POLYCHLORINATED BIPHENYLS		
Aroclor 1016	BDL	1.0
Aroclor 1221	BDL	1.0
Aroclor 1232	BDL	1.0
Aroclor 1242	BDL	1.0
Aroclor 1248	BDL	1.0
Aroclor 1254	BDL	1.0
Aroclor 1260	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE VI - PESTICIDES AND PCB RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #2
OHM SAMPLE NO: 2801-02

Compound Name	Concentration ug/l	Detection Limit ug/l
PESTICIDES		
Aldrin	BDL	1.0
BHC-alpha	BDL	1.0
BHC-beta	BDL	1.0
BHC-gamma	BDL	1.0
BHC-delta	BDL	1.0
Chlordane	BDL	1.0
4,4'-DDD	BDL	1.0
4,4'-DDE	BDL	1.0
4,4'-DDT	BDL	1.0
Dieldrin	BDL	1.0
Endosulfan-alpha	BDL	1.0
Endosulfan-beta	BDL	1.0
Endosulfan Sulfate	BDL	1.0
Endrin	BDL	1.0
Endrin Aldehyde	BDL	1.0
Heptachlor	BDL	1.0
Heptachlor Epoxide	BDL	1.0
Toxaphene	BDL	1.0
POLYCHLORINATED BIPHENYLS		
Aroclor 1016	BDL	1.0
Aroclor 1221	BDL	1.0
Aroclor 1232	BDL	1.0
Aroclor 1242	BDL	1.0
Aroclor 1248	BDL	1.0
Aroclor 1254	BDL	1.0
Aroclor 1260	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE VI - PESTICIDES AND PCB RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #3
OHM SAMPLE NO: 2801-03

Compound Name	Concentration ug/l	Detection Limit ug/l
PESTICIDES		
Aldrin	BDL	1.0
BHC-alpha	BDL	1.0
BHC-beta	BDL	1.0
BHC-gamma	BDL	1.0
BHC-delta	BDL	1.0
Chlordane	BDL	1.0
4,4'-DDD	BDL	1.0
4,4'-DDE	BDL	1.0
4,4'-DDT	BDL	1.0
Dieldrin	BDL	1.0
Endosulfan-alpha	BDL	1.0
Endosulfan-beta	BDL	1.0
Endosulfan Sulfate	BDL	1.0
Endrin	BDL	1.0
Endrin Aldehyde	BDL	1.0
Heptachlor	BDL	1.0
Heptachlor Epoxide	BDL	1.0
Toxaphene	BDL	1.0
POLYCHLORINATED BIPHENYLS		
Aroclor 1016	BDL	1.0
Aroclor 1221	BDL	1.0
Aroclor 1232	BDL	1.0
Aroclor 1242	BDL	1.0
Aroclor 1248	BDL	1.0
Aroclor 1254	BDL	1.0
Aroclor 1260	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE VI - PESTICIDES AND PCB RESULTS

SAMPLE IDENTIFIER: Water Monitor Well #4
OHM SAMPLE NO: 2801-04

Compound Name	Concentration ug/l	Detection Limit ug/l
PESTICIDES		
Aldrin	BDL	1.0
BHC-alpha	BDL	1.0
BHC-beta	BDL	1.0
BHC-gamma	BDL	1.0
BHC-delta	BDL	1.0
Chlordane	BDL	1.0
4,4'-DDD	BDL	1.0
4,4'-DDE	BDL	1.0
4,4'-DDT	BDL	1.0
Dieldrin	BDL	1.0
Endosulfan-alpha	BDL	1.0
Endosulfan-beta	BDL	1.0
Endosulfan Sulfate	BDL	1.0
Endrin	BDL	1.0
Endrin Aldehyde	BDL	1.0
Heptachlor	BDL	1.0
Heptachlor Epoxide	BDL	1.0
Toxaphene	BDL	1.0
POLYCHLORINATED BIPHENYLS		
Aroclor 1016	BDL	1.0
Aroclor 1221	BDL	1.0
Aroclor 1232	BDL	1.0
Aroclor 1242	BDL	1.0
Aroclor 1248	BDL	1.0
Aroclor 1254	BDL	1.0
Aroclor 1260	BDL	1.0

ug/l = ppb (parts-per-billion)
BDL = Below Detection Limit

PROJECT 2801
TABLE VI - PESTICIDES AND PCB RESULTS

SAMPLE IDENTIFIER: Asbestos Pile sample at 6'
OHM SAMPLE NO: 2801-PS1B

Compound Name	Concentration mg/kg	Detection Limit mg/kg
PESTICIDES		
Aldrin	BDL	0.5
BHC-alpha	BDL	0.5
BHC-beta	BDL	0.5
BHC-gamma	BDL	0.5
BHC-delta	BDL	0.5
Chlordane	BDL	0.5
4,4'-DDD	BDL	0.5
4,4'-DDE	BDL	0.5
4,4'-DDT	BDL	0.5
Dieldrin	BDL	0.5
Endosulfan-alpha	BDL	0.5
Endosulfan-beta	BDL	0.5
Endosulfan Sulfate	BDL	0.5
Endrin	BDL	0.5
Endrin Aldehyde	BDL	0.5
Heptachlor	BDL	0.5
Heptachlor Epoxide	BDL	0.5
Toxaphene	BDL	0.5
POLYCHLORINATED BIPHENYLS		
Aroclor 1016	BDL	0.5
Aroclor 1221	BDL	0.5
Aroclor 1232	BDL	0.5
Aroclor 1242	BDL	0.5
Aroclor 1248	BDL	0.5
Aroclor 1254	BDL	0.5
Aroclor 1260	BDL	0.5

mg/kg = ppm (parts-per-million)
BDL = Below Detection Limit

PROJECT 2801
TABLE VI - PESTICIDES AND PCB RESULTS

SAMPLE IDENTIFIER: Soil Sample
OHM SAMPLE NO: 2801-SS-01

Compound Name	Concentration mg/l	Detection Limit mg/kg
PESTICIDES		
Aldrin	BDL	0.5
BHC-alpha	BDL	0.5
BHC-beta	BDL	0.5
BHC-gamma	BDL	0.5
BHC-delta	BDL	0.5
Chlordane	BDL	0.5
4,4'-DDD	BDL	0.5
4,4'-DDE	BDL	0.5
4,4'-DDT	BDL	0.5
Dieldrin	BDL	0.5
Endosulfan-alpha	BDL	0.5
Endosulfan-beta	BDL	0.5
Endosulfan Sulfate	BDL	0.5
Endrin	BDL	0.5
Endrin Aldehyde	BDL	0.5
Heptachlor	BDL	0.5
Heptachlor Epoxide	BDL	0.5
Toxaphene	BDL	0.5
POLYCHLORINATED BIPHENYLS		
Aroclor 1016	BDL	0.5
Aroclor 1221	BDL	0.5
Aroclor 1232	BDL	0.5
Aroclor 1242	BDL	0.5
Aroclor 1248	BDL	0.5
Aroclor 1254	BDL	0.5
Aroclor 1260	BDL	0.5

mg/kg = ppm (parts-per-million)
BDL = Below Detection Limit

PROJECT 2801

TABLE VII - GC/MS SCREEN RESULTS

SAMPLE IDENTIFIER: Liquid Sample
OHM SAMPLE NO: 2801-TS01

COMPOUND	ESTIMATED CONCENTRATION mg/l
Alkyl Substituted Cyclohexanes	5925
Other Allylcyclic Compounds	1150
Alkyl Benzenes	19,465
Alkyl Substituted Napthalene	128.5
Short to Medium Chain (C_6-C_{15}) Saturated + unsaturated Aliphatic Hydrocarbons	28,679

mg/l = ppm (parts-per-million)
Limit of Detection 10 mg/l

PROJECT 2801

TABLE VII - GC/MS SCREEN RESULTS

SAMPLE IDENTIFIER: Liquid Sample
OHM SAMPLE NO: 2801-TS02

COMPOUND	ESTIMATED CONCENTRATION mg/l
Alkyl Substituted Cyclohexanes	3,095
Alkyl Benzenes	515
Short to Medium Chain (C_6-C_{15}) Saturated + unsaturated Aliphatic Hydrocarbons	25,862

mg/l = ppm (parts-per-million)
Limit of Detection = 10.0 mg/l

PROJECT 2801

TABLE VII - GC/MS SCREEN RESULTS

SAMPLE IDENTIFIER: Liquid Sample
OHM SAMPLE NO: 2801-TS-2A

COMPOUND	ESTIMATED CONCENTRATION mg/l
Alkyl Substituted Cyclohexanes	1447
Alkyl Benzenes	500
Short to Medium (C_6-C_{15}) Saturated + Unsaturated Aliphatic Hydrocarbons	19,094

mg/l = ppm (parts-per-million)
Limit of Detection = 10.0 mg/l

PROJECT 2801

TABLE VII - GC/MS SCREEN RESULTS

SAMPLE IDENTIFIER: Liquid Sample
OHM SAMPLE NO: 2801-TS-03

COMPOUND	ESTIMATED CONCENTRATION mg/l
No Compounds Detected	

mg/l = ppm (parts-per-million)
Limit of Detection = 10.0 mg/l

PROJECT 2801

TABLE VII - GC/MS SCREEN RESULTS

SAMPLE IDENTIFIER: Liquid Sample
OHM SAMPLE NO: 2801-TS-04

COMPOUND	ESTIMATED CONCENTRATION mg/l
Alkyl Substituted Naphthalene	33.0
Short to Medium Chain (C_6-C_{15}) Saturated + Unsaturated Aliphatic Hydrocarbons	367

mg/l = ppm (parts-per-million)
Limit of Detection = 10.0 mg/l

PROJECT 2801

TABLE VII - GC/MS SCREEN RESULTS

SAMPLE IDENTIFIER: Liquid Sample
OHM SAMPLE NO: 2801-TS-05

COMPOUND	ESTIMATED CONCENTRATION mg/l
Alkyl Benzenes	37.6

mg/l = ppm (parts-per-million)
Limit of Detection = 10.0 mg/l

The Environmental Services Company
Findlay, Ohio 45839-0551
Phone (419) 423-3526

NO. 12933

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NO	PROJECT NUMBER
Paulding, Ohio			2801

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CHECK 1	2	3	4	5	6
1	2801-01	2-40 ml vials 2-1 Qt jars	Water, Monitor Well #1, 6-15-85, 1430 RS/SK	✓					
2	2801-02	2-40 ml vials 2-1 Qt jars	Water, Monitor Well #2, 6-15-85 1440 RS/SK	✓					
3	2801-03	2-40 ml vials 2-1 Qt jars	Water, Monitor Well #3, 6-15-85 1445 RS/SK	✓					
4	2801-04	2-40 ml vials 2-1 Qt jars	Water, Monitor Well #4, 6-15-85, 1450 RS/SK	✓					
5	2801-05	1-40 ml vial 1-1 Qt jar	Water, Travel Blank, 6-15-85 1500 RS/SK	✓					

Person Responsible for sample	Affiliation	Date	Time
D. Winegardner	OHM		

Purpose of analysis (use back of front sheet if necessary)

~~GC/MS Screen~~
Priority Poll. Org

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME
1	1-5	Robert H. Seel	Gary Gallelli Jr	6/17/85	1815
2					
3					
4					
5					
6					

CHEM
The Environmental Services Company
Findlay, Ohio 45839-0551
Phone (419) 423-3526

N 1c_30

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NO	PROJECT NUMBER
Paulding, OH			2801

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CHECK 1	2	3	4	5	6
1	SS-01	1- Qt jar	Soil sample	✓	✓				
2	SS-02	"	"	✓	✓				
3	SS-03	"	"	✓	✓				
4	SS-04	"	"	✓	✓				
5	SS-05	"	"	✓	✓				
6	SS-06	"	"	✓	✓				
7	SS-07	"	"	✓	✓				
8	PS1B	1- 8oz jar	Asbestos Pile sample ≈ 6ft	✓	✓				
9	TS-01	1-40ml vial	Water sample	✓	✓				
10	TS-02	"	"	✓	✓				
11	TS-03	"	"	✓	✓				
12	TS-04	"	"	✓	✓				
13	TS-05	"	"	✓	✓				
14	TS-2A	"	"	✓	✓				
15	MW-01	"	"	✓	✓				

Person Responsible for sample	Affiliation	Date	Time
Susan Kliensig			

Purpose of analysis (use back of cont sheet if necessary)
Sample # SS-01 thru SS-07; Cu + Zn
Sample # SS01 → ~~PP organics or screen~~ OK
Sample # PS1B Asbestos Pile – PP Metals, PP organics scan

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME
1	1-15	Susan Kliensig	Sheila J. Umbs	9/6/85	1450
2					
3					
4					
5					
6					

McCrone Environmental Services, Inc.

200 Oakbrook Business Center

5500 Oakbrook Parkway

Norcross, Georgia 30093

Telephone: 404/449-8461

TRANSMITTAL OF SAMPLE RESULTS

Date: 06/28/85 ME Project No.: ME-1770

To: O.H. Materials Company

3000 Northwoods Parkway, Suite 220

Norcross GA 30071

Attention: Ms. Susan Klinzing Title:

and/or: Title:

Distribution: 2 Copies: O.H. Materials Company

Copies:

Samples Received: 06/11/85 Quantity: 38 Quantity:

Re: Job No. 2801

Client Information: SAMPLES ANALYZED BY POLARIZED LIGHT MICROSCOPY (PLM) COUPLED WITH DISPERSION STAINING

==========

Microscopist(s): Jeremy A. Armstrong Thomas G. Laubenthal

Ralph F. Crawford

==========

COMMENTS

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 01 M.E. Sample I.D. No. : 11106

Gross Visual Description : Grey, Powdery Material

ASBESTOS MINERALS:						Estimated Percentage
1 . Chrysotile						
2 . Amosite						
3 . Crocidolite						
4 . Anthophyllite						
5 . Tremolite/Actinolite						
			Asbestos Total			none detected
Cellulose Paper/Wood Fibers	-	-	-	-	-	25
Glass Fibers						
Mineral Wool Fibers						
Perlite						
Mica	-	-	-	-	-	25
Binders	-	-	-	-	-	25
Others						
Gypsum	-	-	-	-	-	10
Granular Minerals	-	-	-	-	-	10
Synthetic Fibers	-	-	-	-	-	5
				Total		100

Comments :

Paint found in sample; paint included in binder percentage
Paints found in sample are grey, white and tan

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 02 M.E. Sample I.D. No. : 11107

Gross Visual Description : Grey, Powdery Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected
Cellulose	
Paper/Wood Fibers	
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	2
Binders	
Others	
Granular Material	90
Granular Minerals	5
Hair	3
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Thomas G. Laubenthal

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 03 M.E. Sample I.D. No. : 11108

Gross Visual Description : Grey, Fibrous Powder

ASBESTOS MINERALS: Estimated Percentage

1 . Chrysotile
2 . Amosite
3 . Crocidolite
4 . Anthophyllite
5 . Tremolite/Actinolite

Asbestos Total none detected

Cellulose Paper/Wood Fibers	-	-	-	-	-	25
Glass Fibers Mineral Wool Fibers	-	-	-	-	-	10
Perlite Mica	-	-	-	-	-	30
Binders	-	-	-	-	-	15
Others Granular Minerals	-	-	-	-	-	20
				Total		100

Comments :

Paint found in sample; paint included in binder percentage
Paints found in sample are tan and white

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 04 M.E. Sample I.D. No. : 11109

Gross Visual Description : Grey, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected
Cellulose Paper/Wood Fibers	3
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	35
Binders	35
Others Granular Minerals	25
Cobwebs & Spiderwebs	2
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

rroject Number : ME-1770 Date analyzed : 06/11/85

roject Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

lient's Sample I.D. : No. 05 M.E. Sample I.D. No. : 11110

Gross Visual Description : Grey, Granular Material

ASBESTOS MINERALS: Estimated Percentage

1 . Chrysotile
2 . Amosite
3 . Crocidolite
4 . Anthophyllite
5 . Tremolite/Actinolite

			Asbestos Total			none detected
Cellulose Paper/Wood Fibers	-	-	-	-	-	10
Glass Fibers						
Mineral Wool Fibers						
Perlite						
Mica	-	-	-	-	-	35
Binders	-	-	-	-	-	25
Others						
Granular Minerals	-	-	-	-	-	25
Synthetic Fibers	-	-	-	-	-	5
				Total		100

Comments :

Paint found in sample; paint included in binder percentage
Paints found in sample are grey and tan

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 06 M.E. Sample I.D. No. : 11111

Gross Visual Description : Brown, Flaky Material

ASBESTOS MINERALS: Estimated Percentage

1. Chrysotile
2. Amosite
3. Crocidolite
4. Anthophyllite
5. Tremolite/Actinolite

Asbestos Total none detected

Cellulose Paper/Wood Fibers	-	-	-	-	-	25
Glass Fibers						
Mineral Wool Fibers						
Perlite						
Mica	-	-	-	-	-	25
Binders	-	-	-	-	-	35
Others						
Feathers	-	-	-	-	-	5
Granular Minerals	-	-	-	-	-	10
				Total		100

Comments :

Paint found in sample; paint included in binder percentage
Paint found in sample is grey

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 07 M.E. Sample I.D. No. : 11112

Gross Visual Description : Grey, Granular Material

ASBESTOS MINERALS: Estimated Percentage

1 . Chrysotile
2 . Amosite
3 . Crocidolite
4 . Anthophyllite
5 . Tremolite/Actinolite

Asbestos Total none detected

Cellulose Paper/Wood Fibers	-	-	-	-	-	15
Glass Fibers Mineral Wool Fibers	-	-	-	-	-	5
Perlite Mica	-	-	-	-	-	25
Binders	-	-	-	-	-	30
Others Granular Minerals	-	-	-	-	-	20
Synthetics	-	-	-	-	-	5
					Total	100

Comments :

Paint found in sample; paint included in binder percentage
Paint found in sample is grey

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 08 M.E. Sample I.D. No. : 11113

Gross Visual Description : Tan, Flaky Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	trace
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	trace detected
Cellulose Paper/Wood Fibers	trace
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	100
Binders	
Others	
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 09 M.E. Sample I.D. No. : 11114

Gross Visual Description : Brown, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected

Cellulose Paper/Wood Fibers	-	-	-	-	-	20
Glass Fibers						
Mineral Wool Fibers						
Perlite						
Mica	-	-	-	-	-	2
Binders	-	-	-	-	-	13
Others						
Granular Minerals	-	-	-	-	-	65
Synthetic Fibers	-	-	-	-	-	trace
				Total		100

Comments :

Paint found in sample; paint included in binder percentage
Paints found in sample are grey and tan

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 10 M.E. Sample I.D. No. : 11115

Gross Visual Description : Grey, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected
Cellulose Paper/Wood Fibers	2
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	3
Binders	15
Others Granular Minerals	80
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 11 M.E. Sample I.D. No. : 11116

Gross Visual Description : Grey, Flaky Powder

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	1
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	1
Cellulose Paper/Wood Fibers	10
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	4
Binders	15
Others	
Granular Minerals	65
Synthetic Fibers	5
Total	100

Comments :

Paint found in sample; paint included in binder percentage
Paints found in sample are yellow and grey

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 12 M.E. Sample I.D. No. : 11117

Gross Visual Description : Grey, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	1
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	1
Cellulose Paper/Wood Fibers	15
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	16
Binders	33
Others Granular Minerals	35
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 13 M.E. Sample I.D. No. : 11118

Gross Visual Description : Grey, Fibrous Powder

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected
Cellulose	
Paper/Wood Fibers - - - - -	15
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica - - - - -	trace
Binders	
Others	
Granular Minerals - - - - -	70
Synthetic Fibers - - - - -	5
Organic Material - - - - -	10
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 14 M.E. Sample I.D. No. : 11119

Gross Visual Description : Grey Powder

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	1
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	1
Cellulose Paper/Wood Fibers	15
Glass Fibers Mineral Wool Fibers	trace
Perlite	
Mica	
Binders	
Others	
Granular Minerals	64
Paint Chips	15
Organic Material	5
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 15 M.E. Sample I.D. No. : 11120

Gross Visual Description : Tan Powder

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	1
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	1
Cellulose Paper/Wood Fibers	20
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	5
Others	
Granular Minerals	53
Paint Chips	20
Synthetic Fibers	1
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 16 M.E. Sample I.D. No. : 11121

Gross Visual Description : Grey, Powdery Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	2
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	2
Cellulose Paper/Wood Fibers	2
Glass Fibers Mineral Wool Fibers	trace
Perlite	
Mica	
Binders	
Others	
Granular Minerals	16
Granular Material	80
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Thomas G. Laubenthal

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 17 M.E. Sample I.D. No. : 11122

Gross Visual Description : Grey, Powdery Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	trace
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	trace detected
Cellulose Paper/Wood Fibers	7
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	15
Others	
Granular Minerals	40
Granular Material	38
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Thomas G. Laubenthal

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 18 M.E. Sample I.D. No. : 11123

Gross Visual Description : White, Fibrous Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	10
2 . Amosite	75
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	85
Cellulose Paper/Wood Fibers	
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	trace
Binders	15
Others	
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Thomas G. Laubenthal

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 19 M.E. Sample I.D. No. : 11124

Gross Visual Description : Grey, Powdery Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	trace
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	trace detected
Cellulose Paper/Wood Fibers	6
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	trace
Binders	
Others	
Granular Material	79
Granular Minerals	15
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Thomas G. Laubenthal

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 20 M.E. Sample I.D. No. : 11125

Gross Visual Description : Grey, Powdery Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected

Cellulose Paper/Wood Fibers	8
Glass Fibers Mineral Wool Fibers	trace
Perlite Mica	trace
Binders	
Others	
Granular Minerals	15
Granular Material	77
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Thomas G. Laubenthal

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 21 M.E. Sample I.D. No. : 11126

Gross Visual Description : Tan, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1. Chrysotile	3
2. Amosite	
3. Crocidolite	
4. Anthophyllite	
5. Tremolite/Actinolite	
Asbestos Total	3
Cellulose Paper/Wood Fibers	10
Glass Fibers Mineral Wool Fibers	2
Perlite	
Mica	
Binders	
Others Granular Minerals	70
Organic Material	15
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 22 M.E. Sample I.D. No. : 11127

Gross Visual Description : Tan, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	1
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	1
Cellulose Paper/Wood Fibers	4
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	20
Others Granular Minerals	75
Total	100

Comments :

Paint found in sample; paint included in binder percentage
Paints found in sample are grey, blue and white

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 23 M.E. Sample I.D. No. : 11128

Gross Visual Description : White, Flaky Powder

ASBESTOS MINERALS:						Estimated Percentage
1 . Chrysotile						
2 . Amosite						
3 . Crocidolite						
4 . Anthophyllite						
5 . Tremolite/Actinolite						
			Asbestos Total			none detected
Cellulose Paper/Wood Fibers	-	-	-	-	-	5
Glass Fibers Mineral Wool Fibers	-	-	-	-	-	2
Perlite						
Mica						
Binders	-	-	-	-	-	50
Others Granular Minerals	-	-	-	-	-	40
Organic Material	-	-	-	-	-	3
				Total		100

Comments :

Paint found in sample; paint included in binder percentage
Paints found in sample are white, yellow and green

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 24 M.E. Sample I.D. No. : 11129

Gross Visual Description : Grey, Granular Powder

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected
Cellulose	
Paper/Wood Fibers	
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	
Others	
Granular Minerals - - - - -	100
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 25 M.E. Sample I.D. No. : 11130

Gross Visual Description : Tan Powder

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	trace
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	trace detected
Cellulose	
Paper/Wood Fibers	10
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	
Others	
Granular Minerals	74
Paint Chips	15
Organic Material	1
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 26 M.E. Sample I.D. No. : 11131

Gross Visual Description : Grey, Fibrous Powder

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	1
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	1
Cellulose Paper/Wood Fibers	20
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	trace
Binders	
Others	
Granular Minerals	56
Paint Chips	20
Hair	3
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 27 M.E. Sample I.D. No. : 11132

Gross Visual Description : Brown, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	2
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	2
Cellulose Paper/Wood Fibers	15
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	50
Others Granular Minerals	33
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 28 M.E. Sample I.D. No. : 11133

Gross Visual Description : Brown, Flaky Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected
Cellulose	
Paper/Wood Fibers - - - - -	10
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	
Others	
Opaques - - - - -	90
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 29 M.E. Sample I.D. No. : 11134

Gross Visual Description : Brown, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	2
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	2
Cellulose Paper/Wood Fibers	15
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	1
Binders	47
Others Granular Minerals	35
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/11/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 30 M.E. Sample I.D. No. : 11135

Gross Visual Description : Brown, Flaky Material

ASBESTOS MINERALS: Estimated Percentage

1 . Chrysotile
2 . Amosite
3 . Crocidolite
4 . Anthophyllite
5 . Tremolite/Actinolite

Asbestos Total none detected

Cellulose Paper/Wood Fibers	-	-	-	-	-	10
Glass Fibers	-	-	-	-	-	3
Mineral Wool Fibers	-	-	-	-	-	5
Perlite						
Mica	-	-	-	-	-	12
Binders						
Others						
Opaques	-	-	-	-	-	60
Organic Material	-	-	-	-	-	10
				Total		100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 31 M.E. Sample I.D. No. : 11136

Gross Visual Description : Grey, Powdery Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	2
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	2
Cellulose Paper/Wood Fibers	3
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	5
Binders	85
Others Granular Minerals	5
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

roject Number : ME-1770 Date analyzed : 06/12/85

roject Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

lient's Sample I.D. : No. 32 M.E. Sample I.D. No. : 11137

Gross Visual Description : Green Powder

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile - - - - -	trace
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	trace detected
Cellulose	
Paper/Wood Fibers - - - - -	5
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica - - - - -	5
Binders - - - - -	40
Others	
Granular Minerals - - - - -	50
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 33 M.E. Sample I.D. No. : 11138

Gross Visual Description : Black, Flaky Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	3
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	3
Cellulose	
Paper/Wood Fibers	20
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	
Others	
Granular Minerals	42
Opaques	35
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 34 M.E. Sample I.D. No. : 11139

Gross Visual Description : Black, Flaky Material

ASBESTOS MINERALS:	Estimated Percentage
1. Chrysotile	8
2. Amosite	
3. Crocidolite	
4. Anthophyllite	
5. Tremolite/Actinolite	
Asbestos Total	8
Cellulose Paper/Wood Fibers	5
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	15
Binders	
Others	
Rubbery Material	67
Granular Minerals	4
Hair	1
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

roject Number : ME-1770 Date analyzed : 06/12/85

roject Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

lient's Sample I.D. : No. 35 M.E. Sample I.D. No. : 11140

Gross Visual Description : White Fibrous and Brown, Flaky Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	25
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	25
Cellulose Paper/Wood Fibers	5
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	69
Others	
Hair	1
Opaques	trace
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : No. 36 M.E. Sample I.D. No. : 11141

Gross Visual Description : White, Fibrous Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	92
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	92
Cellulose Paper/Wood Fibers	1
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	
Binders	
Others	
Opaques	5
Granular Minerals	2
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

DUST SAMPLE ANALYSIS

roject Number : ME-1770 Date analyzed : 06/12/85

roject Name : O.H. Materials Co./Atlanta GA

:lient : SAME Re: Job No. 2801

lient's Sample I.D. : No. 37 M.E. Sample I.D. No. : 11142

Gross Visual Description : Brown, Micaceous Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	none detected
Cellulose Paper/Wood Fibers	trace
Glass Fibers	
Mineral Wool Fibers	
Perlite	
Mica	100
Binders	
Others	
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Ralph F. Crawford

McCRONE ENVIRONMENTAL SERVICES, INC.
200 Oakbrook Business Center
5500 Oakbrook Parkway
Norcross, GA 30093 (404) 449-8461

SOIL SAMPLE ANALYSIS

Project Number : ME-1770 Date analyzed : 06/12/85

Project Name : O.H. Materials Co./Atlanta GA

Client : SAME Re: Job No. 2801

Client's Sample I.D. : PS-1A M.E. Sample I.D. No. : 11143

Gross Visual Description : Black, Granular Material

ASBESTOS MINERALS:	Estimated Percentage
1 . Chrysotile	20
2 . Amosite	
3 . Crocidolite	
4 . Anthophyllite	
5 . Tremolite/Actinolite	
Asbestos Total	20
Cellulose Paper/Wood Fibers	5
Glass Fibers Mineral Wool Fibers	trace
Perlite Mica	trace
Binders	
Others	
Granular Minerals	70
Opaques	4
Synthetic Fibers	1
Total	100

Comments :

Analysis time requested 30 minutes

Microscopist : Jeremy A. Armstrong

ASBESTOS
MANAGEMENT
INCORPORATED

36700 South Huron
Suite 104
New Boston, Michigan 48164
313 961 6135

December 24, 1985

Mr. Robert Near
CTI & Associates, Inc.
46408 Grand River
Novi, MI 48050

Dear Mr. Near:

The samples received by us on December 20, 1985, have been analyzed as requested using Polarized Light Microscopy. The Environmental Protection Agency recognizes Polarized Light Microscopy as the method of choice for the analysis of bulk samples for asbestos fibers.* The results are compiled on the enclosed table.

It is a pleasure to be of assistance to you. Please contact us if you have questions concerning any aspect of this report.

Very Truly yours,

ASBESTOS MANAGEMENT, INC.

Benjamin Calo

Benjamin Calo, R.S., M.P.H.
General Manager

BC/mk

*Asbestos-Containing Materials in School Buildings; A Guidance Document. EPC/OPTS #C00090, March 1979.

and Associates, Inc.
46408 Grand River Ave., Novi, Michigan 48050
(313) 349-3744

LETTER OF TRANSMITTAL

DATE	JOB NO.
1-14-86	D-10615

ATTENTION Mr. Bob Beckwith

RE Armor & Company Asbestos Investigation

TO OH Materials
16406 US Route 224 East
Findley, Ohio 45840

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover

THE FOLLOWING ITEMS:

COPIES	DATE	NO.	DESCRIPTION

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ As requested
☒ For your use ☐ _____

REMARKS Enclosed please find the results of the asbestos and permeability tests for the above referenced project. If you have any questions, please feel free to call.

COPY TO _____

SIGNED: Robert R. Near (jt)
Robert R. Near
President

If enclosures are not as noted, kindly notify us at once.

Site Address: OH Materials, Findlay, OHio 45839

Date Rec'd	Lab #	Sample I.D.	Asbestos Results	Non-Asbestos Material
12/20/85	12-430	Soil Sample from BH-1, SS Sample at 5.0' to 6.5' deep 2801-06	0%	Cellulose, Non Fibrous
	12-431	Soil Sample from BH-1, SS Sample at 12.5' to 14.0' deep 2801-07	< 1% Chrysotile	Cellulose, Non Fibrous
	12-432	Soil Sample from BH-2, SS Sample at 7.5' to 9.0' deep 2801-08	2% Chrysotile	Non Fibrous
	12-433	Soil Sample from BH-2, SS Sample at 12.5' to 14.0' deep 2801-09	0%	Non Fibrous
	12-434	Soil Sample from BH-3, SS Sample at 2.5' to 4.0' deep 2801-10	22% Chrysotile	Non Fibrous
	12-435	Soil Sample from BH-3, SS Sample at 7.5' to 9.0' deep 2801-11	< 1.0% Chrysotile	Non Fibrous
	12-436	Soil Sample from BH-4, SS Sample at 2.5' to 4.0' deep 2801-12	0%	Non Fibrous
	12-437	Soil Sample from BH-5, SS Sample at 2.5' to 4.0' deep 2801-13	< 1.0% Chrysotile	Cellulose, Non Fibrous
	12-438	Soil Sample from BH-5, SS Sample at 7.5' to 9.0' deep 2801-14	0%	Cellulose, Non Fibrous
	12-439	Soil Sample from BH-6, SS Sample at 5.0' to 6.5' deep 2801-15	12% Chrysotile	Non Fibrous
	12-440	Soil Sample from BH-6, SS Sample at 12.5' to 14.0' deep 2801-16	0%	Non Fibrous
	12-441	Soil Sample from BH-7, SS Sample at 5.0' to 6.5' deep 2801-17	10 % Chrysotile	Non Fibrous
	12-442	Soil Sample from BH-7, SS Sample at 7.5' to 9.0' deep 2801-18	0%	Non Fibrous

Client Name: CH & Associates, Inc.

Site Address: OH Materials, Findlay, Ohio 45839

Date Rec'd	Lab #	Sample I.D.	Asbestos Results	Non-Asbestos Material
12/20/85	12-443	Soil Sample from BH-8, SS Sample at 5.0' to 6.5' deep 2801-19	2% Chrysotile	Non Fibrous
	12-444	Soil Sample from BH-9, SS Sample at 5.0' to 6.5' deep 2801-20	15% Chrysotile	Non Fibrous
	12-445	Soil Sample from BH-10, SS Sample at 2.5' to 4.0' deep 2801-21	8% Chrysotile	Non Fibrous
	12-446	Soil Sample from BH-10, SS Sample at 10.0' to 11.5' deep 2801-22	0%	Non Fibrous
	12-447	Soil Sample from BH-11, SS Sample at 5.0' to 6.5' deep 2801-23	6% Chrysotile	Non Fibrous
	12-448	Soil Sample from BH-11, SS Sample at 7.5' to 9.0' deep 2801-24	0%	Non Fibrous

OHM
The Environmental Services Company

O.H. Materials Co.
P.O. Box 551
Findlay, Ohio 45839-0551
Phone (419) 423-3526

CHAIN-OF—CUSTODY RECORD

22325

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NO	PROJECT NUMBER
PAULDING, OHIO	[illegible]		28[illegible]

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CHECK 1	2	3	4	5	6
1	28[illegible]-06	1-8oz. glass jar	Soil sample from BH-1, SS sample at [illegible] to 0.5' deep.						
2	28[illegible]-07	1-8oz. jar	Soil Sample from BH-1, SS sample at 12.5' to 14.0' deep.						
3	28[illegible]-08	1-8oz. glass jar	Soil sample from BH-2, SS sample at 7.5' to 9.0' deep.						
4	28[illegible]-09	1-8oz. jar	Soil sample from BH-2, SS sample at 12.5' to 14.0' deep.						

Person Responsible for sample	Affiliation	Date	Time
THOMAS [illegible]	OHM	12-[illegible]	[illegible]

Purpose of analysis (use back of front sheet if necessary)

Asbestos

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME
1	1-4	[illegible]		[illegible]	[illegible]
2					
3					
4					
5					

OHM
The Environmental Services Company

O.H. Materials Co.
P.O. Box 551
Findlay, Ohio 45839-0551
Phone (419) 423-3526

CHAIN-OF—CUSTODY RECORD

22322

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NO	PROJECT NUMBER
PAULDING OHIO	Armour & Co.		2801

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CHECK 1	2	3	4	5	6	7
1	2801-10	1-3oz glass jar	Soil sample from BH-3, SS-sample at 2.0' to 4.0' deep.							
2	2801-11	1-3oz jar	Soil sample from BH-3, SS sample at 11.5' to 1.0' deep.							
3	2801-12	1-3oz. Jar	Soil sample from BH-4, SS sample at 2.5' to 4.0' deep.							
4	2801-13	1-3oz Jar	Soil sample from BH-5, SS sample at 2.5' to 4.0' deep.							
5	2801-14	1-3oz JAR	Soil sample from BH-5 SS sample at 7.5' to 9.0' deep.							
6	2801-15	1-3oz. Jar	Soil sample from BH-6 SS sample at 5.0' to 6.5' deep							

Person Responsible for sample	Affiliation	Date	Time
Thomas [illegible]	OHM	[illegible]	[illegible]

Purpose of analysis (use back of front sheet if necessary)

Asbestos

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME
1	1-6	Thomas [illegible] OHM		[illegible]	[illegible]
2					
3					
4					
5					

OHM
The Environmental Services Company

O.H. Materials Co.
P.O. Box 551
Findlay, Ohio 45839-0551
Phone (419) 423-3526

CHAIN-OF—CUSTODY RECORD

22323

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NO	PROJECT NUMBER
FAULDING, OHIO	[illegible]		2801

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CHECK 1	2	3	4	5	6
1	201-16	1 x 2. [illegible]	[illegible] 1.5' to 1.0' [illegible]						
[illegible]	[illegible]	[illegible]	[illegible]						
[illegible]	[illegible]	[illegible]	[illegible] 1.5' to 1.0' [illegible]						
1	201-11	1 x 2. [illegible]	[illegible] 5.0' to 6.5' [illegible]						
[illegible]	201-20	[illegible]	[illegible] 5.0' to 6.5' [illegible]						
[illegible]	201-21	[illegible]	[illegible] 2.5' to 4.0' [illegible]						

Person Responsible for sample	Affiliation	Date	Time
[illegible]	[illegible]	[illegible]	

Purpose of analysis (use back of front sheet if necessary)

[illegible]

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE	TIME
1	1-6	[illegible]		[illegible]	[illegible]
2					
3					
4					
5					

OHM
The Environmental Services Company

O.H. Materials Co.
P.O. Box 551
Findlay, Ohio 45839-0551
Phone (419) 423-3526

CHAIN-OF—CUSTODY RECORD

2232

PROJECT LOCATION	NAME OF CLIENT	PROJECT TELEPHONE NO	PROJECT NUME
MAULDIN, OHIO	[illegible]		801

ITEM NUMBER	SAMPLE NUMBER	NUMBER & SIZE OF CONTAINERS	DESCRIPTION	TRANSFER NUMBER & CH 1	2	3	4	5
1	801-22	[illegible]	[illegible] sample ITEM [illegible] sample @ 10' to 10' bep.					
2	801-23	[illegible]	[illegible] sample ITEM BH-11 sample @ 10' to 15' bep					
	801-24	[illegible]	[illegible] sample ITEM BH-11 sample @ 7.5' to 10' bep.					

Person Responsible for sample	Affiliation	Date	Time
[illegible] MAN	HM	[illegible]	[illegible]

Purpose of analysis (use back of front sheet if necessary)

[illegible]

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	ACCEPTED BY	DATE
1	1-3	[illegible]	[illegible]	
2				
3				
4				
5				

and Associates, Inc.
Novi Office—46408 Grand River Ave., Novi, Michigan 48050 (313) 349-3744
Ann Arbor Office—607 South Maple, Ann Arbor, Michigan 48103 (313) 995-3777

SUMMARY OF LABORATORY TEST RESULTS

PROJECT: Armor & Company Asbestos Investigation

PROJECT NO: D-10615

Test Boring or Test Pit Number	Depth of Sample, Feet	Coefficient of Permeability * cm/second	Natural Water Content (Percent of Dry Weight)	Natural Density (Pounds per Cubic Foot)	Unconfined Compression		Atterberg Limits			Particle Size Distribution					
					Strength (PSF)	Failure Strain (Percent)	Liquid Limit (Percent)	Plastic Limit (Percent)	Plasticity Index (Percent)	Clay (Percent	Silt (Percent)	Fine Sand (Percent)	Medium Sand (Percent)	Coarse Sand (Percent)	Gravel (Percent)
TB-1	13.5-15.5	1.2×10^{-6}													
TB-6	13.5-15.5	6.2×10^{-8}													
TB-7	9.0-11.0	3.4×10^{-8}													

* Permeability value was obtained at a consolidation pressure of 1/2 ton per square foot.

INVENTORY OF MUNICIPAL WATER-SUPPLY SYSTEMS BY COUNTY, OHIO

Ohio Water Inventory

Report No. 24

Columbus

1977

ODNR
Ohio Department of Natural Resources
DIVISION OF WATER

LINE	1 OWNER OF FACILITY BY COUNTY	2 TYPE	3 ESTIMATED POPULATION SERVED	4 SOURCE OF SUPPLY	5 SURFACE SAFE YIELD (mgd)	6 TOTAL GROUNDWATER DEPENDABLE PUMPAGE (mgd)	7 PLANT SYSTEM CAPACITY (mgd)
1	Antwerp	M	2,000	3 wells	-	0.700	0.600
2	Oakwood	M	850	2 wells	-	0.360	0.360
3	Paulding	M	3,300	1 reservoir (Flatrock Creek)	1.500	-	1.500
4	Payne	M	1,700	2 wells	-	0.576	0.576
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							