inter-office communication

to: Rod Beals, OEPA, DERR, NEFO date: June 4, 1991

from: Michelle Tarka through Raymond Roe

subject: BUSTR Incident #679298-01

Ravenna Army Ammunition Plant
George Road Burning Ground
Ravenna, OH 44266
Portage County

File #679298-01 concerns the removal of a 2,000 gallon UST that contained fuel oil used to heat a detonation chamber. The fuel oil was consumed in this process. The tank in question is referred to as RV33 by the Ravenna Arsenal. As this incident is considered NON-LTF, it is being referred to OEPA for any follow up deemed necessary.

MT/sk

Attachment

cc: 679298-01

617278-C

RAVENNA ARMY AMMUNITION PLAN
8451 STATE ROUTE 5
RAVENNA, OHIO 44260

December 8, 1989

State Fire Marshal's Office
Department of Commerce
8895 E. Main Street
Reynoldsburg, Ohio 43068

ATTN: Mr. Todd Parfitt

SUBJECT: Underground Storage Tank Compliance Milestone

Ravenna Army Army Ammunition Plant has 17 regulated tanks which require tank and piping tightness testing by December 22, 1989. Of these 9 have been out of service over one year and are planned for removal. These out of service tanks are filled with water and a chromium based corrosion inhibitor. The remaining 8 tanks are planned for tightness testing as soon as funding is provided by the Army. They contain fuel oil and gasoline for use in plant operations.

We have been working since June to obtain funding for the removal and the testing projects. However, our command group has been swamped with requests for environmental project funds to the point where our projects have not been funded. The congressional delay in approving the FY-90 Department of Defense appropriations has delayed the processing of current year projects.

We have solicited bids and selected the contractors to perform both projects so that contracts may be placed within days of the receipt of funding. The required applications for tank removal permits have been submitted to your office.

We request an extension of the deadline for testing and removal as follows:

Tightness testing of 8 UST's	September 1, 1990
Removal of 9 UST's	November 1, 1990

These requested dates are based on an estimated July 1, 1989 date for receipt of funding; 120 days for mobilization of the contractor and removal of the tanks to be removed; and 60 days to mobilize the contractor and complete the testing of the tanks to be tested.

For your information the tanks to be removed are registered with your office as tank numbers: RV-13, RV-14, RV-15, RV-16, RV-17, RV-18, RV-19, RV-37, RV-52

The tanks to be tested are registered with your office as tank numbers:
RV-1, RV-2, RV-3, RV-11, RV-12, RV-23, RV-33, RV-51

We appreciate your consideration in this matter.

R. J. Kasper, Commander's Representative

cf: AMSMC-PCG-B
AMSMC-ISE

679298-01

HRC/wt/ust.doc

COPY

Duplicate Site

REPORT #: |6|7|9|2|9|8|-01| SUSPECTED RELEASE REPORT

Filmed

DATE: 1|15|90

TIME: 4:89 pm

== [1] PERSON REPORTING THE RELEASE ==

NAME: Tom Chanda TITLE: Env. Eng. PHONE: |216| 297-3221

AGENCY/COMPANY: Ravenna Army Munitions Plant RELATION TO SITE: _____

ADDRESS: ~~8451~~ St. Rt 5 CITY: Ravenna ST: OH ZIP: 44266-9297

REMARKS: UST failure .0825 gph. Going to separate plumbing, line from tank. They will pump out tank tonight. All this Refer #2 fuel oil

== [2] SUSPECTED RELEASE LOCATION ==

FACILITY: U.S ~~Dept~~ Army Munitions Plant USTR ID#: _____

ADDRESS: George Rd. Surrounds Grounds COUNTY: Portage

CITY: Ravenna ST: OH ZIP: 44266 PHONE: |____|_____

UST OWNER: _____ PHONE: |____|_____

REMARKS: Fuel oil used as lubricant in munitions production. — used to heat the detonation chamber consumed in process

FIRE DEPT: ~~[redacted]~~ CONTACT: ~~Chief Snafo~~ PHONE: ~~|216| 297-5938~~

on FD on site Chief Watson 216 297-3222

== [3] CONDITIONS LEADING TO REPORT OF SUSPECTED RELEASE (Check all that apply) ==

___ Inventory control results indicate a release may have occurred.

✓ Testing, monitoring or sampling results indicate a release may have occurred.

___ Unusual operating conditions observed (e.g., sudden drop in tank volume).

___ Impacts noticed in area surrounding tank (e.g., vapors, well contaminated, run-off).

___ Soil contaminated, or soil exceeds 100 ppm total hydrocarbons using G.C. or O.V.A.

___ Spill or overfill of petroleum in excess of 25 gallons.

___ Spill or overfill of petroleum less than 25 gallons when containment is not possible.

___ Spill or overfill of petroleum below ground, or soaking into ground after spill.

___ Spill or overfill of petroleum to surface water when petroleum creates sheen on water.

OTHER CONDITIONS: failed 1st TTT .0825 gph; failed 2nd time .06 gph will remove tank

== [4] SUSPECTED SUBSTANCE RELEASED ==

✓ GASOLINE ___ DIESEL FUEL ___ KEROSINE ___ USED OIL ___ HYDRO LIFT
✓ OTHER PETRO ___ HAZ SUBST ___ PROBLEM FLAG ___ UNKNOWN

********** COMPLETE REVERSE SIDE **********

== [11] REPORT DISPOSITION (Indicate actions taken on reverse side) ==

TAKEN BY: Roc. EMERGENCY ACTION? ___YES X NO BY: ___FM ( ) ___OEPA

COORD: TARKA REPORT/ACTION APPROVED: (PSR) DATE: 1|15|90 TIME: 3:47pm

LOGGED BY: _____ DATE: ___|___|___ ENTERED BY: SA DATE: 2|16|90

CIRCLE STATUS: RPT (SUS) CON ICA FPR SAP LCA NFA PRIORITY: 1 2 (3) 4 CLASS: A B C (D) LTF (NON-LTF)

Filmed

BUREAU OF UNDERGROUND STORAGE TANK REGULATIONS

UNDERGROUND TANK LEAK/SPILL REPORT

DATE: 1-15-90

TIME: 4:09

PLEASE PRINT

PERSON REPORTING THE LEAK/SPILL

NAME: TOM CHANDA TITLE: ENVIRONMENTAL ENG. PHONE: (216) 297-3221

AGENCY/COMPANY: RAVENNA ARMY MUNITIONS PLANT

ADDRESS: 8451 STATE RT #5 CITY: RAVENNA STATE: OH ZIP: 44266-9297

LOCATION OF LEAK/SPILL

FACILITY NAME: UST TEST FAILED. RESULTS AT POINT .0825 G.P.H.

ADDRESS: _____ COUNTY: _____

CITY: _____ STATE: _____ ZIP: _____ PHONE: ( ) _____

FIRE DEPT: _____ CONTACT: _____ PHONE: ( ) _____

NATURE OF PROBLEM *(PLEASE PRINT)*

GOING TO SEPERATE PLUMBING LINE FROM TANK.
WILL RETEST UST IF TST FAILS TANK WILL BE DRAINED TONITE

SECURITY: CALL BUSTR EMERGENCY PAGER NUMBER 229-1545
WAIT FOR BEEP
DIAL IN YOUR NUMBER 614-752-8200
PUNCH THE # KEY ON THE TELEPHONE - YOU SHOULD GET A BUSY SIGNAL -THIS WILL INDICATE YOU HAVE COMPLETED THE PAGE CORRECTLY -
IF YOU DON'T GET A BUSY SIGNAL, REDIAL

IF NO RESPONSE AFTER 15 MINUTES, CALL THE BUSTR EMERGENCY PAGER NUMBER AGAIN AT 15 MINUTE INTERVALS. ONE OF THE SUPERVISORS WILL RETURN THE CALL.

REV 11/22/89

679298-01

DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location)

Filmed

Tank Identification No. (e.g., ABC-123 Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No. 2	Tank No. 3	Tank No. 4	Tank No. 5
A. Status of Tank (Mark all that apply X)	RV-18	RV-19	RV-23	RV-33	RV-37
1 Currently in Use	☐	☐	☒	☐	☐
2 Temporarily Out of Use	☒	☒	☐	☒	☒
3 Permanently Out of Use	☐	☐	☐	☐	☐
B. Date Installed (mo/yr.)	Mar / 1942	Mar / 1942	Mar / 1942	Jun / 1965	Mar / 194
C. Estimated Total Capacity (Gallons)	3,900	3,900	15,000	2,000	5,000
D. Tank Material of Construction (Mark one X)					
1 Steel	☒	☒	☒	☒	☒
3 Concrete	☐	☐	☐	☐	☐
2 Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
0 Unknown	☐	☐	☐	☐	☐
9 Other, Please Specify					
E. Tank Internal Protection (Mark all that apply X)					
3 Cathodic Protection	☐	☐	☐	☐	☐
1 Interior Lining (e.g., epoxy resins)	☐	☐	☐	☐	☐
2 None	☒	☒	☒	☒	☒
0 Unknown	☐	☐	☐	☐	☐
9 Other, Please Specify					
F. Tank External Protection					
Cathodic Protection	☐	☐	☐	☐	☐
1 Sacrificial Anodes	☐	☐	☐	☐	☐
2 Impressed Current	☐	☐	☐	☐	☐
3 Steel-FRP-Composites	☐	☐	☐	☐	☐
4 Painted (e.g., asphaltic)	☒	☒	☒	☒	☒
5 Unknown	☐	☐	☐	☐	☐
9 Other, Please Specify					
0 None	☐	☐	☐	☐	☐
G. Piping (Mark all that apply X)					
1 Bare Steel	☒	☒	☒	☒	☒
2 Galvanized Steel	☐	☐	☐	☐	☐
3 Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
4 Cathodically Protected	☐	☐	☐	☐	☐
0 Unknown	☐	☐	☐	☐	☐
9 Other, Please Specify					
H. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply X)					
8 a. Empty	☐	☐	☐	☐	☐
b. Petroleum					
2 Diesel	☐	☐	☐	☐	☐
3 Kerosene	☐	☐	☐	☐	☐
1 Gasoline (including alcohol blends)	☒	☒	☐	☐	☐
4 Used Oil	☐	☐	☐	☐	☐
9 Other, Please Specify			No. 2	NO. 2	No. 2
c. Hazardous Substance					
7 Please Indicate Chemical Abstract Service (CAS) No. of Principal CERCLA Substance	NA	NA	NA	NA	NA
Mark box X if tank stores a mixture of substances	☐	☐	☐	☐	☐
0 Unknown	☐	☐	☐	☐	☐
I. Corrosion Protection (if tank or piping are steel))					
As specified for factory-installed cathodic protection for steel tanks	☐	☐	☐	☐	☐
As specified for field-installed cathodic protection for steel tanks	☐	☐	☐	☐	☐
As specified for steel piping	☐	☐	☐	☐	☐
Another method approved by the State Fire Marshal. Specify:	None	None	None	None	None
J. Installation (Mark all that apply X) New tank systems only					
1 The installation was inspected by state or local fire officials	☐	☐	☐	☐	☐
2 Manufacture-supplied checklists of installation procedures were completed	☐	☐	☐	☐	☐
3 The tank and piping were tested for leaks during and after installation	☐	☐	☐	☐	☐
4 Other, Specify:	NA	NA	NA	NA	NA
K. Release Detection (Mark all that apply X):					
1 Vapor monitoring	☐	☐	☐	☐	☐
2 Groundwater monitoring	☐	☐	☐	☐	☐
3 Monitoring above an impermeable barrier	☐	☐	☐	☐	☐
4 Automatic in-tank monitoring and inventory control	☐	☐	☐	☐	☐
5 Secondary containment with interstitial monitoring	☐	☐	☐	☐	☐
6 Tank Testing: product inventory	☐	☐	☐	☐	☐
9 Another method approved by the State Fire Marshal. Specify	None	None	None	None	None
L. Release Detection Pressure Piping					
Rapid Detection	None	None	None	None	None
1 Automatic flow restrictors	☐	☐	☐	☐	☐
2 Automatic shutoff device	☐	☐	☐	☐	☐
3 Continuous monitoring system (alarm within 1 hour)					
Interstitial monitoring	☐	☐	☐	☐	☐
Vapor monitoring	☐	☐	☐	☐	☐
Backup method	None	NOne	None	None	None
1 Line tightness test (annual)	☐	☐	☐	☐	☐
2 Monthly method					
Vapor monitoring	☐	☐	☐	☐	☐
Groundwater monitoring	☐	☐	☐	☐	☐
Interstitial monitoring	☐	☐	☐	☐	☐

Filmed

TELEPHONE MEMORANDUM

REPORT #: 6|7|9|2|9|8|-|0|1|-|_|_|_|_|_|_ DATE: 1|17|90

TIME: 8|35

CALL TO [ ] FROM [✓]

NAME: Tom Chanda TITLE: _____ PHONE (216) 297-3221

AGENCY/COMPANY: Ravenna Army Ammunition RELATION TO SITE _____

ADDRESS: _____ CITY: Ravenna ST: _____ ZIP: _____

SUBJECT: _____

NOTES & SUMMARY

first call to Raymond Roe on system TT, .0825/gph leak rate

- retested after seperating piping and the tank had a leak rate of .106/gph

- The will remove the tank

- #2 fuel oil used in production (specifically in the demilling of small arms ammunition

1-30-90 called Sue McCausland - asked For site map - she will FAX ASAP

BUSTR STAFF MEMBER: Parfitt CONTINUED ON BACK: _____ PAGES ATTACHED _____

Filmed

TELEPHONE MEMORANDUM

REPORT #: 6792981011 DATE: 11/8/90
TIME: 2145

CALL TO [X] FROM [ ]

NAME: Tom Chanda TITLE: PHONE (216) 297-3221
AGENCY/COMPANY: Ravenna Army RELATION TO SITE
ADDRESS: CITY: ST: ZIP:
SUBJECT:

NOTES & SUMMARY

the tank holds #2 fuel used to heat the detonation chamber (shoot flame through chamber to point of detonation)

plan to remove tank, its pumped dry, next week contractor ready

~ 12 other tanks to come out on other properties

project will go over to Enviro Engin
Sue McCauslin
216-297-3220

not a flow through process tank

BUSTR STAFF MEMBER: TARA CONTINUED ON BACK: PAGES ATTACHED

Filmed

SITE LISTING UPDATE FORM

EXISTING INCIDENT #: 6 7 9 2 9 8 - 0 0 1 - 9 0 0 9 UPDATE.001 REV 8/89

FACILITY NAME: Ravenna Army Ammunition Plant NEW FACILITY INFO? ___ YES ✓ NO (Update on back)

[1] REASON FOR LISTING UPDATE

___ [1] Written report/results received from owner/operator.
✓ [2] Verbal report/results received from owner/operator.
___ [3] Written report received from BUSTR contractor.
___ [4] Information collected from BUSTR field examination/inspection.
___ [5] Change in site coordinator/contractor assignment.
___ [6] Change/delete existing incident number - explain change in remarks section [5].
___ [7] Create new incident number for additional suspected facility/location.
___ [8] Orders issued.
___ [9] Other:

[2] NEW SITE LISTING DATA

INCIDENT #: 6 7 9 2 9 8 - 0 0 1 - 9 0 0 0
REPORT NUMBER FAC TRKG# SPRC

EMERGENCY RESPONSE: ___ YES ✓ NO BY: ___ FM (_____) ___ OEPA ___ USEPA

STATUS: ___ RPT ✓ SUS ___ DIS ___ CON ___ ICA ___ ICR ___ ICC ___ SAS ___ SAC ___ CAS ___ CAP ___ NFA

PRIORITY: ___ 1* ✓ 2 ___ 3 ___ 4 ___ 5

CLASSIFICATION: ___ A ___ B ___ C ✓ D LTF ELIGIBILITY: ___ YES (1) ___ NO (2)

SITE COORDINATOR: TURKA CONTRACTOR: _____ WORK ORDER: _____

* [3] SITE SUMMARY (UPDATE FOR ALL PRIORITY 1 SITES)

(First sentence - why is it a 1? Second sentence - who is doing what at this time)

[4] NEW EXCEPTION REPORT DATA

___ [1] State plans to obligate over $100,000 at a site.
___ [2] State actually obligated over $100,000 at a site (cumulative expenses exceeded $100,000 this quarter).
___ [3] State plans to use innovative or experimental technology at the site.
___ [4] State plans to provide permanent alternative drinking water supply.
___ [5] State plans to permanently relocate residents.
___ [6] State reached/received cost recovery settlement; amount: _____.

[5] SITE MANAGEMENT REMARKS

(BUSTR actions needed/taken, reports expected, etc.)

are CON. tank and are SUS tank at the facility. most recent report 1-19-90. Request site coordinator change from Parfitt to NE District Coordinator.

[6] FOLLOW-UP BUSTR ACTIONS/ASSIGNMENT

(For use by supervisor)

UPDATE SUBMITTED BY: Parfitt DATE: 1 19 90

APPROVED: [signature] DATE: 1 29 90 ENTRY: St DATE: 1 22 90

RAVENNA ARSENAL INC.

8451 STATE ROUTE 5
RAVENNA, OHIO 44266-9297

Telephone (216) 358-7111

Autovon 346-3218

Filmed

RECEIVED

FEB 1 1990

January 30, 1990

THRU: Contracting Officer's Representative
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266-9297

31 Jan 90

TO: Ohio Department of Commerce
Division of State Fire Marshal
Bureau of Underground Storage Tank Regulations
ATTN: Michelle Tarka, Site Coordinator
7510 East Main Street
P.O. Box 525
Reynoldsburg, Ohio 43068-3395

Subject: Request For Extension Of Time To Complete Investigation Of Leaking UST

Dear Ms. Tarka:

Your office has been notified about three tanks which failed their tank tightness tests.

The tanks were drained as soon as the test results were known. The earth surrounding the tanks are generally low permeability clay.

These tanks were included in a project to test eight tanks at the Ravenna Army Ammunition Plant. After each of the first tanks failed, the plant requested funding from the Army Command Headquarters to remove the tanks to comply with the requirements of OAC Rule 1301:7-7-36.

The command waited for the results of the last leak test so that it could be included in the same project if it failed. It failed its test on January 26, 1990.

We hereby request a 20 day extension to the allowed time of 20 days to remove a tank. The extension is requested for each tank. This will allow for the time delay in funding the removal of the first tanks while waiting on the results of the third test. It will also allow for approximately one week to process a contract modification and for the fact that the contractor has three tanks to remove almost simultaneously. We expect to have the tanks removed and the required samples taken by the requested extended deadlines.

679298 - 01-9000

A summary of the proposed dates are as follows:

	Date Reported	20 Days	20 Day Extension
Tank No. 33	January 15	Feb. 4	February 24
Tank No. 23	January 19	Feb. 8	February 28
Tank No. 11	January 26	Feb. 15	March 7

Sincerely,

RAVENNA ARSENAL, INC.

H. R. Cooper
Plant Engineer

HRC/wt/hc90008

cf: AMCCOM
AMSMC-PCG-B (Shirlene Wise)

AMCCOM
AMSMC-ISE-M (Ms. Ronnie DePorter)

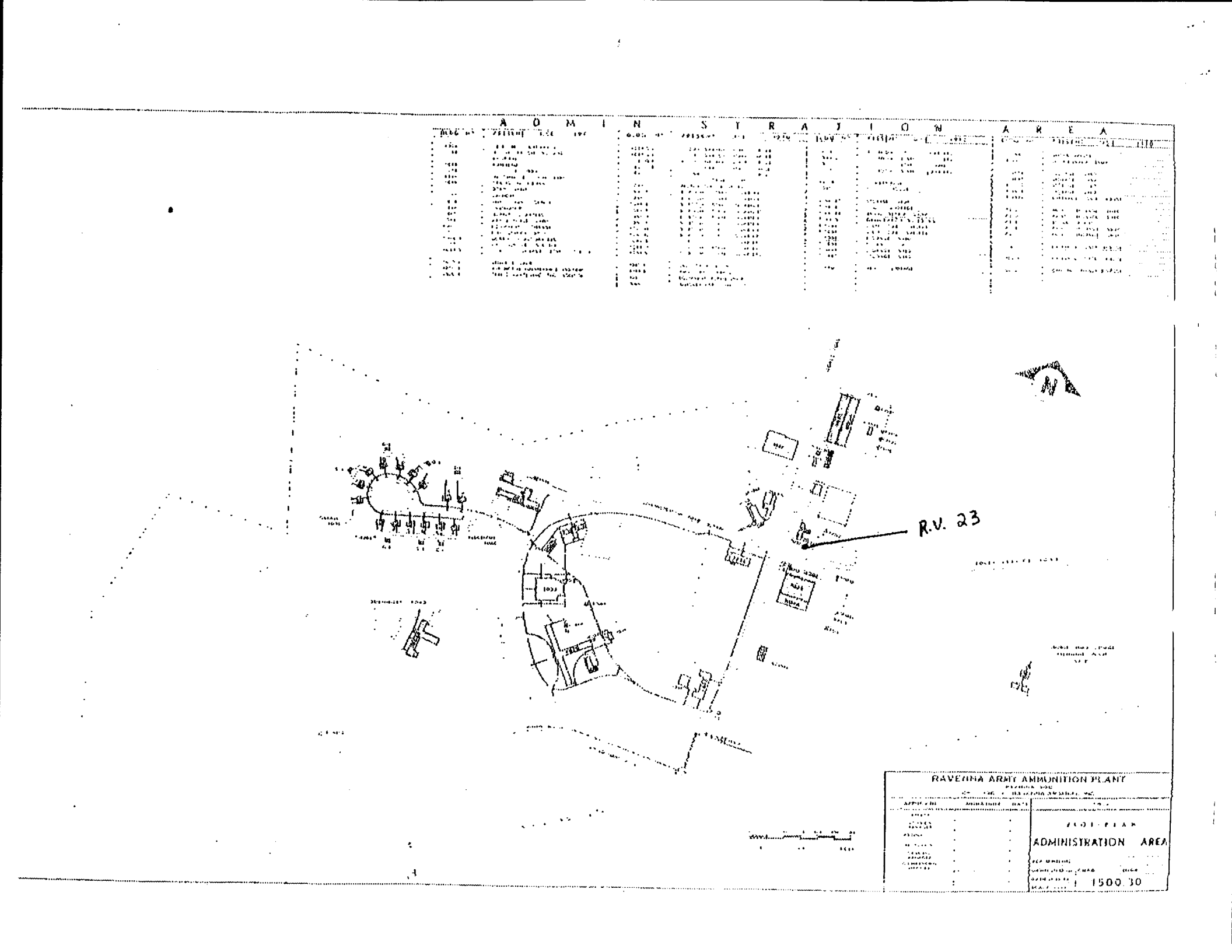
Filmed

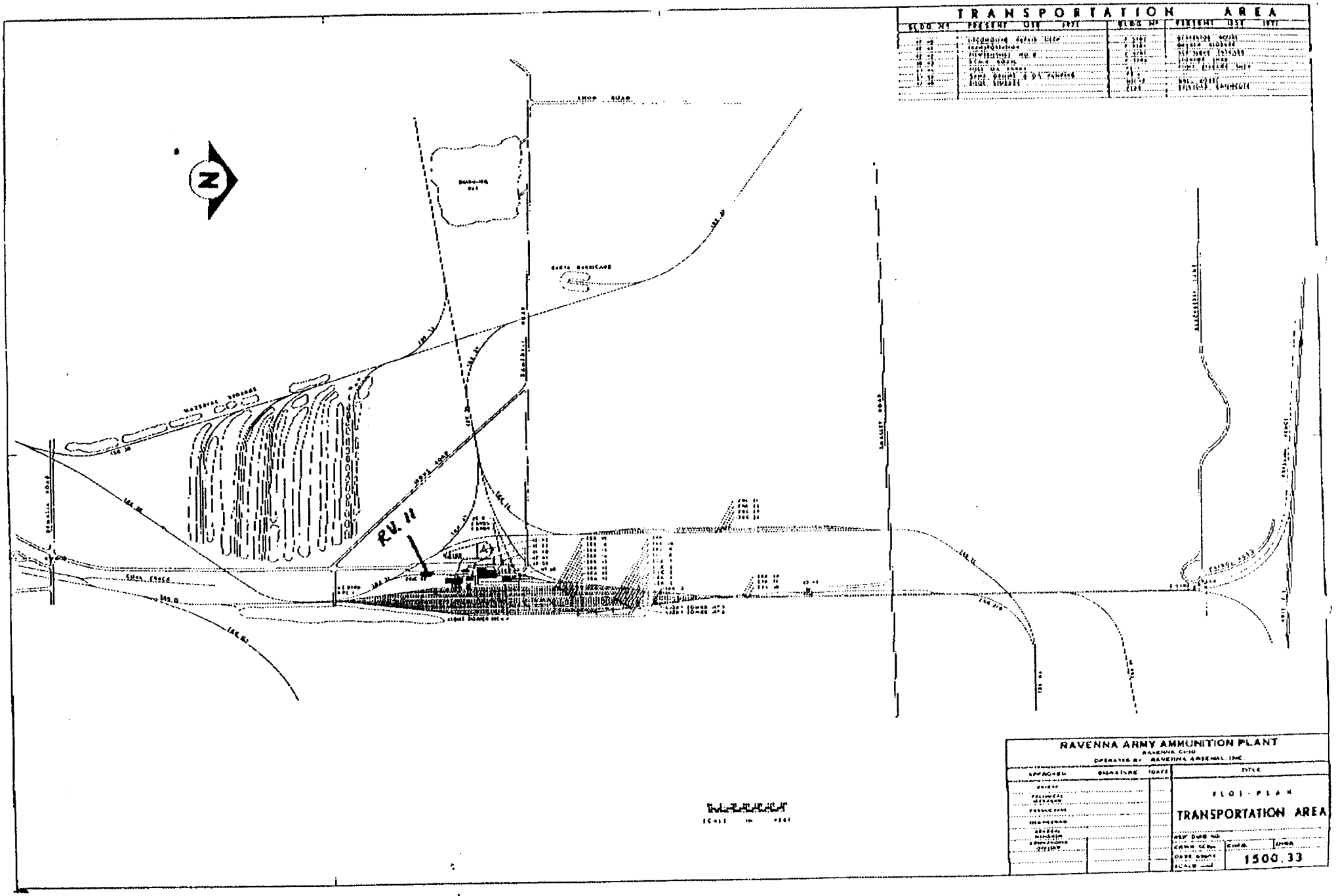
679298-01

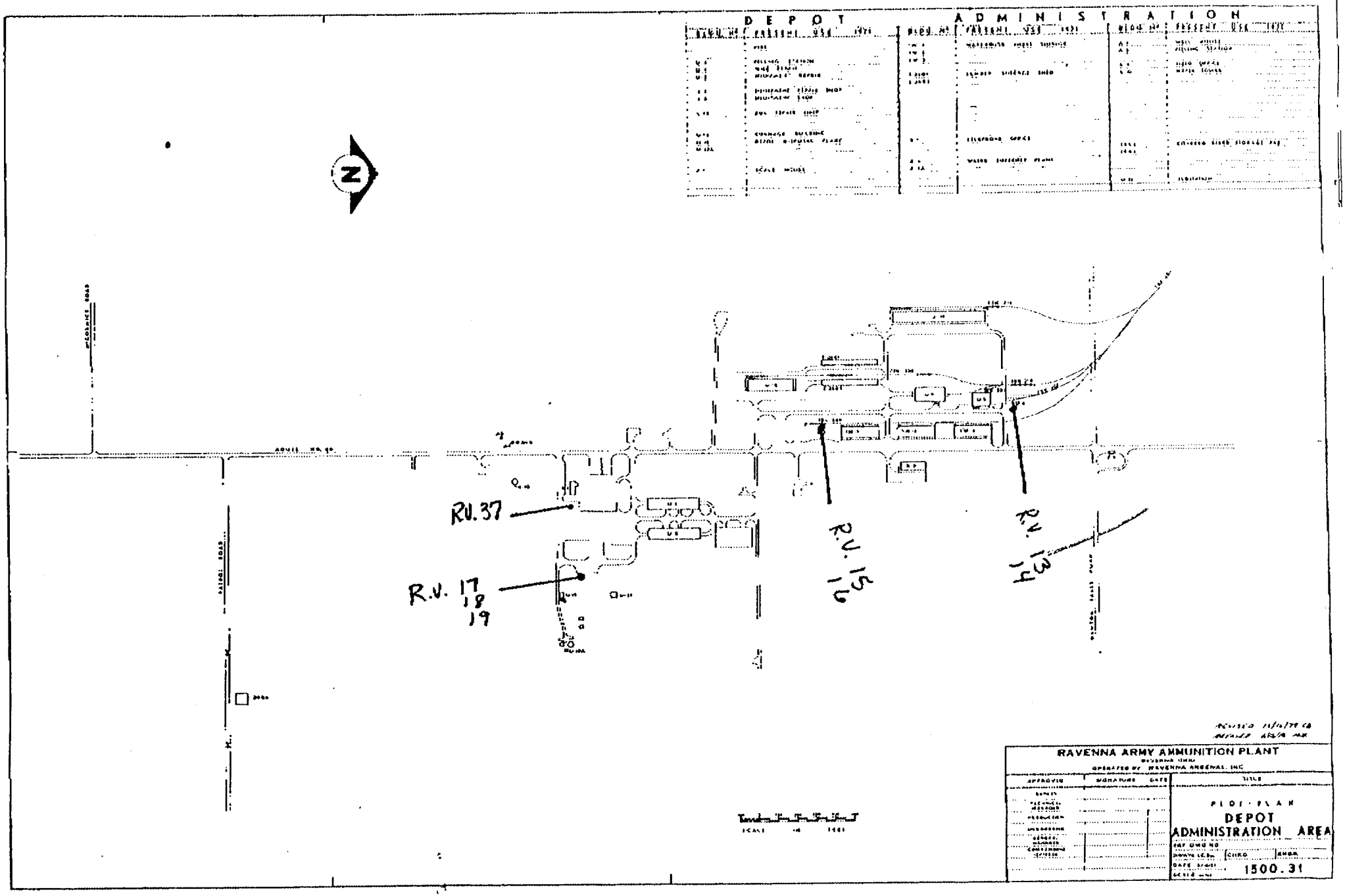
RECEIVED

FEB 12 1990

STATE FIRE MARSHAL
UNDERGROUND TANK PROGRAM


A D M I N I S T R A T I O N A R E A
N
R.V. 23
RAVENNA ARMY AMMUNITION PLANT
ADMINISTRATION AREA
1500 30


TRANSPORTATION AREA
RU. 11
RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO
OPERATED BY RAVENNA ARSENAL, INC.
APPROVED
SIGNATURE
DATE
TITLE
PLOT PLAN
TRANSPORTATION AREA
1500.33


DEPOT
ADMINISTRATION
R.V. 37
R.V. 17
18
19
R.V. 15
16
R.V. 13
14
RAVENNA ARMY AMMUNITION PLANT
OPERATED BY RAVENNA ARSENAL, INC
PLOT PLAN
DEPOT
ADMINISTRATION AREA
1500.31

TANK NO.	CAPACITY	LOCATION
RV-11	15,000 Gal.	Railroad Yard, South Service Road
RV-13	12,000 Gal.	Building U-6 (N)
RV-14	12,000 Gal.	Building U-6 (S)
RV-15	12,000 Gal.	Building U-3 (S)
RV-16	12,000 Gal.	Building U-3 (N)
RV-17	3,900 Gal.	Building A-6 (N)
RV-18	3,900 Gal.	Building A-6 (C)
RV-19	3,900 Gal.	Building A-6 (S)
RV-23	15,000 Gal.	Building 1045
RV-37	5,000 Gal.	Building A-1
RV-52	1,000 Gal.	1000' SW of Intersection of Paris-Windham and Newton Falls Road

RAVENNA ARSENAL INC.
8451 STATE ROUTE 5
RAVENNA, OHIO 44266-9297
Telephone (216) 358-7111
Autovon 346-3210

Filmed

February 23, 1990

RECEIVED
FEB 26 1990

THRU: Contracting Officer's Representative
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266-9297

23Feb90

TO: Ohio Department of Commerce
Division of State Fire Marshal
Bureau of Underground Storage Tank Regulations
ATTN: Michelle Tarka, Site Coordinator
7510 East Main Street
P.O. Box 525
Reynoldsburg, Ohio 43068-3395

Subject: Site investigation report for leaking underground storage tanks.

Dear Ms. Tarka:

Pursuant to Rule 1303:7-7-36 of the Ohio Administrative Code, following is the Site Investigation Report for leaking underground storage tanks at the Ravenna Army Ammunition Plant (RVAAP).

Your office was notified that three underground storage tanks at RVAAP failed their tank tightness tests. Tank #11 contained #2 fuel oil; leakage indicated by the test was .353 gph. Tank #23 contained #2 fuel oil; leakage indicated by the test was .3005 gph. Tank #33 contained #2 fuel oil; leakage indicated by the test was .065 gph.

The tanks were drained immediately upon learning of the test results. Quantity of product released is unknown, however, it is believed to be minimal. Soils surrounding the tanks are generally a low permeability silty clay loam. No free product was observed in the surrounding soils.

R&R International Inc. has cleaned, removed and disposed of the tanks. Any visibly contaminated soils, or soils suspected to be contaminated based on PID screening, were excavated. R&R collected samples from the sidewalls and bottom of the excavated pits for Tanks #23 and #33. Bedrock was encountered during the excavation

679098_01

of Tank #11, and samples were taken from soils in two sidewalls and the excavation pit bottom. The two remaining sidewalls were excavated to bedrock, no samples were taken from these areas. Groundwater was not encountered in any of the excavations. Samples collected from the excavated areas were tested for benzene, ethyl benzene, toluene, and xylene (BTEX), total lead, and total petroleum hydrocarbons (TPH), using methods set forth in SW-846. Analytical results for TPH and BTEX have been received and are enclosed. The remaining results are expected to be received by February 26, 1990. These results will be immediately forwarded to your attention upon receipt.

Excavated soils were sampled to characterize them for disposal. These samples will be analyzed for TPH, E.P. Toxicity, percent solids and flash point using methods set forth in SW-846.

Groundwater is currently the exclusive source of water supply for RVAAP. The location of active groundwater production wells is shown in Attachment #1. None of these wells is located with 1,000 ft. of the leaking tanks. A description of soil characteristics and a map showing subsurface soil distribution on site is shown in Attachment #2. Local climatogical conditions are shown in Attachment #3. Surrounding land use is residential; the closest residence to a leaking tank location on the installation is approximately 4,000 ft.

This installation's point of contact for this subject is Susan McCauslin, Environmental Specialist, (216)297-3220.

Sincerely,

Ravenna Arsenal, Inc.

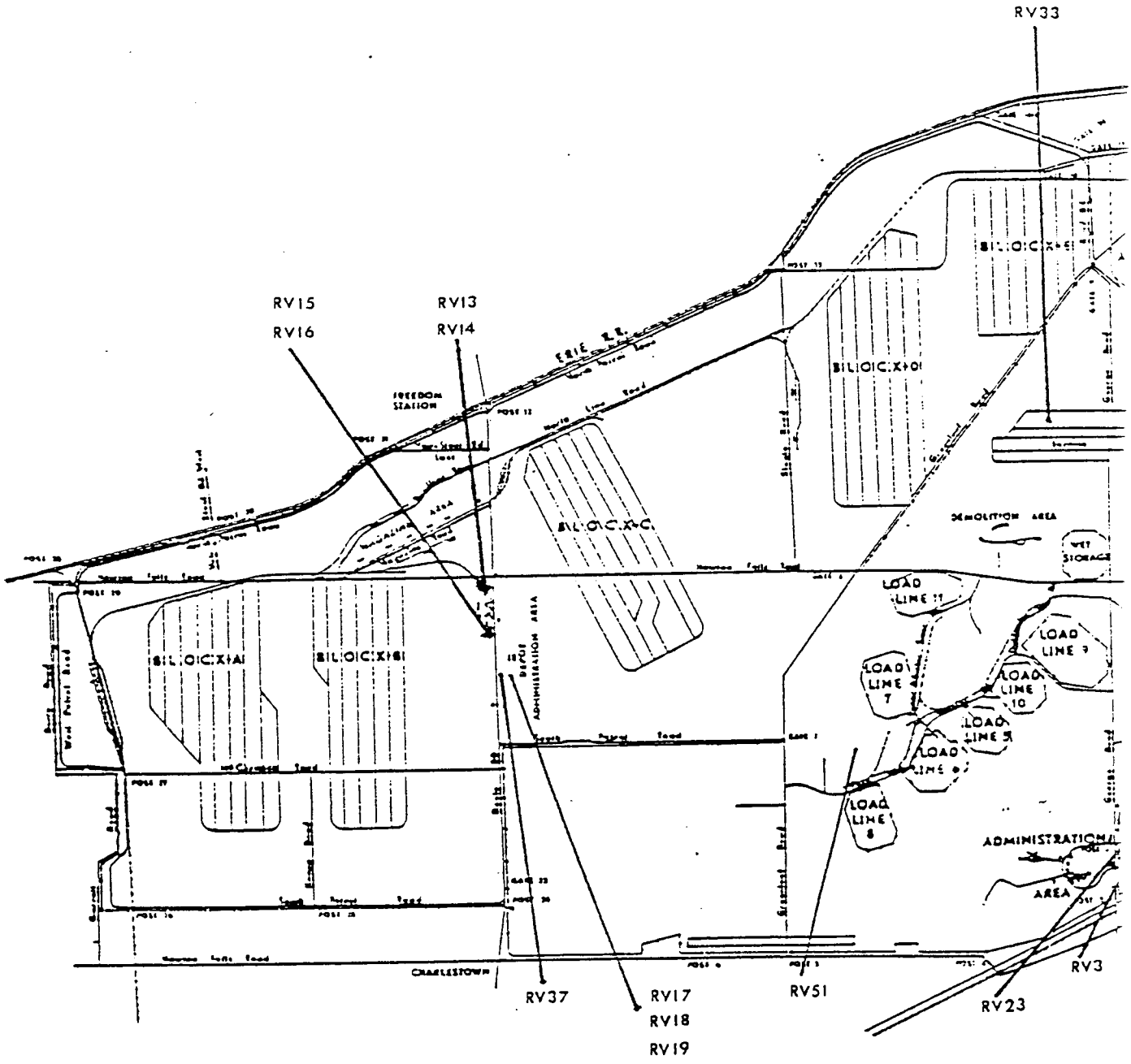
H.R. Cooper

H.R. Cooper
Plant Engineer

HRC:SM:ade:90002

cf: Commander
AMCCOM
AMSMC-ISE
Rock Island, IL 61299-6000

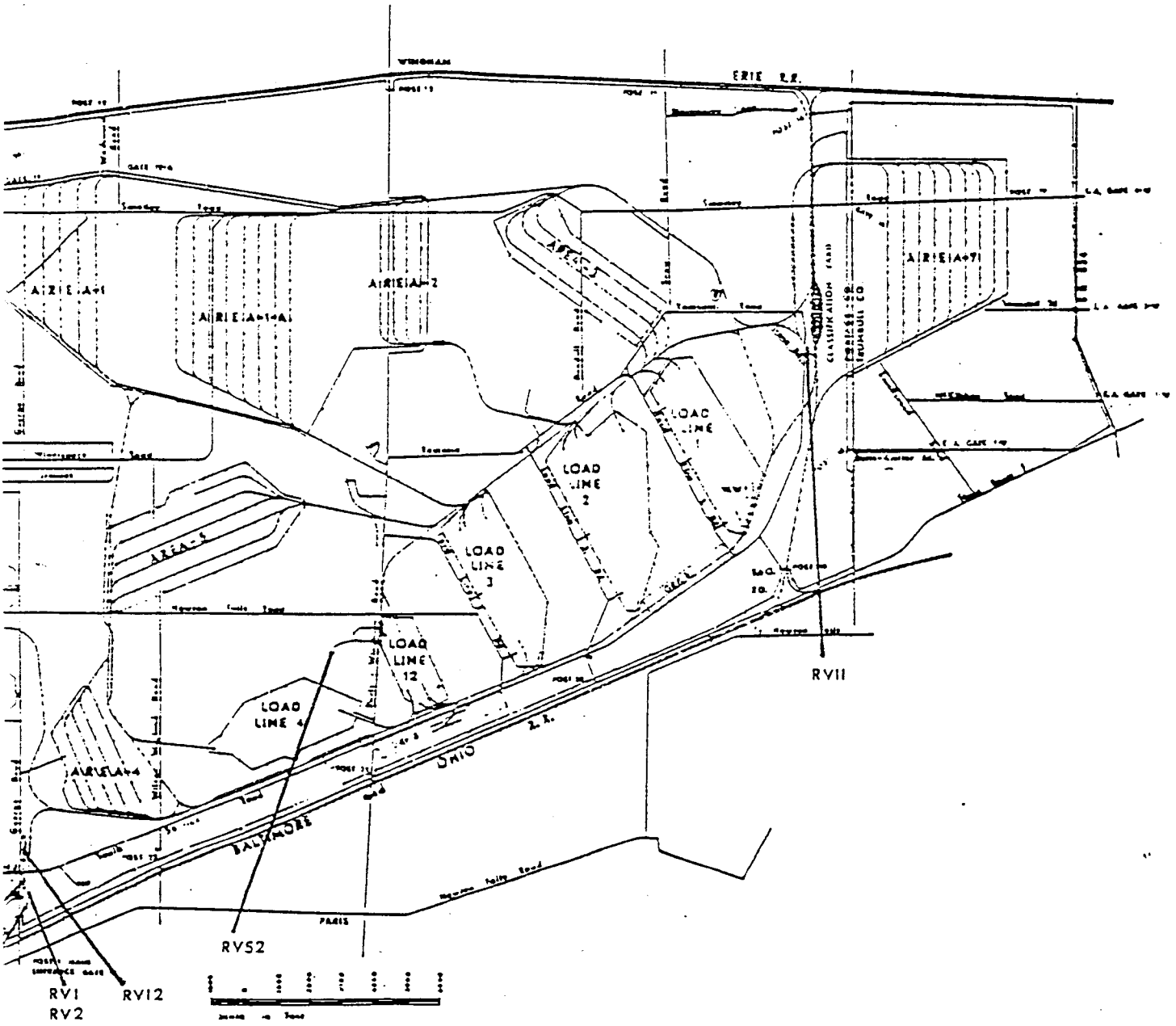
cc: N. Wulff
File



679298-01

NOTE: Tanks RV13, RV14, RV15, RV16, RV17, RV18, RV19, RV37 and RV52 are scheduled for removal in 1990.

USTs



RAVENNA ARMY AMMUNITION PLANT RAVENNA, OHIO OPERATED BY RAVENNA ARSENAL, INC.			
APPROVED	SIGNATURE	DATE	TITLE
SAFETY			GENERAL AREA MAP
TECHNICAL MANAGER			
PRODUCTION			
ENGINEERING			
GENERAL MANAGER			
COMMANDING OFFICER			
			REF. DWG NO.
			DRWN. CHKD. ORIGR.
			DATE SCALE A-109

HOLK ENVIRONMENTAL SERVICES, INC.

7777 Wall Street
Valley View, Ohio 44125
(216) 524-0888
FAX (216) 524-2090

Date Received: 2-15-90

Customer I.D.: Ravenna Arsenal

P.O.#: vb. VM/JO

Date Reported: 2-20-90

HOLK-Lab #: B9015-2-7

Description: soil samples

Nozzle New, Inc.
34412 Pettibone Road
Solon, Ohio 44139
Attn: Mr. Vince Marek

Customer I.D.	HOLK-Lab #	BTEX*
Tank #2 (RU 11) (East)	B9015-2	<2 ppb
Tank #2 (Center)	B9015-3	<2 ppb
Tank #2 (West)	B9015-4	<2 ppb
Tank #3 (RU 22) (North)	B9015-5	<2 ppb
Tank #3 (Center)	B9015-6	<2 ppb
Tank #3 (South)	B9015-7	<2 ppb

* Benzene, Toluene, Ethylbenzene, Xylene

Thomas H. Richert
Director of Analytical Services

THR/tlg

The foregoing is limited to findings based upon material received f analysis and/or information furnished by client. Samples received will disposed of after 30 days.

RAVENNA ARSENAL INC.

8451 STATE ROUTE 5
RAVENNA, OHIO 44266-9297

Telephone (216) 358-7111

Autovon 346-3210

Filmed

RECEIVED
MAR 30 1990
STATE FIRE MARSHAL
UNDERGROUND TANK PROGRAM

March 19, 1990

THRU: Contracting Officer's Representative
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266-9297

22 Mar 90

TO: Ohio Department of Commerce - Division of State Fire Marshal
Bureau of Underground Storage Tank Regulations
ATTN: Michelle Tarka, Site Coordinator
7510 East Main Street
P.O. Box 525
Reynoldsburg, Ohio 43068-3395

Subject: Incident 679298-01, RVAAP Tank #33, Total Lead Results

Dear Ms. Tarka:

As a follow up to our February 23, 1990 site investigation report for leaking underground storage tanks enclosed you will find total lead results for samples taken in the excavated tank pit RV33 after tank removal.

This submission will complete our Site Investigation Report for the subject incident. Please feel free to contact Susan McCauslin, Environmental Specialist at (216)297-3220 if you have any questions or require further information regarding this subject.

Sincerely,

Ravenna Arsenal, Inc.

H.R. Cooper

H.R. Cooper
Plant Engineer

HRC:SM:ade:90005

cc: N. Wulff
W. Carkido
S. McCauslin
File

cf: Commander
AMCCOM
AMSMC-ISE

HOLK ENVIRONMENTAL SERVICES, INC.

7777 Wall Street
Valley View, Ohio 44125
(216) 524-0888
FAX (216) 524-2090

Date Received: 2-15-90

Customer I.D.: Ravenna Arsenal

P.O.#: vb, VM/JO

Date Reported: 2-20-90

HOLK-Lab #: B9015-2-7

Description: soil samples

Nozzle New, Inc.
34412 Pattibone Road
Solon, Ohio 44139
Attn: Mr. Vince Marek

Customer I.D.	HOLK-Lab #	TPH
Tank #2 (RU11) (East)	B9015-2	22 ppm
Tank #2 (Center)	B9015-3	18 ppm
Tank #2 (West)	B9015-4	17 ppm
Tank #3 (RU 22) (North)	B9015-5	23 ppm
Tank #3 (Center)	B9015-6	18 ppm
Tank #3 (South)	B9015-7	44 ppm

Thomas H. Richert
Director of Analytical Services

THR/tlg

The foregoing is limited to findings based upon material received fc analysis and/or information furnished by client. Samples received will b disposed of after 30 days.

HOLK ENVIRONMENTAL SERVICES, INC.

7777 Wall Street
Valley View, Ohio 44125
(216) 524-0888
FAX (216) 524-2090

Date Received: 2-15-90

Customer I.D.: Ravenna Arsenal

P.O.#: vb. VM/JO

Date Reported: 2-20-90

HOLK-Lab #: B9015-8-13

Description: soil samples

Nozzle New, Inc.
34412 Pettibone Road
Solon, Ohio 44139
Attn: Mr. Vince Marek

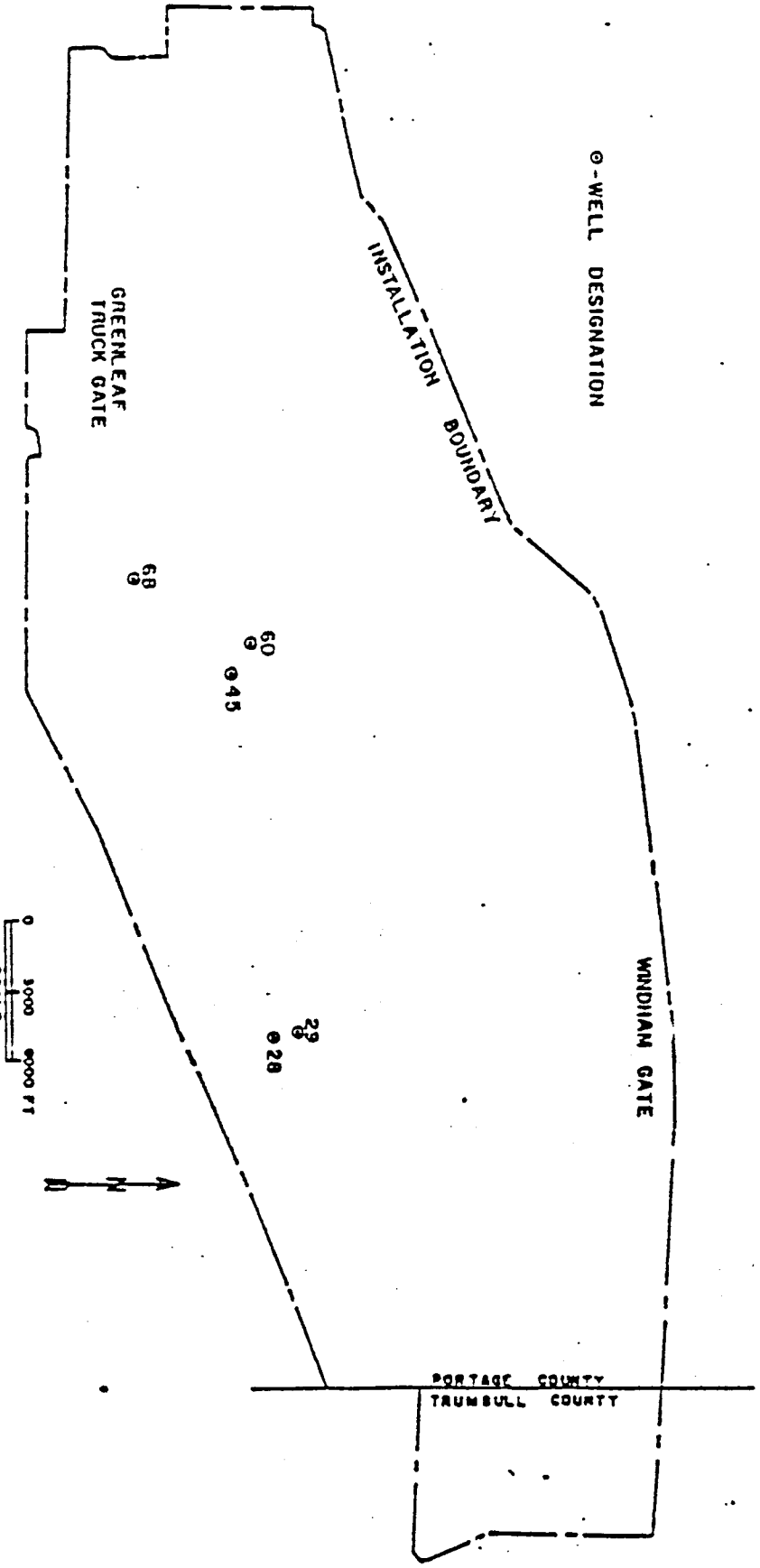
Customer I.D.	HOLK-Lab #	TPH
Tank #1 (North) (RV 33)	B9015-8	149 ppm
Tank #1 (Center)	B9015-9	305 ppm
Tank #1 (South)	B9015-10	158 ppm
Tank #4 (North) (RV 23)	B9015-11	37 ppm
Tank #4 (Center)	B9015-12	67 ppm
Tank #4 (South)	B9015-13	394 ppm

Thomas H. Richert
Director of Analytical Services

THR/tlg

The foregoing is limited to findings based upon material received f analysis and/or information furnished by client. Samples received will disposed of after 30 days.

ATTACHMENT #1



MAP OF RAAP, SHOWING LOCATION OF PRODUCTION WELLS

Soil Characteristics.*

(1) Distribution. RAAP contains three distinct soil associations; their distribution is depicted on Figure 1. Most of the installation is mantled by somewhat poorly drained and slowly permeable silt loams which have developed over silty clay loam or clay loam glacial till. The till soils in the western quarter of RAAP contain a restrictive, cemented subsoil layer (fragipan). The northeastern fringe of RAAP contains poorly drained but moderately permeable silt loams formed in silty, stream-deposited, alluvium on flood plains.

(2) Description.

(a) Mahoning-Ellsworth Soil Association. The topsoil consists of 8 inches of friable, dark grayish-brown silt loam; the subsoil consists of 52 inches of firm brown silty clay loam. The top 3 to 4 feet possess a pH ranging from 4.5 to 7.3; however, below that the soil is alkaline (7.4-8.4). These soils display slow to very slow permeability.

(b) Wadsworth-Rittman Soil Association. The topsoil consists of 8 inches of friable, dark grayish-brown silt loam; the subsoil consists of 19 inches of yellowish-brown silty clay loam over 21 to 33 inches of brown, very firm and brittle cemented, clay loam or silty clay loam (fragipan). These soils have a pH ranging from 4.5 to 7.8 and display slow permeability.

(c) Sebring-Holly Soil Association. The topsoil consists of 10 inches of friable gray silt loam; the subsoil contains 50 inches of gray silt loam to silty clay loam. The soil pH ranges from 5.1 to 7.3, and the soil permeability is moderately slow to moderately rapid.

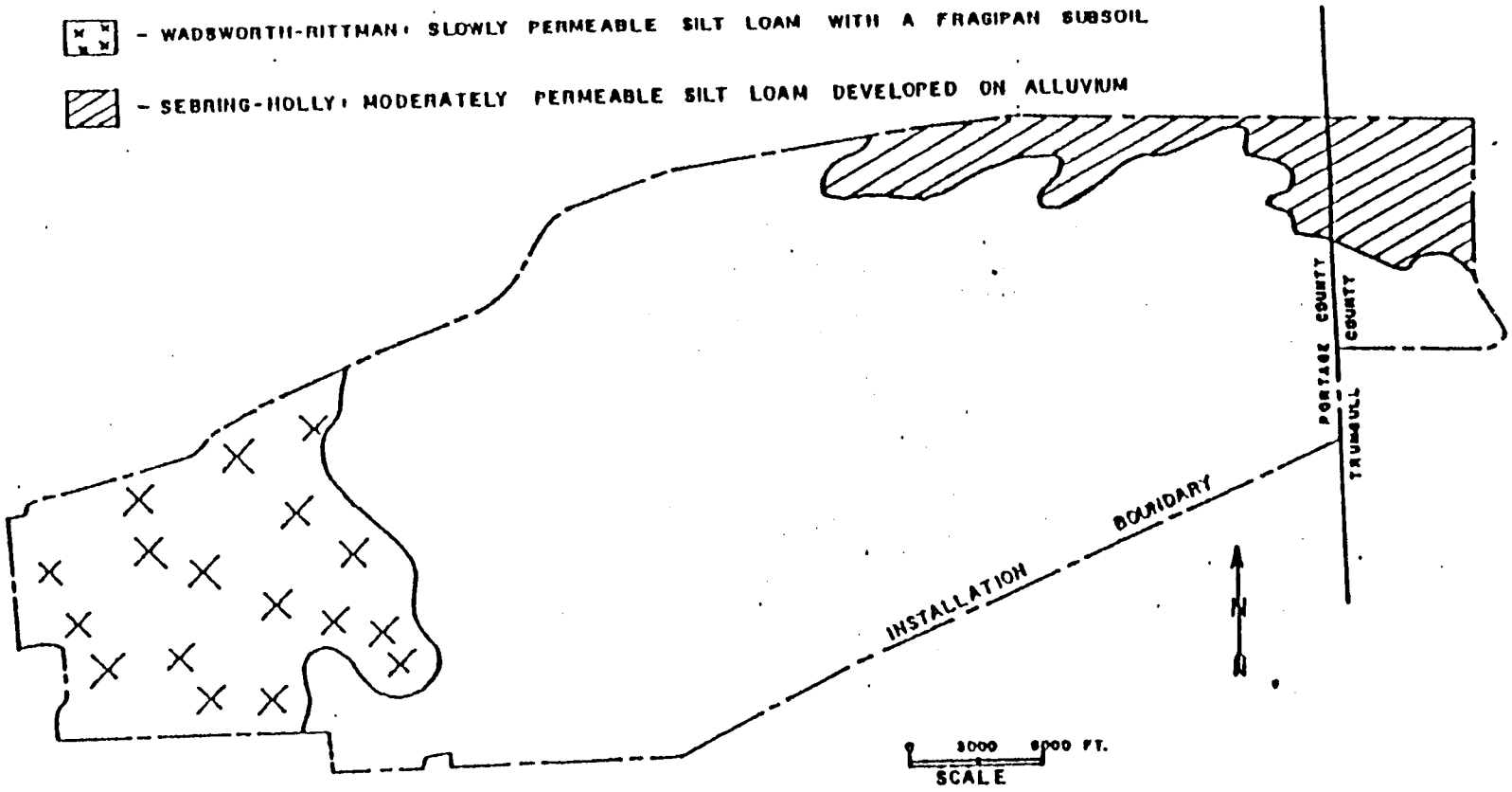
---

* Source of information is "An Inventory of Ohio Soils, Portage County," Ohio Department of Natural Resources, Progress Report No. 38 (1973)

ATTACHMENT #2

EXPLANATION OF SOIL ASSOCIATION:

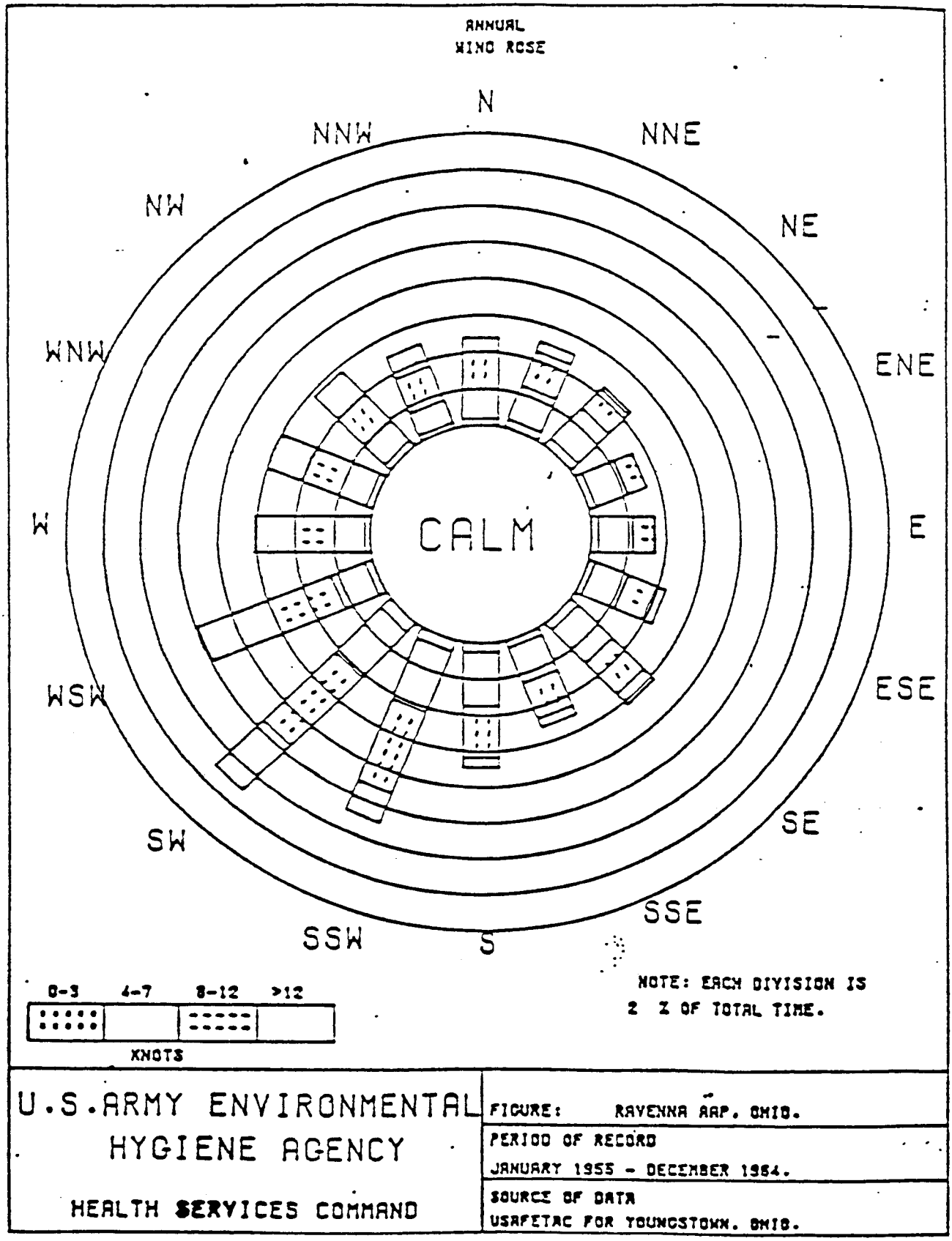
- MAHONING-ELLSWORTH: SLOWLY PERMEABLE SILT LOAM DEVELOPED ON GLACIAL TILL
- WADSWORTH-RITTMAN: SLOWLY PERMEABLE SILT LOAM WITH A FRAGIPAN SUBSOIL
- SEBRING-HOLLY: MODERATELY PERMEABLE SILT LOAM DEVELOPED ON ALLUVIUM



MAP OF RAAP, SHOWING SOIL GROUP DISTRIBUTION

ATTACHMENT #3

The plant site has a continental climate with temperature extremes of -21°F in January and 100°F in July. The annual mean precipitation is 36 inches. The annual mean snowfall is 48 inches. The prevailing winds are south and southwest and average 10 miles/hour.



HOLK ENVIRONMENTAL SERVICES, INC.

7777 Wall Street
Valley View, Ohio 44125
(216) 524-0888
FAX (216) 524-2090

Date Received: 2/15/90
Date Reported: 3/14/90

Client Sample I.D.: Ravenna Arsenal
HOLK Sample I.D.: B9015-2-8,10-13
Sampled By: Client
P.O.#: vb. VH/JO
Sample Description: brown soils

Nozzle New, Inc.
34412 Pettibone Road
Solon, Ohio 44139

	CLIENT SAMPLE I.D.	HOLK SAMPLE I.D.	TOTAL LEAD (ppm)	REAGENT BLANK (mg/l)	STANDARD RECOVERY (%)
RU #11	Tank #2 East	B9015-2	6.74	<0.01	101
	Tank #2 Center	B9015-3	5.69	<0.01	101
	Tank #2 West	B9015-4	5.84	<0.01	101
RU#22	Tank #3 North	B9015-5	3.47	<0.01	101
	Tank #3 Center	B9015-6	2.62	<0.01	101
	Tank #3 South	B9015-7	2.92	<0.01	101
RU#33	Tank #1 North	B9015-8	15.0	<0.01	101
	Tank #1 South	B9015-10	10.8	<0.01	101
RU#23	Tank #4 North	B9015-11	37.0	<0.01	86
	Tank #4 Center	B9015-12	23.4	<0.01	86
	Tank #4 South	B9015-13	28.1	<0.01	86

Ronald A. Baracona
Ronald A. Baracona
LABORATORY MANAGER

RAB/tlg

The foregoing is limited to findings based upon material received f analysis and/or information furnished by client. Samples received will

inter-office communication

to: Rod Beals, OEPA, DERR, NEFO date: June 4, 1991

from: Michelle Tarka through Raymond Roe

subject: BUSTR Incident #679298-01

Ravenna Army Ammunition Plant
George Road Burning Ground
Ravenna, OH 44266
Portage County

File #679298-01 concerns the removal of a 2,000 gallon UST that contained fuel oil used to heat a detonation chamber. The fuel oil was consumed in this process. The tank in question is referred to as RV33 by the Ravenna Arsenal. As this incident is considered NON-LTF, it is being referred to OEPA for any follow up deemed necessary.

MT/sk

Attachment

cc: 679298-01

679298-01

RAVENNA ARMY AMMUNITION PLAN
8451 STATE ROUTE 5
RAVENNA, OHIO 44260

December 8, 1989

State Fire Marshal's Office
Department of Commerce
8895 E. Main Street
Reynoldsburg, Ohio 43068

ATTN: Mr. Todd Parfitt

SUBJECT: Underground Storage Tank Compliance Milestone

Ravenna Army Army Ammunition Plant has 17 regulated tanks which require tank and piping tightness testing by December 22, 1989. Of these 9 have been out of service over one year and are planned for removal. These out of service tanks are filled with water and a chromium based corrosion inhibitor. The remaining 8 tanks are planned for tightness testing as soon as funding is provided by the Army. They contain fuel oil and gasoline for use in plant operations.

We have been working since June to obtain funding for the removal and the testing projects. However, our command group has been swamped with requests for environmental project funds to the point where our projects have not been funded. The congressional delay in approving the FY-90 Department of Defense appropriations has delayed the processing of current year projects.

We have solicited bids and selected the contractors to perform both projects so that contracts may be placed within days of the receipt of funding. The required applications for tank removal permits have been submitted to your office.

We request an extension of the deadline for testing and removal as follows:

Tightness testing of 8 UST's	September 1, 1990
Removal of 9 UST's	November 1, 1990

These requested dates are based on an estimated July 1, 1989 date for receipt of funding; 120 days for mobilization of the contractor and removal of the tanks to be removed; and 60 days to mobilize the contractor and complete the testing of the tanks to be tested.

For your information the tanks to be removed are registered with your office as tank numbers: RV-13, RV-14, RV-15, RV-16, RV-17, RV-18, RV-19, RV-37, RV-52

The tanks to be tested are registered with your office as tank numbers:
RV-1, RV-2, RV-3, RV-11, RV-12, RV-23, RV-33, RV-51

We appreciate your consideration in this matter.

R. J. Kasper, Commander's Representative

cf: AMSMC-PCG-B
AMSMC-ISE

679298-01

HRC/wt/ust.doc

Duplicate site

REPORT #: 16|7|9|2|9|8|-01 SUSPECTED RELEASE REPORT

Filmed

DATE: 1|15|90

TIME: 4:89 pm

== [1] PERSON REPORTING THE RELEASE ==

NAME: Tom Chanda TITLE: Env. Eng. PHONE: 216 297-3221

AGENCY/COMPANY: Ravenna Army Munitions Plant RELATION TO SITE: _____

ADDRESS: ~~8451~~ St. Rt. 5 CITY: Ravenna ST: OH ZIP: 44266-9297

REMARKS: UST failure .0825 gph. Going to separate plumbing line from tank. They will pump out tank tonight. All this Petro #2 fuel oil

== [2] SUSPECTED RELEASE LOCATION ==

FACILITY: U.S ~~Army~~ Army Munitions Plant USTR ID#: _____

ADDRESS: 6615 N. Old George Rd. Burning Grounds COUNTY: Portage

CITY: Ravenna ST: OH ZIP: 44266 PHONE: |____|_____

UST OWNER: _____ PHONE: |____|_____

REMARKS: Fuel oil used as lubricant in munitions production. — used to heat the detonation chamber consumed in process

FIRE DEPT: ~~Ravenna~~ CONTACT: ~~Chief Stafford~~ PHONE: ~~216 297-5938~~

on FD on site Chief Watson 216 297-3222

== [3] CONDITIONS LEADING TO REPORT OF SUSPECTED RELEASE (Check all that apply) ==

___ Inventory control results indicate a release may have occurred.

✓ Testing, monitoring or sampling results indicate a release may have occurred.

___ Unusual operating conditions observed (e.g., sudden drop in tank volume).

___ Impacts noticed in area surrounding tank (e.g., vapors, well contaminated, run-off).

___ Soil contaminated, or soil exceeds 100 ppm total hydrocarbons using G.C. or O.V.A.

___ Spill or overfill of petroleum in excess of 25 gallons.

___ Spill or overfill of petroleum less than 25 gallons when containment is not possible.

___ Spill or overfill of petroleum below ground, or soaking into ground after spill.

___ Spill or overfill of petroleum to surface water when petroleum creates sheen on water.

OTHER CONDITIONS: failed 1st TTT .0825 gph; failed 2nd time .06 gph will remove tank

== [4] SUSPECTED SUBSTANCE RELEASED ==

✓ GASOLINE ___ DIESEL FUEL ___ KEROSINE ___ USED OIL ___ HYDRO LIFT
✓ OTHER PETRO ___ HAZ SUBST ___ PROBLEM FLAG ___ UNKNOWN

********** COMPLETE REVERSE SIDE **********

== [11] REPORT DISPOSITION (Indicate actions taken on reverse side) ==

TAKEN BY: Roc. EMERGENCY ACTION? ___YES X NO BY: ___FM ( ) ___OEPA

COORD: TARKA REPORT/ACTION APPROVED: (PER) DATE: 1|15|90 TIME: 3:47pm

LOGGED BY: _____ DATE: ___|___|___ ENTERED BY: SA DATE: 2|16|90

CIRCLE STATUS: RPT (SUS) CON ICA FPR SAP LCA NFA PRIORITY: 1 2 (3) 4 CLASS: A B C (D) LTF (NON-LTF)

Filmed

BUREAU OF UNDERGROUND STORAGE TANK REGULATIONS

UNDERGROUND TANK LEAK/SPILL REPORT

DATE: 1-15-90

TIME: 4:09

PLEASE PRINT

PERSON REPORTING THE LEAK/SPILL

NAME: TOM CHANDA TITLE: ENVIORMENTAL ENG. PHONE: (216) 297-3221

AGENCY/COMPANY: RAVENNA ARMY MUNITIONS PLANT

ADDRESS: 8451 STATE RT #5 CITY: RAVENNA STATE: OH ZIP: 44266-9297

LOCATION OF LEAK/SPILL

FACILITY NAME: UST test failed. RESULTS AT POINT .0825 G.P.H.

ADDRESS: _____ COUNTY: _____

CITY: _____ STATE: _____ ZIP: _____ PHONE: ( ) _____

FIRE DEPT: _____ CONTACT: _____ PHONE: ( ) _____

NATURE OF PROBLEM *(PLEASE PRINT)*

GOING TO SEPERATE PLUMBING LINE FROM TANK.
WILL RETEST UST IF TST FAILS TANK WILL BE DRAINED TONITE

SECURITY: CALL BUSTR EMERGENCY PAGER NUMBER 229-1545
WAIT FOR BEEP
DIAL IN YOUR NUMBER 614-752-8200
PUNCH THE # KEY ON THE TELEPHONE - YOU SHOULD GET A BUSY SIGNAL -THIS WILL INDICATE YOU HAVE COMPLETED THE PAGE CORRECTLY -
IF YOU DON'T GET A BUSY SIGNAL, REDIAL

IF NO RESPONSE AFTER 15 MINUTES, CALL THE BUSTR EMERGENCY PAGER NUMBER AGAIN AT 15 MINUTE INTERVALS. ONE OF THE SUPERVISORS WILL RETURN THE CALL.

REV 11/22/89

679298-01

DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location)

Tank Identification No. (e.g., ABC-123 Arbitrarily Assigned Sequential Number (e.g., 1,2,3...))	Tank No. 1	Tank No. 2	Tank No. 3	Tank No. 4	Tank No. 5
A. Status of Tank (Mark all that apply X)	RV-18	RV-19	RV-23	RV-33	RV-37
1 Currently in Use	☐	☐	☒	☐	☐
2 Temporarily Out of Use	☒	☒	☐	☒	☒
3 Permanently Out of Use	☐	☐	☐	☐	☐
B. Date Installed (mo/yr.)	Mar / 1942	Mar / 1942	Mar / 1942	Jun / 1965	Mar / 194
C. Estimated Total Capacity (Gallons)	3,900	3,900	15,000	2,000	5,000
D. Tank Material of Construction (Mark one X)					
1 Steel	☒	☒	☒	☒	☒
3 Concrete	☐	☐	☐	☐	☐
2 Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
0 Unknown	☐	☐	☐	☐	☐
9 Other, Please Specify					
E. Tank Internal Protection (Mark all that apply X)					
3 Cathodic Protection	☐	☐	☐	☐	☐
1 Interior Lining (e.g., epoxy resins)	☐	☐	☐	☐	☐
2 None	☒	☒	☒	☒	☒
0 Unknown	☐	☐	☐	☐	☐
9 Other, Please Specify					
F. Tank External Protection					
Cathodic Protection	☐	☐	☐	☐	☐
1 Sacrificial Anodes	☐	☐	☐	☐	☐
2 Impressed Current	☐	☐	☐	☐	☐
3 Steel-FRP-Composites	☐	☐	☐	☐	☐
4 Painted (e.g., asphaltic)	☒	☒	☒	☒	☒
5 Unknown	☐	☐	☐	☐	☐
9 Other, Please Specify					
0 None	☐	☐	☐	☐	☐
G. Piping (Mark all that apply X)					
1 Bare Steel	☒	☒	☒	☒	☒
2 Galvanized Steel	☐	☐	☐	☐	☐
3 Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
4 Cathodically Protected	☐	☐	☐	☐	☐
0 Unknown	☐	☐	☐	☐	☐
9 Other, Please Specify					
H. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply X)					
8 a. Empty	☐	☐	☐	☐	☐
b. Petroleum					
2 Diesel	☐	☐	☐	☐	☐
3 Kerosene	☐	☐	☐	☐	☐
1 Gasoline (including alcohol blends)	☒	☒	☐	☐	☐
4 Used Oil	☐	☐	☐	☐	☐
9 Other, Please Specify			No. 2	NO. 2	No. 2
c. Hazardous Substance					
7 Please Indicate Chemical Abstract Service (CAS) No. of Principal CERCLA Substance	NA	NA	NA	NA	NA
Mark box X if tank stores a mixture of substances	☐	☐	☐	☐	☐
0 Unknown	☐	☐	☐	☐	☐
I. Corrosion Protection (if tank or piping are steel))					
As specified for factory-installed cathodic protection for steel tanks	☐	☐	☐	☐	☐
As specified for field-installed cathodic protection for steel tanks	☐	☐	☐	☐	☐
As specified for steel piping	☐	☐	☐	☐	☐
Another method approved by the State Fire Marshal. Specify:	None	None	None	None	None
J. Installation (Mark all that apply X) New tank systems only					
1 The installation was inspected by state or local fire officials	☐	☐	☐	☐	☐
2 Manufacture-supplied checklists of installation procedures were completed	☐	☐	☐	☐	☐
3 The tank and piping were tested for leaks during and after installation	☐	☐	☐	☐	☐
4 Other, Specify:	NA	NA	NA	NA	NA
K. Release Detection (Mark all that apply X):					
1 Vapor monitoring	☐	☐	☐	☐	☐
2 Groundwater monitoring	☐	☐	☐	☐	☐
3 Monitoring above an impermeable barrier	☐	☐	☐	☐	☐
4 Automatic in-tank monitoring and inventory control	☐	☐	☐	☐	☐
5 Secondary containment with interstitial monitoring	☐	☐	☐	☐	☐
6 Tank Testing: product inventory	☐	☐	☐	☐	☐
9 Another method approved by the State Fire Marshal. Specify	None	None	None	None	None
L. Release Detection Pressure Piping					
Rapid Detection	None	None	None	None	None
1 Automatic flow restrictors	☐	☐	☐	☐	☐
2 Automatic shutoff device	☐	☐	☐	☐	☐
3 Continuous monitoring system (alarm within 1 hour)					
Interstitial monitoring	☐	☐	☐	☐	☐
Vapor monitoring	☐	☐	☐	☐	☐
Backup method	None	NOne	None	None	None
1 Line tightness test (annual)	☐	☐	☐	☐	☐
2 Monthly method					
Vapor monitoring	☐	☐	☐	☐	☐
Groundwater monitoring	☐	☐	☐	☐	☐
Interstitial monitoring	☐	☐	☐	☐	☐

Filmed

TELEPHONE MEMORANDUM

REPORT #: 6|7|9|2|9|8|-|0|1|-|_|_|_|_|_|

DATE: 1|17|90

TIME: 8|35

CALL TO [ ] FROM [✓]

NAME: Tom Chanda TITLE: _____ PHONE (216) 297-3221

AGENCY/COMPANY: Ravenna Army Ammunition RELATION TO SITE _____

ADDRESS: _____ CITY: Ravenna ST: _____ ZIP: _____

SUBJECT: _____

NOTES & SUMMARY

first call to Raymond Roe on system TII, .0825/gph leak rate

- retested after separating piping and the tank had a leak rate of .106/gph
- The will remove the tank
- #2 fuel oil used in production (specifically in the demilling of small arms ammunition

1-30-90 called Sue McCausland - asked for site map - she will FAX ASAP

BUSTR STAFF MEMBER: Pat D CONTINUED ON BACK: _____ PAGES ATTACHED _____

Filmed

TELEPHONE MEMORANDUM

REPORT #: 6792918.01 DATE: 11/8/90
TIME: 2145

CALL TO [X] FROM [ ]

NAME: Tom Chanda TITLE: PHONE (216) 297-3221
AGENCY/COMPANY: Ravenna Army RELATION TO SITE
ADDRESS: CITY: ST: ZIP:
SUBJECT:

NOTES & SUMMARY

the tank holds #2 Fuel used to heat the detonation chamber (shoot flame through chamber to point of detonation)

plan to remove tank, its pumped dry, next week contractor ready

~ 12 other tanks to come out on other properties

project will go over to Enviro Engin
Sue McCauslin
216-297-3220

not a flow through process tank

BUSTR STAFF MEMBER: TARA CONTINUED ON BACK: PAGES ATTACHED

Filmed

SITE LISTING UPDATE FORM

EXISTING INCIDENT #: 1 6 7 9 2 9 8 1 - 0 1 0 1 - 9 0 0 9 0 9 UPDATE.001 REV 8/89

FACILITY NAME: Ravenna Army Ammunition Plant NEW FACILITY INFO? ___ YES ✓ NO (Update on back)

[1] REASON FOR LISTING UPDATE

___ [1] Written report/results received from owner/operator.
✓ [2] Verbal report/results received from owner/operator.
___ [3] Written report received from BUSTR contractor.
___ [4] Information collected from BUSTR field examination/inspection.
___ [5] Change in site coordinator/contractor assignment.
___ [6] Change/delete existing incident number - explain change in remarks section [5].
___ [7] Create new incident number for additional suspected facility/location.
___ [8] Orders issued.
___ [9] Other:

[2] NEW SITE LISTING DATA

INCIDENT #: 1 6 7 9 2 9 8 1 - 0 1 0 1 - 9 0 0 9 0 9
REPORT NUMBER FAC TRKG# SPRC

EMERGENCY RESPONSE: ___ YES ✓ NO BY: ___ FM (_____) ___ OEPA ___ USEPA

STATUS: ___ RPT ✓ SUS ___ DIS ___ CON ___ ICA ___ ICR ___ ICC ___ SAS ___ SAC ___ CAS ___ CAP ___ NFA

PRIORITY: ___ 1* ✓ 2 ___ 3 ___ 4 ___ 5

CLASSIFICATION: ___ A ___ B ___ C ✓ D LTF ELIGIBILITY: ___ YES (1) ___ NO (2)

SITE COORDINATOR: TURKA CONTRACTOR: _____ WORK ORDER: _____

* [3] SITE SUMMARY (UPDATE FOR ALL PRIORITY 1 SITES)

(First sentence - why is it a 1? Second sentence - who is doing what at this time)

[4] NEW EXCEPTION REPORT DATA

___ [1] State plans to obligate over $100,000 at a site.
___ [2] State actually obligated over $100,000 at a site (cumulative expenses exceeded $100,000 this quarter).
___ [3] State plans to use innovative or experimental technology at the site.
___ [4] State plans to provide permanent alternative drinking water supply.
___ [5] State plans to permanently relocate residents.
___ [6] State reached/received cost recovery settlement; amount: _____.

[5] SITE MANAGEMENT REMARKS

(BUSTR actions needed/taken, reports expected, etc.)

are CON. tank and one SUS tank at the facility. most recent report 1-19-90. Request site coordinator change from Parfitt to NE District Coordinator.

[6] FOLLOW-UP BUSTR ACTIONS/ASSIGNMENT

(For use by supervisor)

UPDATE SUBMITTED BY: Parfitt DATE: 1 19 90

APPROVED: ROR DATE: 1 29 90 ENTRY: ST DATE: 1 30 90

RAVENNA ARSENAL INC.

8451 STATE ROUTE 5
RAVENNA, OHIO 44266-9297

Telephone (216) 358-7111

Autovon 346-3210

January 30, 1990

THRU: Contracting Officer's Representative
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266-9297

31 Jan 90

TO: Ohio Department of Commerce
Division of State Fire Marshal
Bureau of Underground Storage Tank Regulations
ATTN: Michelle Tarka, Site Coordinator
7510 East Main Street
P.O. Box 525
Reynoldsburg, Ohio 43068-3395

Subject: Request For Extension Of Time To Complete Investigation Of Leaking UST

Dear Ms. Tarka:

Your office has been notified about three tanks which failed their tank tightness tests.

The tanks were drained as soon as the test results were known. The earth surrounding the tanks are generally low permeability clay.

These tanks were included in a project to test eight tanks at the Ravenna Army Ammunition Plant. After each of the first tanks failed, the plant requested funding from the Army Command Headquarters to remove the tanks to comply with the requirements of OAC Rule 1301:7-7-36.

The command waited for the results of the last leak test so that it could be included in the same project if it failed. It failed its test on January 26, 1990.

We hereby request a 20 day extension to the allowed time of 20 days to remove a tank. The extension is requested for each tank. This will allow for the time delay in funding the removal of the first tanks while waiting on the results of the third test. It will also allow for approximately one week to process a contract modification and for the fact that the contractor has three tanks to remove almost simultaneously. We expect to have the tanks removed and the required samples taken by the requested extended deadlines.

679298 - 01-9000

A summary of the proposed dates are as follows:

	Date Reported	20 Days	20 Day Extension
Tank No. 33	January 15	Feb. 4	February 24
Tank No. 23	January 19	Feb. 8	February 28
Tank No. 11	January 26	Feb. 15	March 7

Sincerely,

RAVENNA ARSENAL, INC.

H. R. Cooper
Plant Engineer

HRC/wt/hc90008

cf: AMCCOM
AMSMC-PCG-B (Shirlene Wise)

AMCCOM
AMSMC-ISE-M (Ms. Ronnie DePorter)

Filmed

R.V. 52

RAVENNA ARMY AMMUNITION PLANT

MAINTENANCE AREA

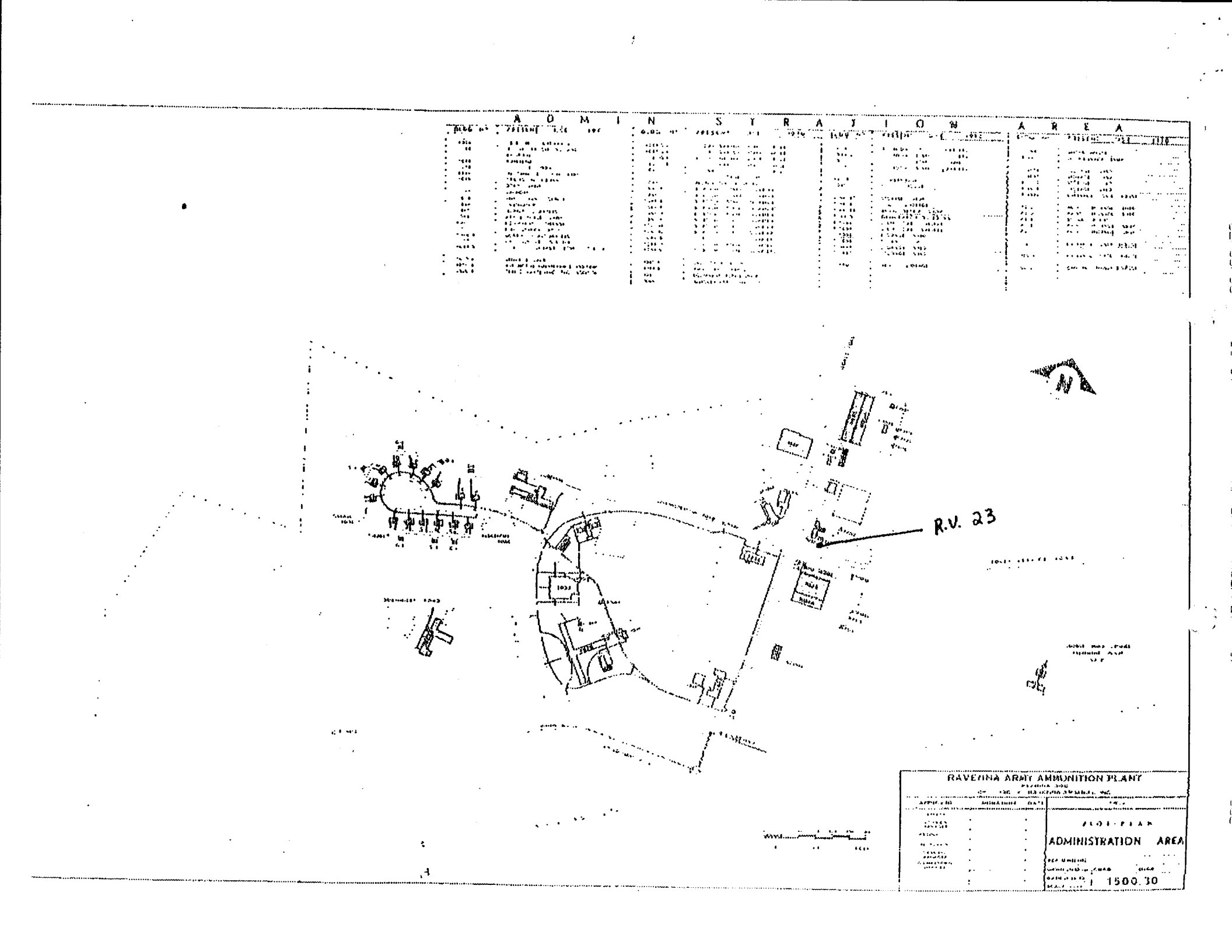
1500.32

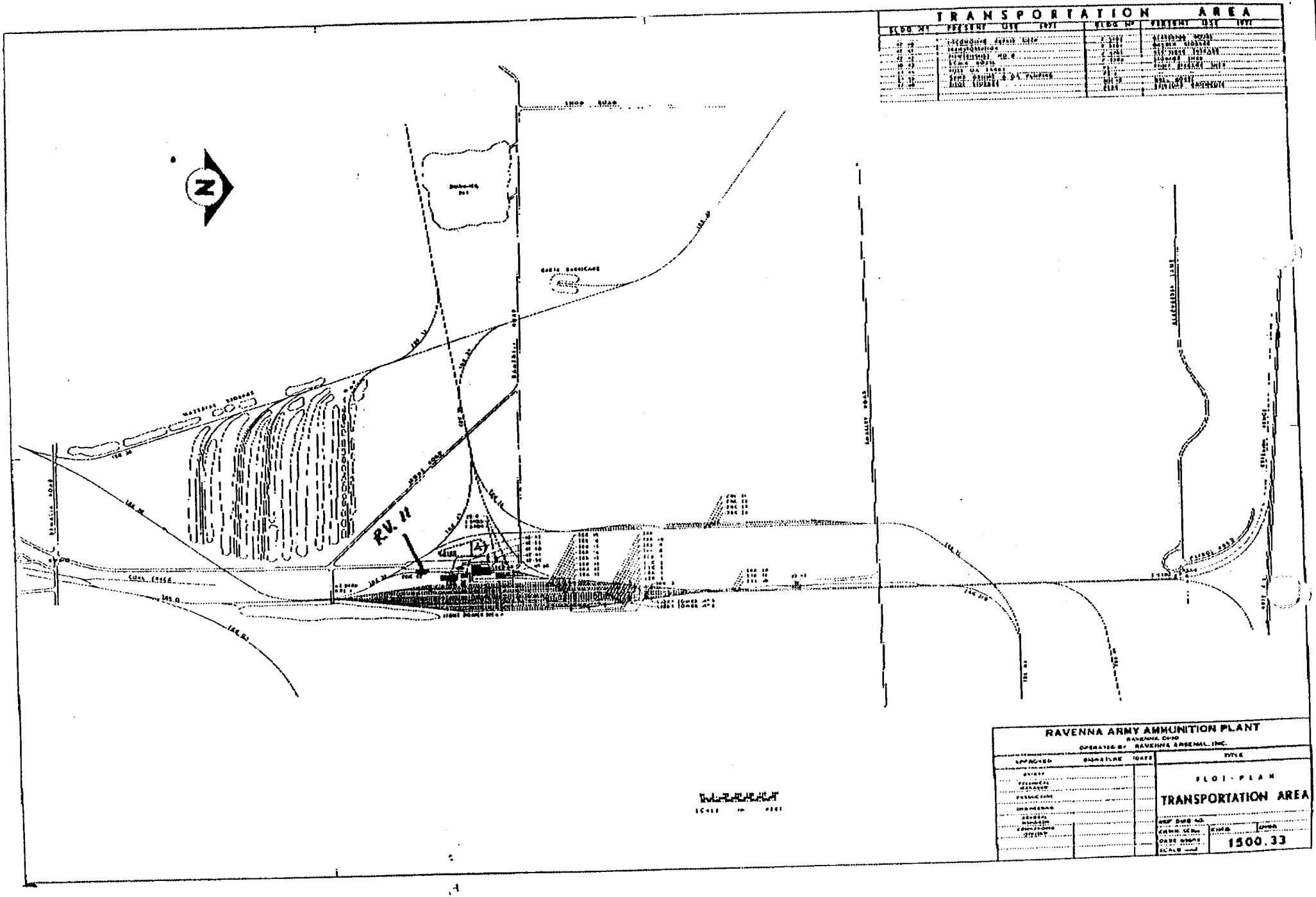
679298-01

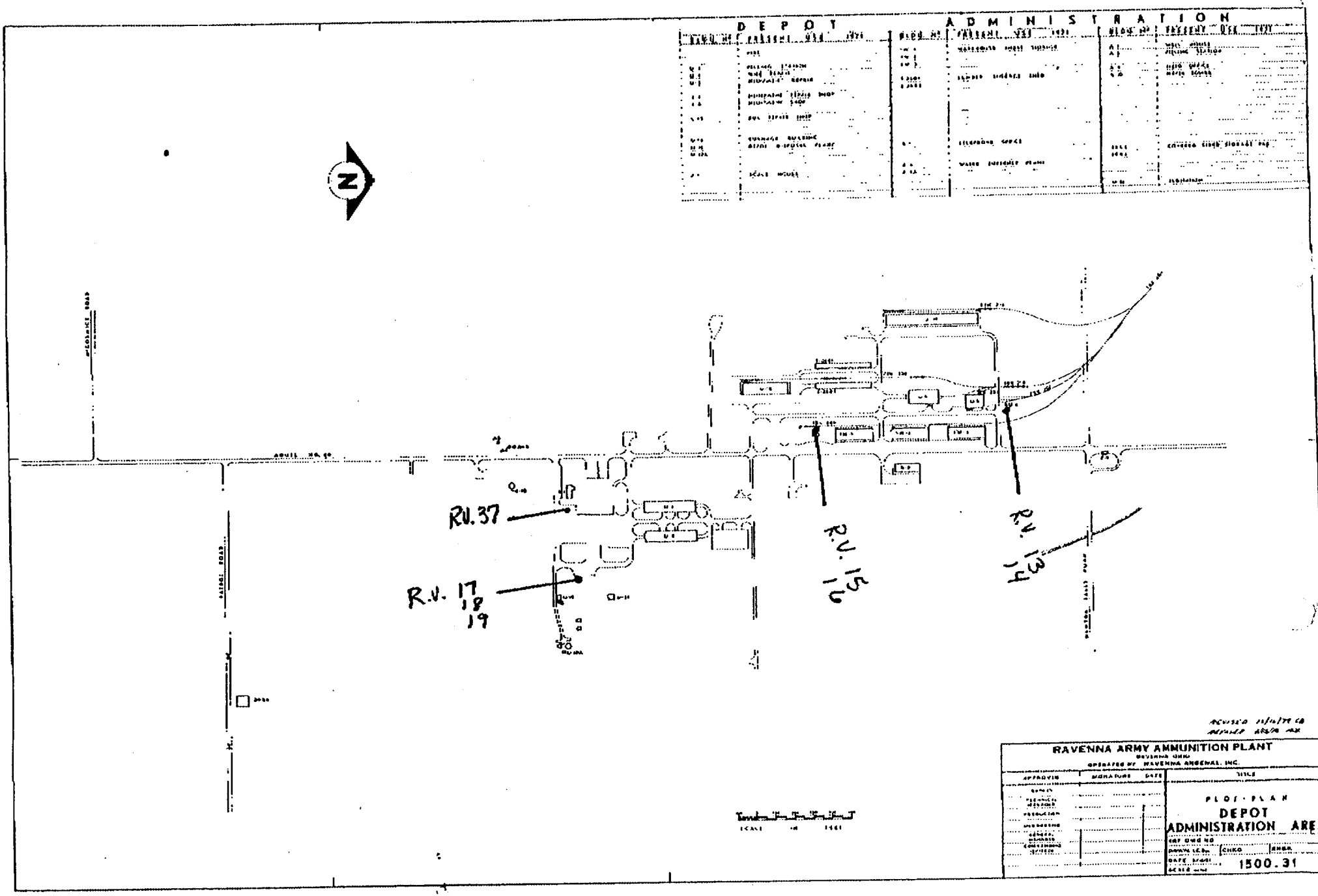
RECEIVED

FEB 12 1990

STATE FIRE MARSHAL
UNDERGROUND TANK PROGRAM


A D M I N I S T R A T I O N A R E A
R.V. 23
N
RAVENNA ARMY AMMUNITION PLANT
SITE PLAN
ADMINISTRATION AREA
1500.30


TRANSPORTATION AREA
BLDG NO
PRESENT USE
1971
RV. 11
RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO
OPERATED BY RAVENNA ARSENAL, INC.
APPROVED
SIGNATURE
DATE
TITLE
PLOT PLAN
TRANSPORTATION AREA
1500.33


DEPOT
ADMINISTRATION
R.V. 37
R.V. 17
18
19
R.V. 15
16
R.V. 13
14
RAVENNA ARMY AMMUNITION PLANT
OPERATED BY RAVENNA ARSENAL, INC.
PLOT PLAN
DEPOT
ADMINISTRATION AREA
1500.31

TANK NO.	CAPACITY	LOCATION
RV-11	15,000 Gal.	Railroad Yard, South Service Road
RV-13	12,000 Gal.	Building U-6 (N)
RV-14	12,000 Gal.	Building U-6 (S)
RV-15	12,000 Gal.	Building U-3 (S)
RV-16	12,000 Gal.	Building U-3 (N)
RV-17	3,900 Gal.	Building A-6 (N)
RV-18	3,900 Gal.	Building A-6 (C)
RV-19	3,900 Gal.	Building A-6 (S)
RV-23	15,000 Gal.	Building 1045
RV-37	5,000 Gal.	Building A-1
RV-52	1,000 Gal.	1000' SW of Intersection of Paris-Windham and Newton Falls Road

RAVENNA ARSENAL INC.

8451 STATE ROUTE 5
RAVENNA, OHIO 44266-9297

Telephone (216) 358-7111

Autovon 346-3210

February 23, 1990

THRU: Contracting Officer's Representative
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266-9297

23Feb90

TO: Ohio Department of Commerce
Division of State Fire Marshal
Bureau of Underground Storage Tank Regulations
ATTN: Michelle Tarka, Site Coordinator
7510 East Main Street
P.O. Box 525
Reynoldsburg, Ohio 43068-3395

Subject: Site investigation report for leaking underground storage tanks.

Dear Ms. Tarka:

Pursuant to Rule 1303:7-7-36 of the Ohio Administrative Code, following is the Site Investigation Report for leaking underground storage tanks at the Ravenna Army Ammunition Plant (RVAAP).

Your office was notified that three underground storage tanks at RVAAP failed their tank tightness tests. Tank #11 contained #2 fuel oil; leakage indicated by the test was .353 gph. Tank #23 contained #2 fuel oil; leakage indicated by the test was .3005 gph. Tank #33 contained #2 fuel oil; leakage indicated by the test was .065 gph.

The tanks were drained immediately upon learning of the test results. Quantity of product released is unknown, however, it is believed to be minimal. Soils surrounding the tanks are generally a low permeability silty clay loam. No free product was observed in the surrounding soils.

R&R International Inc. has cleaned, removed and disposed of the tanks. Any visibly contaminated soils, or soils suspected to be contaminated based on PID screening, were excavated. R&R collected samples from the sidewalls and bottom of the excavated pits for Tanks #23 and #33. Bedrock was encountered during the excavation

679098-01

of Tank #11, and samples were taken from soils in two sidewalls and the excavation pit bottom. The two remaining sidewalls were excavated to bedrock, no samples were taken from these areas. Groundwater was not encountered in any of the excavations. Samples collected from the excavated areas were tested for benzene, ethyl benzene, toluene, and xylene (BTEX), total lead, and total petroleum hydrocarbons (TPH), using methods set forth in SW-846. Analytical results for TPH and BTEX have been received and are enclosed. The remaining results are expected to be received by February 26, 1990. These results will be immediately forwarded to your attention upon receipt.

Excavated soils were sampled to characterize them for disposal. These samples will be analyzed for TPH, E.P. Toxicity, percent solids and flash point using methods set forth in SW-846.

Groundwater is currently the exclusive source of water supply for RVAAP. The location of active groundwater production wells is shown in Attachment #1. None of these wells is located with 1,000 ft. of the leaking tanks. A description of soil characteristics and a map showing subsurface soil distribution on site is shown in Attachment #2. Local climatogical conditions are shown in Attachment #3. Surrounding land use is residential; the closest residence to a leaking tank location on the installation is approximately 4,000 ft.

This installation's point of contact for this subject is Susan McCauslin, Environmental Specialist, (216)297-3220.

Sincerely,

Ravenna Arsenal, Inc.

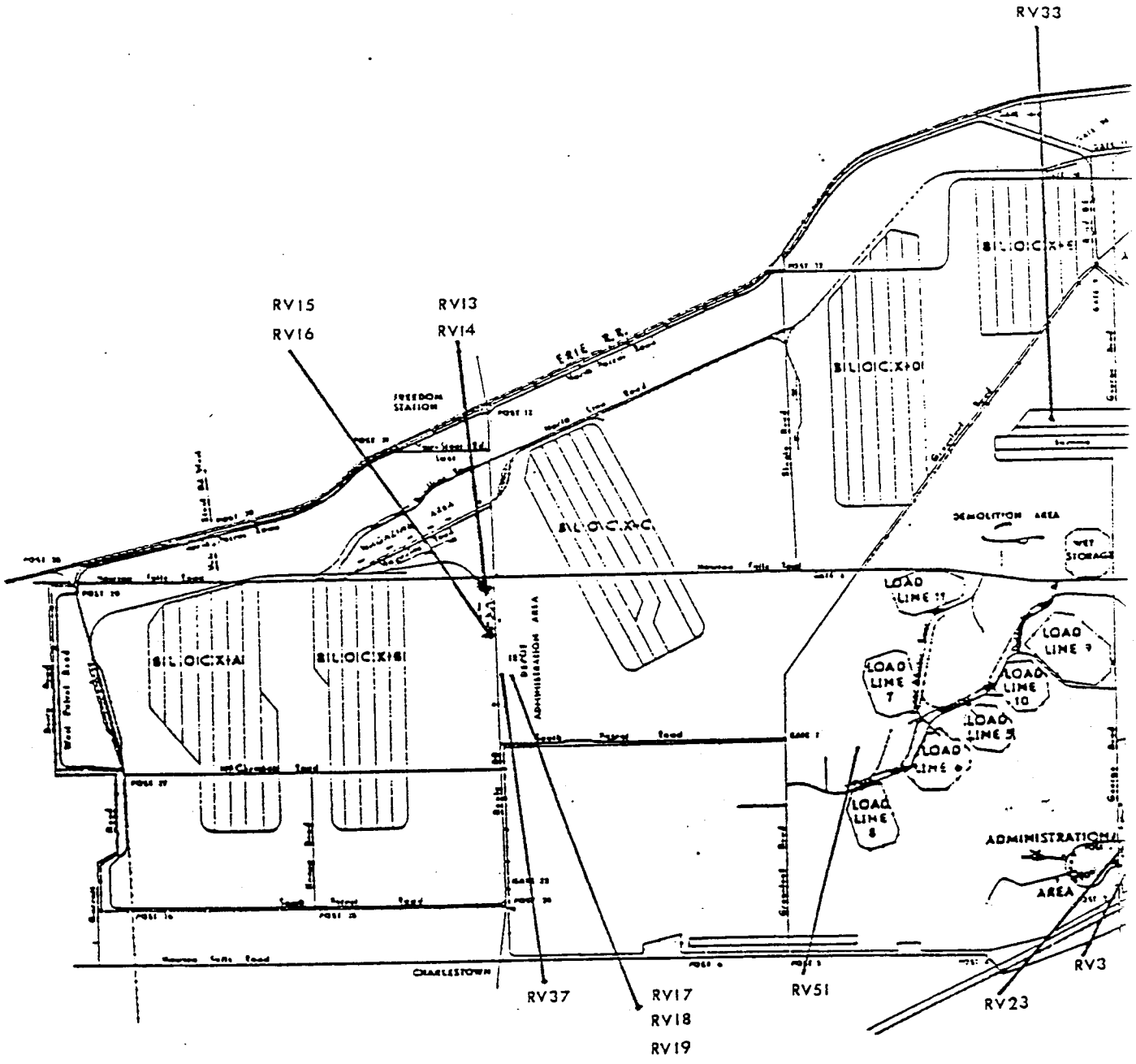
H.R. Cooper

H.R. Cooper
Plant Engineer

HRC:SM:ade:90002

cf: Commander
AMCCOM
AMSMC-ISE
Rock Island, IL 61299-6000

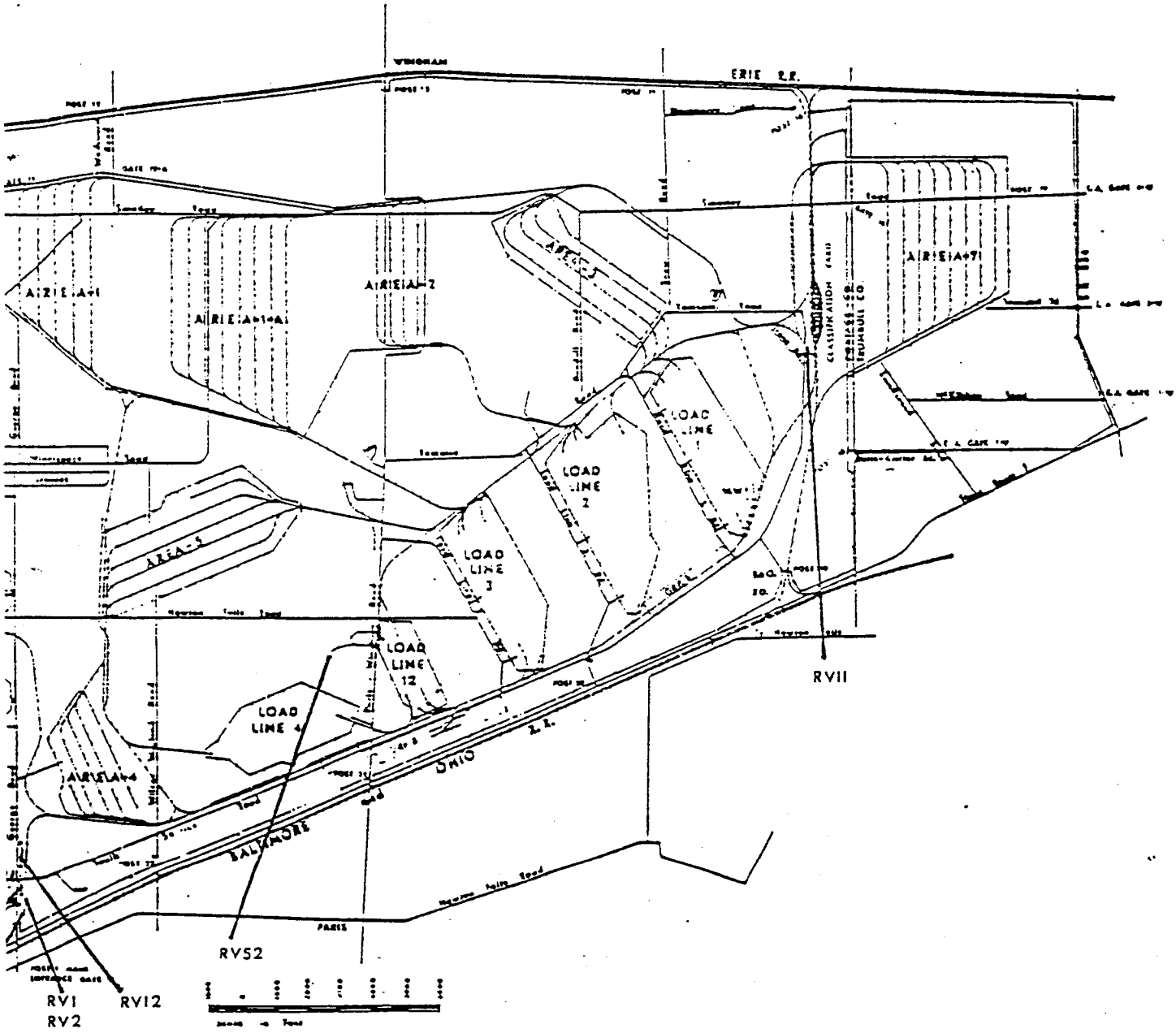
cc: N. Wulff
File



679298-01

NOTE: Tanks RV13, RV14, RV15, RV16, RV17, RV18, RV19, RV37 and RV52 are scheduled for removal in 1990.

USTs



RAVENNA ARMY AMMUNITION PLANT RAVENNA, OHIO OPERATED BY RAVENNA ARSENAL, INC.			
APPROVED	SIGNATURE	DATE	TITLE
SAFETY			GENERAL AREA MAP
TECHNICAL MANAGER			
PRODUCTION			
ENGINEERING			
GENERAL MANAGER			
COMMANDING OFFICER			
			REF. DWG NO.
			DRWN. CHKD. ENGR.
			DATE A-109
			SCALE

HOLK ENVIRONMENTAL SERVICES, INC.

7777 Wall Street
Valley View, Ohio 44125
(216) 524-0888
FAX (216) 524-2090

Date Received: 2-15-90

Customer I.D.: Ravenna Arsenal

P.O.#: vb, VM/JO

Date Reported: 2-20-90

HOLK-Lab #: B9015-2-7

Description: soil samples

Nozzle New, Inc.
34412 Pettibone Road
Solon, Ohio 44139
Attn: Mr. Vince Marek

Customer I.D.	HOLK-Lab #	BTEX*
Tank #2 (RU 11) (East)	B9015-2	<2 ppb
Tank #2 (Center)	B9015-3	<2 ppb
Tank #2 (West)	B9015-4	<2 ppb
Tank #3 (RU 22) (North)	B9015-5	<2 ppb
Tank #3 (Center)	B9015-6	<2 ppb
Tank #3 (South)	B9015-7	<2 ppb

* Benzene, Toluene, Ethylbenzene, Xylene

Thomas H. Richert
Director of Analytical Services

THR/tlg

The foregoing is limited to findings based upon material received f analysis and/or information furnished by client. Samples received will l disposed of after 30 days.

RAVENNA ARSENAL INC.

8451 STATE ROUTE 5
RAVENNA, OHIO 44266-9297

Telephone (216) 358-7111

Akron 346-3210

Filmed

RECEIVED
MAR 20 1990
STATE FIRE MARSHAL
UNDERGROUND TANK PROGRAM

March 19, 1990

THRU: Contracting Officer's Representative
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, Ohio 44266-9297

22 Mar 90

TO: Ohio Department of Commerce - Division of State Fire Marshal
Bureau of Underground Storage Tank Regulations
ATTN: Michelle Tarka, Site Coordinator
7510 East Main Street
P.O. Box 525
Reynoldsburg, Ohio 43068-3395

Subject: Incident 679298-01, RVAAP Tank #33, Total Lead Results

Dear Ms. Tarka:

As a follow up to our February 23, 1990 site investigation report for leaking underground storage tanks enclosed you will find total lead results for samples taken in the excavated tank pit RV33 after tank removal.

This submission will complete our Site Investigation Report for the subject incident. Please feel free to contact Susan McCauslin, Environmental Specialist at (216)297-3220 if you have any questions or require further information regarding this subject.

Sincerely,

Ravenna Arsenal, Inc.

H.R. Cooper

H.R. Cooper
Plant Engineer

HRC:SM:ade:90005

cc: N. Wulff
W. Carkido
S. McCauslin
File

cf: Commander
AMCCOM
AMSMC-ISE

HOLK ENVIRONMENTAL SERVICES, INC.

7777 Wall Street
Valley View, Ohio 44125
(216) 524-0888
FAX (216) 524-2090

Date Received: 2-15-90

Customer I.D.: Ravenna Arsenal

P.O.#: wb. VH/JO

Date Reported: 2-20-90

HOLK-Lab #: B9015-2-7

Description: soil samples

Nozzle New, Inc.
34412 Pettibone Road
Solon, Ohio 44139
Attn: Mr. Vince Marek

Customer I.D.	HOLK-Lab #	TPH
Tank #2 (East) (RU11)	B9015-2	22 ppm
Tank #2 (Center)	B9015-3	18 ppm
Tank #2 (West)	B9015-4	17 ppm
Tank #3 (North) (RU 22)	B9015-5	23 ppm
Tank #3 (Center)	B9015-6	18 ppm
Tank #3 (South)	B9015-7	44 ppm

Thomas H. Richert
Director of Analytical Services

THR/tlg

The foregoing is limited to findings based upon material received fc analysis and/or information furnished by client. Samples received will b disposed of after 30 days.

HOLK ENVIRONMENTAL SERVICES, INC.

7777 Wall Street
Valley View, Ohio 44125
(216) 524-0888
FAX (216) 524-2090

Date Received: 2-15-90

Customer I.D.: Ravenna Arsenal

P.O.#: ub. VM/JO

Nozzle New, Inc.
34412 Pettibone Road
Solon, Ohio 44139
Attn: Mr. Vince Marek

Date Reported: 2-20-90

HOLK-Lab #: B9015-8-13

Description: soil samples

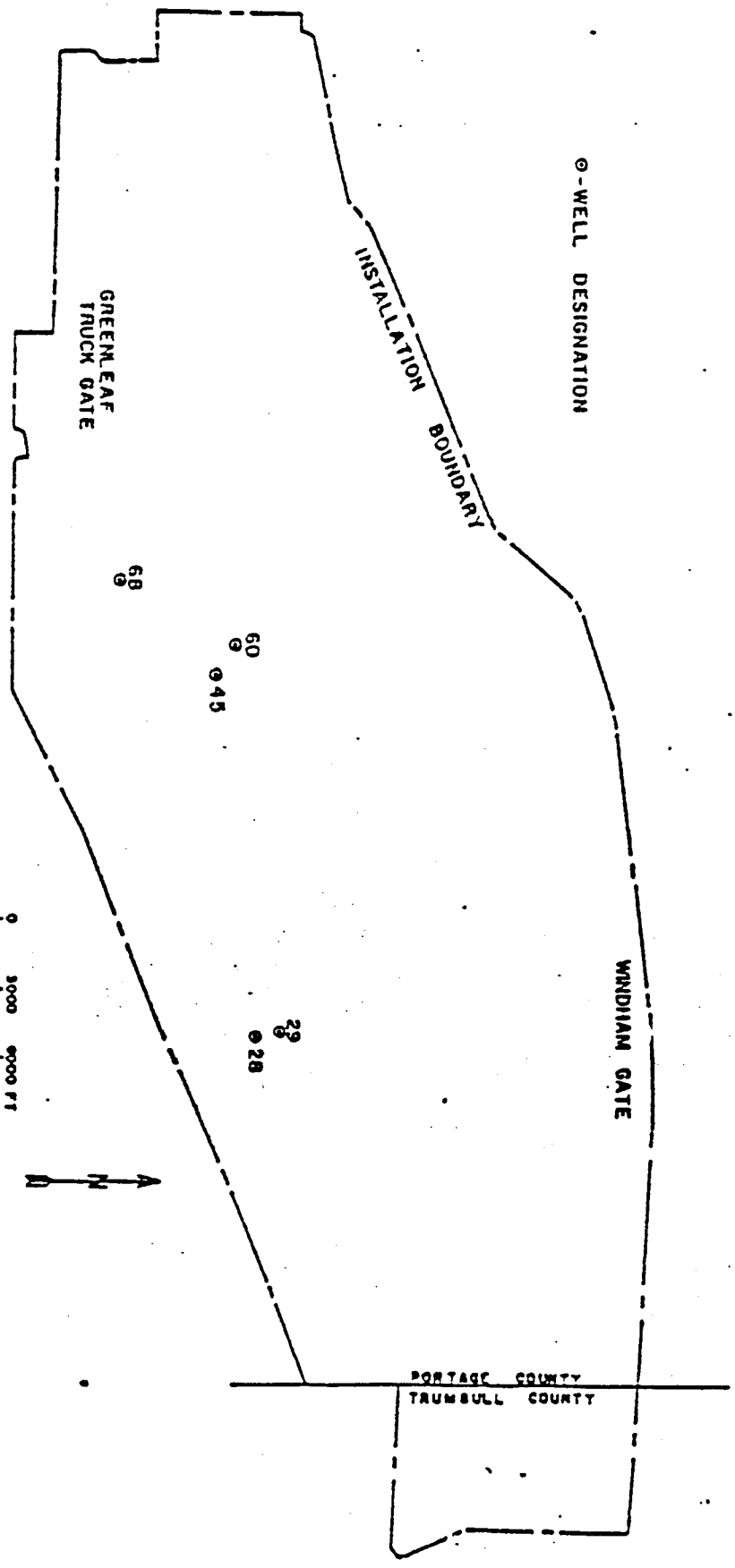
Customer I.D.	HOLK-Lab #	TPH
Tank #1 (North) (RV 33)	B9015-8	149 ppm
Tank #1 (Center)	B9015-9	305 ppm
Tank #1 (South)	B9015-10	158 ppm
Tank #4 (North) (RV 23)	B9015-11	37 ppm
Tank #4 (Center)	B9015-12	67 ppm
Tank #4 (South)	B9015-13	394 ppm

Thomas H. Richert
Director of Analytical Services

THR/tlg

The foregoing is limited to findings based upon material received f analysis and/or information furnished by client. Samples received will disposed of after 30 days.

ATTACHMENT #1



MAP OF RAAP, SHOWING LOCATION OF PRODUCTION WELLS

Soil Characteristics.*

(1) Distribution. RAAP contains three distinct soil associations; their distribution is depicted on Figure 1. Most of the installation is mantled by somewhat poorly drained and slowly permeable silt loams which have developed over silty clay loam or clay loam glacial till. The till soils in the western quarter of RAAP contain a restrictive, cemented subsoil layer (fragipan). The northeastern fringe of RAAP contains poorly drained but moderately permeable silt loams formed in silty, stream-deposited, alluvium on flood plains.

(2) Description.

(a) Mahoning-Ellsworth Soil Association. The topsoil consists of 8 inches of friable, dark grayish-brown silt loam; the subsoil consists of 52 inches of firm brown silty clay loam. The top 3 to 4 feet possess a pH ranging from 4.5 to 7.3; however, below that the soil is alkaline (7.4-8.4). These soils display slow to very slow permeability.

(b) Wadsworth-Rittman Soil Association. The topsoil consists of 8 inches of friable, dark grayish-brown silt loam; the subsoil consists of 19 inches of yellowish-brown silty clay loam over 21 to 33 inches of brown, very firm and brittle cemented, clay loam or silty clay loam (fragipan). These soils have a pH ranging from 4.5 to 7.8 and display slow permeability.

(c) Sebring-Holly Soil Association. The topsoil consists of 10 inches of friable gray silt loam; the subsoil contains 50 inches of gray silt loam to silty clay loam. The soil pH ranges from 5.1 to 7.3, and the soil permeability is moderately slow to moderately rapid.

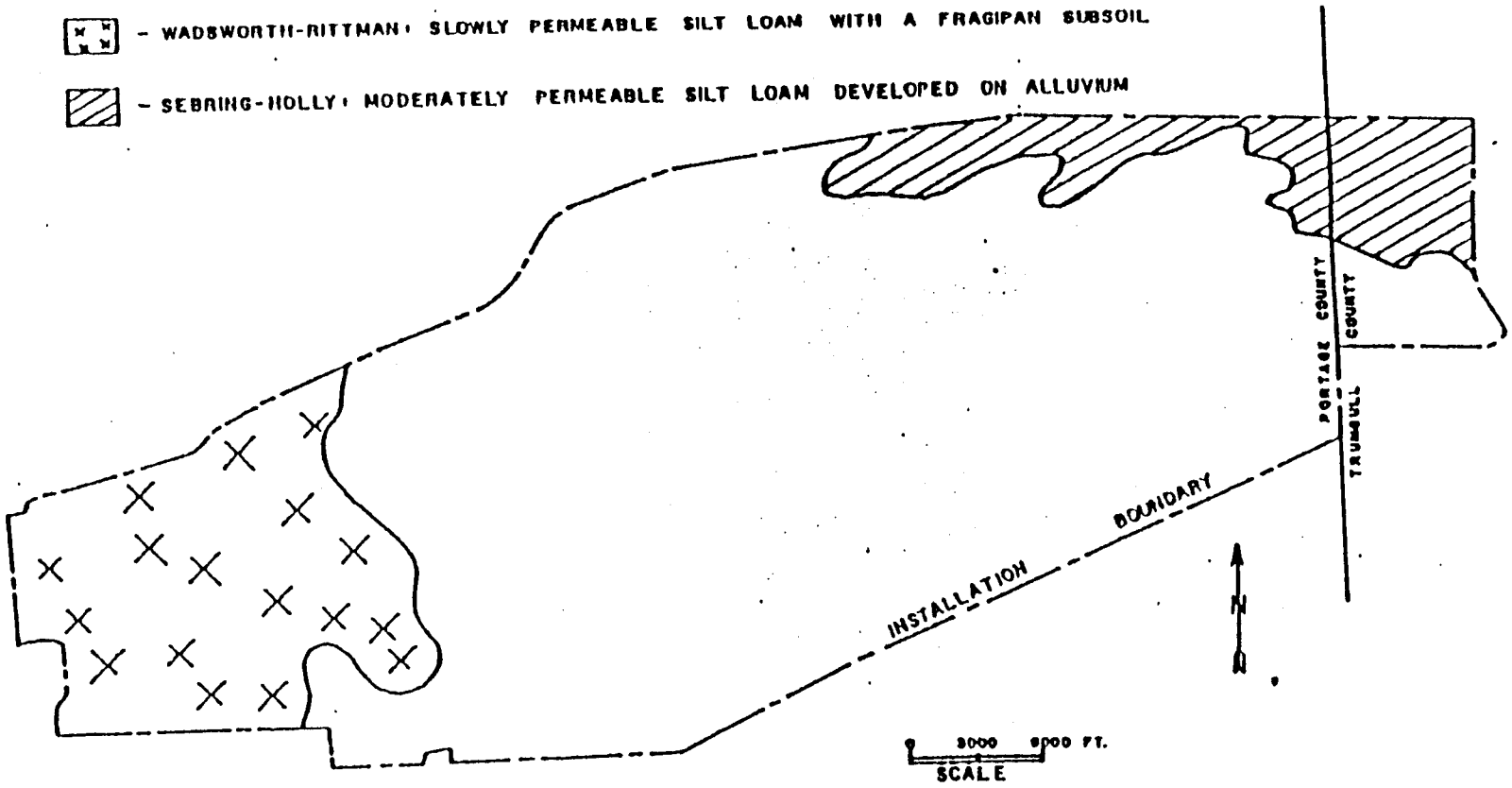
---

* Source of information is "An Inventory of Ohio Soils, Portage County," Ohio Department of Natural Resources, Progress Report No. 38 (1973)

ATTACHMENT #2

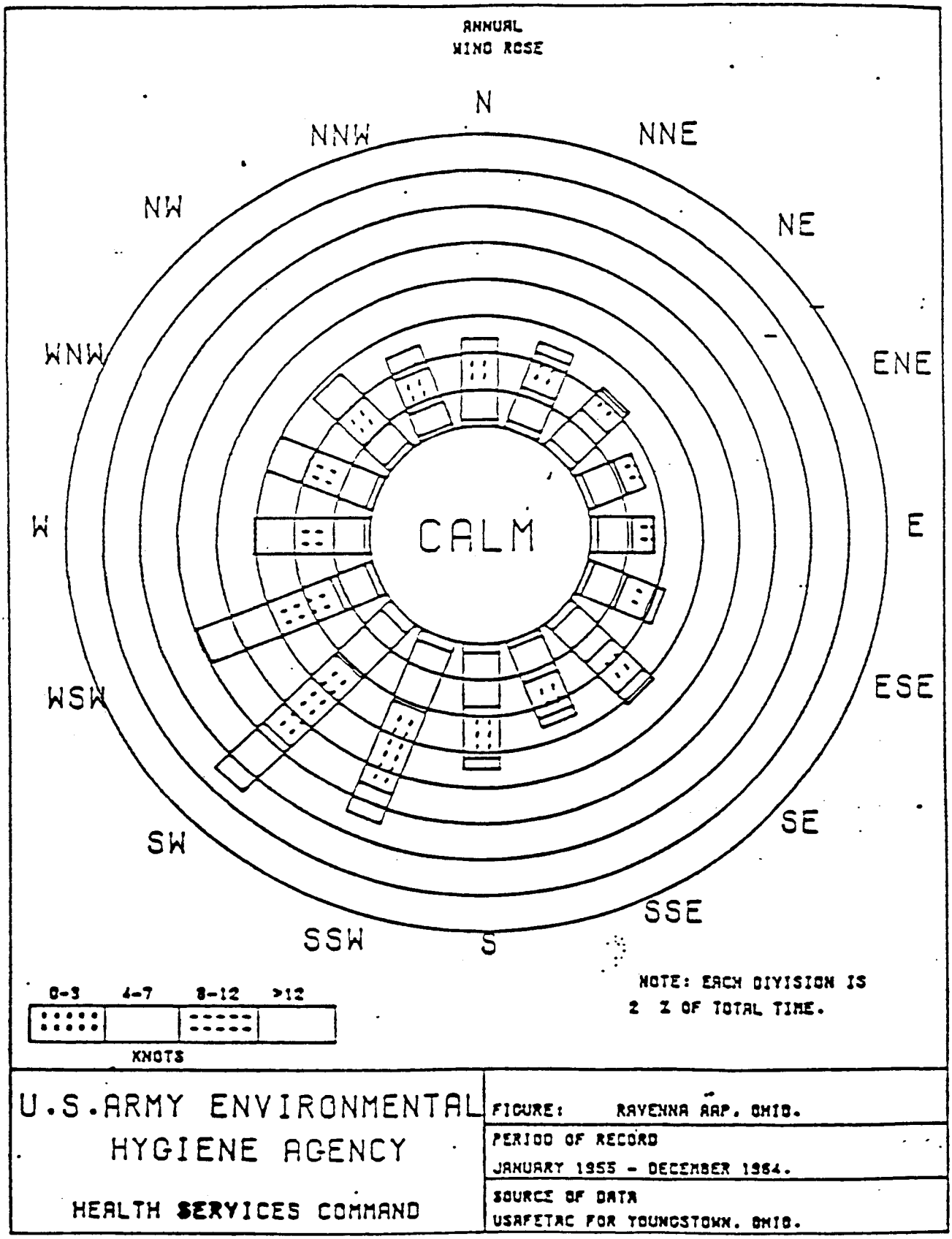
EXPLANATION OF SOIL ASSOCIATION:

- MAHONING-ELLSWORTH: SLOWLY PERMEABLE SILT LOAM DEVELOPED ON GLACIAL TILL
- WADSWORTH-RITTMAN: SLOWLY PERMEABLE SILT LOAM WITH A FRAGIPAN SUBSOIL
- SEBRING-HOLLY: MODERATELY PERMEABLE SILT LOAM DEVELOPED ON ALLUVIUM



MAP OF RAAP, SHOWING SOIL GROUP DISTRIBUTION

The plant site has a continental climate with temperature extremes of -21°F in January and 100°F in July. The annual mean precipitation is 36 inches. The annual mean snowfall is 48 inches. The prevailing winds are south and southwest and average 10 miles/hour.



HOLK ENVIRONMENTAL SERVICES, INC.

7777 Wall Street
Valley View, Ohio 44125
(216) 524-0888
FAX (218) 524-2090

Date Received: 2/15/90
Date Reported: 3/14/90

Client Sample I.D.: Ravenna Arsenal
HOLK Sample I.D.: B9015-2-8,10-13
Sampled By: Client
P.O.#: vb, VH/JO
Sample Description: brown soils

Nozzle New, Inc.
34412 Pettibone Road
Solon, Ohio 44139

	CLIENT SAMPLE I.D.	HOLK SAMPLE I.D.	TOTAL LEAD (ppm)	REAGENT BLANK (mg/l)	STANDARD RECOVERY (%)
RV #11	Tank #2 East	B9015-2	6.74	<0.01	101
	Tank #2 Center	B9015-3	5.69	<0.01	101
	Tank #2 West	B9015-4	5.84	<0.01	101
RV #22	Tank #3 North	B9015-5	3.47	<0.01	101
	Tank #3 Center	B9015-6	2.62	<0.01	101
	Tank #3 South	B9015-7	2.92	<0.01	101
RV #33	Tank #1 North	B9015-8	15.0	<0.01	101
	Tank #1 South	B9015-10	10.8	<0.01	101
RV #23	Tank #4 North	B9015-11	37.0	<0.01	86
	Tank #4 Center	B9015-12	23.4	<0.01	86
	Tank #4 South	B9015-13	28.1	<0.01	86

Ronald A. Baraona
Ronald A. Baraona
LABORATORY MANAGER

RAB/tlg

The foregoing is limited to findings based upon material received f analysis and/or information furnished by client. Samples received will