POOR LEGIBILITY

PORTIONS OF THIS DOCUMENT MAY BE UNREADABLE, DUE TO THE QUALITY OF THE ORIGINAL

N/F

REGION: 04
STATE : KY

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
C E R C L I S V 1.2

M.2 - SITE MAINTENANCE FORM

* ACTION: _

EPA ID : KYD980841654

SITE NAME: PESTICIDE DUMP SOURCE: R *

STREET : ROUTE 102 CONG DIST: 01 *

CITY : ELKTON ZIP: 42220 *

CNTY NAME: TODD CNTY CODE : 219 *

LATITUDE : 36/48/30.0 LONGITUDE : 087/09/06.0 * __/__/__._

LL-SOURCE: R LL-ACCURACY: * _

SMSA : HYDRO UNIT: 05130206 * ____

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N * _ _

NPL IND: N NPL LISTING DATE: NPL DELISTING DATE: * _ __/__

SITE/SPILL IDS: * __ __ __ __ __

RPM NAME: RPM PHONE: - - * _____

SITE CLASSIFICATION: SITE APPROACH: * __

DIOXIN TIER: REG FLD1: REG FLD2: * ____

RESP TERM: PENDING ( ) NO FURTHER ACTION ( ) * PENDING (_)

ENF DISP: NO VIABLE RESP PARTY ( ) VOLUNTARY RESPONSE ( ) * _ _
ENFORCED RESPONSE ( ) COST RECOVERY ( ) * _ _

SITE DESCRIPTION:

*

*

*

*

REGION: 04
STATE : KY

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
C E R C L I S V 1.2

M.2 - PROGRAM MAINTENANCE FORM

* ACTION: _

SITE: PESTICIDE DUMP

EPA ID: KYD980841654 PROGRAM CODE: H01 PROGRAM TYPE: *

PROGRAM QUALIFIER: ALIAS LINK : * ___ ___

PROGRAM NAME: SITE EVALUATION * _____

DESCRIPTION:

* _____

* _____

* _____

* _____

REGION: 04
STATE : KY

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
C E R C L I S V 1.2

M.2 - EVENT MAINTENANCE FORM

* ACTION: _

SITE: PESTICIDE DUMP
PROGRAM: SITE EVALUATION

EPA ID: KYD980841654 PROGRAM CODE: H01 EVENT TYPE: DS1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: E * _ ___

EVENT NAME: DISCOVERY STATUS: * _____

DESCRIPTION:

* _____
* _____
* _____
* _____

ORIGINAL	CURRENT	ACTUAL	
START:	START:	START:	* __/__/__ __/
COMP :	COMP :	COMP : 04/01/84	* __/__/__ __/

HQ COMMENT:

* _____

RG COMMENT:

* _____

COOP AGR #	AMENDMENT #	STATUS	STATE %	
			0	* _____ _____

REGION: 04
STATE : KY

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
C E R C L I S V 1.2

M.2 - EVENT MAINTENANCE FORM

* ACTION: _

SITE: PESTICIDE DUMP
PROGRAM: SITE EVALUATION

EPA ID: KYD980841654 PROGRAM CODE: H01 EVENT TYPE: PA1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: S * _ ___

EVENT NAME: PRELIMINARY ASSESSMENT STATUS: * _____

DESCRIPTION:

* _____
* _____
* _____
* _____

ORIGINAL	CURRENT	ACTUAL	
START:	START:	START: 07/01/84	* __/__/__ __/.
COMP :	COMP :	COMP : 08/01/84	* __/__/__ __/.

HQ COMMENT:

* _____

RG COMMENT:

* _____

COOP AGR #	AMENDMENT #	STATUS	STATE %	
			0	* _____ _____

REGION: 04
STATE : KY

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
C E R C L I S V 1.2

M.2 - EVENT MAINTENANCE FORM

* ACTION: _

SITE: PESTICIDE DUMP
PROGRAM: SITE EVALUATION

EPA ID: KYD980841654 PROGRAM CODE: H01 EVENT TYPE: SI1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: S * _ ___

EVENT NAME: SITE INSPECTION STATUS: * _____

DESCRIPTION:

* _____
* _____
* _____
* _____

ORIGINAL	CURRENT	ACTUAL		
START:	START:	START: 02/01/85	* __/__/__	__/_
COMP :	COMP :	COMP : 02/01/85	* __/__/__	__/_

HQ COMMENT:

* _____

RG COMMENT:

* _____

COOP AGR #	AMENDMENT #	STATUS	STATE %		
			0	* _____	_____

REGION: 04
STATE : KY

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
C E R C L I S V 1.2

M.2 - EVENT MAINTENANCE FORM

* ACTION: _

SITE: PESTICIDE DUMP
PROGRAM: SITE EVALUATION

EPA ID: KYD980841654 PROGRAM CODE: H01 EVENT TYPE: SI2

FWS CODE: EVENT QUALIFIER : EVENT LEAD: E * _ ___

EVENT NAME: SITE INSPECTION STATUS: * _____

DESCRIPTION:

* _____
* _____
* _____
* _____

ORIGINAL	CURRENT	ACTUAL		
START:	START:	START: 04/03/86	* __/__/__	__/.
COMP :	COMP :	COMP : 04/10/86	* __/__/__	__/.

HQ COMMENT:

* _____

RG COMMENT:

* _____

COOP AGR #	AMENDMENT #	STATUS	STATE %		
			0	* _____	_____

REGION: 04
STATE : KY

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
C E R C L I S V 1.2

M.2 - REGIONAL UTILITY MAINTENANCE FORM

SITE: PESTICIDE DUMP

EPA ID: KYD980841654

REG CODE: HSC2-01 * ACTION: _

DESCRIPTION: PESTICIDES * _____

* _____

DATE1: * __/__/__

DATE2: * __/__/__

DATE3: * __/__/__

FREE FIELD: * _____

REG CODE: OPDD-01 * ACTION: _

DESCRIPTION: CONTAINERS * _____

* _____

DATE1: * __/__/__

DATE2: * __/__/__

DATE3: * __/__/__

FREE FIELD: * _____

REG CODE: OPD7-01 * ACTION: _

DESCRIPTION: SOIL CONTAMINATION * _____

* _____

DATE1: * __/__/__

DATE2: * __/__/__

DATE3: * __/__/__

FREE FIELD: * _____

REGION: 04
STATE : KY

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF EMERGENCY AND REMEDIAL RESPONSE
C E R C L I S V 1.2

M.2 - REGIONAL UTILITY MAINTENANCE FORM

SITE: PESTICIDE DUMP

EPA ID: KYD980841654

REG CODE: 4C85-01 * ACTION: _

DESCRIPTION: CERCLA FY 85 COOPERATIVE AGREEMENT; SIF * _____

* _____

DATE1: * __/__/__

DATE2: * __/__/__

DATE3: * __/__/__

FREE FIELD: * _____

REG CODE: 4HRN-01 * ACTION: _

DESCRIPTION: PRELIMINARY HAZARD RANKING NEEDED * _____

* _____

DATE1: * __/__/__

DATE2: * __/__/__

DATE3: * __/__/__

FREE FIELD: * _____

REG CODE: 4R12-01 * ACTION: _

DESCRIPTION: RCRA 3012 COOPERATIVE AGREEMENT; PA & SI * _____

* _____

DATE1: * __/__/__

DATE2: * __/__/__

DATE3: * __/__/__

FREE FIELD: * _____

TELECOPIER REQUEST
REGION IV

TO: Alex Barker

PHONE: 564-4245

LOCATION: Dept. of Environmental Protection

CONFIRMATION

FROM: Denise Macquarrie

SUBJECT: Immediate Removal

PHONE: 881-3931

NUMBER OF PAGES TO FOLLOW: 1

DATE SENT:

TIME:

MAGNAFAX CONFIRMATION

DATE JUL 1 8 1985

TIME 12:00

OPERATOR WB

PANAFAX- MACHINE-257-4702, CONFIRMATION-257-2785

3M(AUTO) MACHINE-257-4486, CONFIRMATION-257-2176

DEX(AUTO) 4100- MACHINE-257-2175, CONFIRMATION-257-2176

WESTON • SPER
Suite C, 4329 Memorial Drive
Decatur, GA 30032 • (404) 294-9110

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-6669

See TSCA for application Rate

MEMORANDUM

TO: Dennis Manganiello
EPA Region IV - Atlanta

THRU: John G. Cwiek JGC
TATL Region IV - Atlanta

FROM: Lorenzo Richardson L.R.
TAT Region IV - Atlanta

SUBJECT: Site Investigation, Pesticide Dump, Elkton, KY.
TDD# 04-8503-07

DATE: March 21, 1985
TAT-04-F-00339

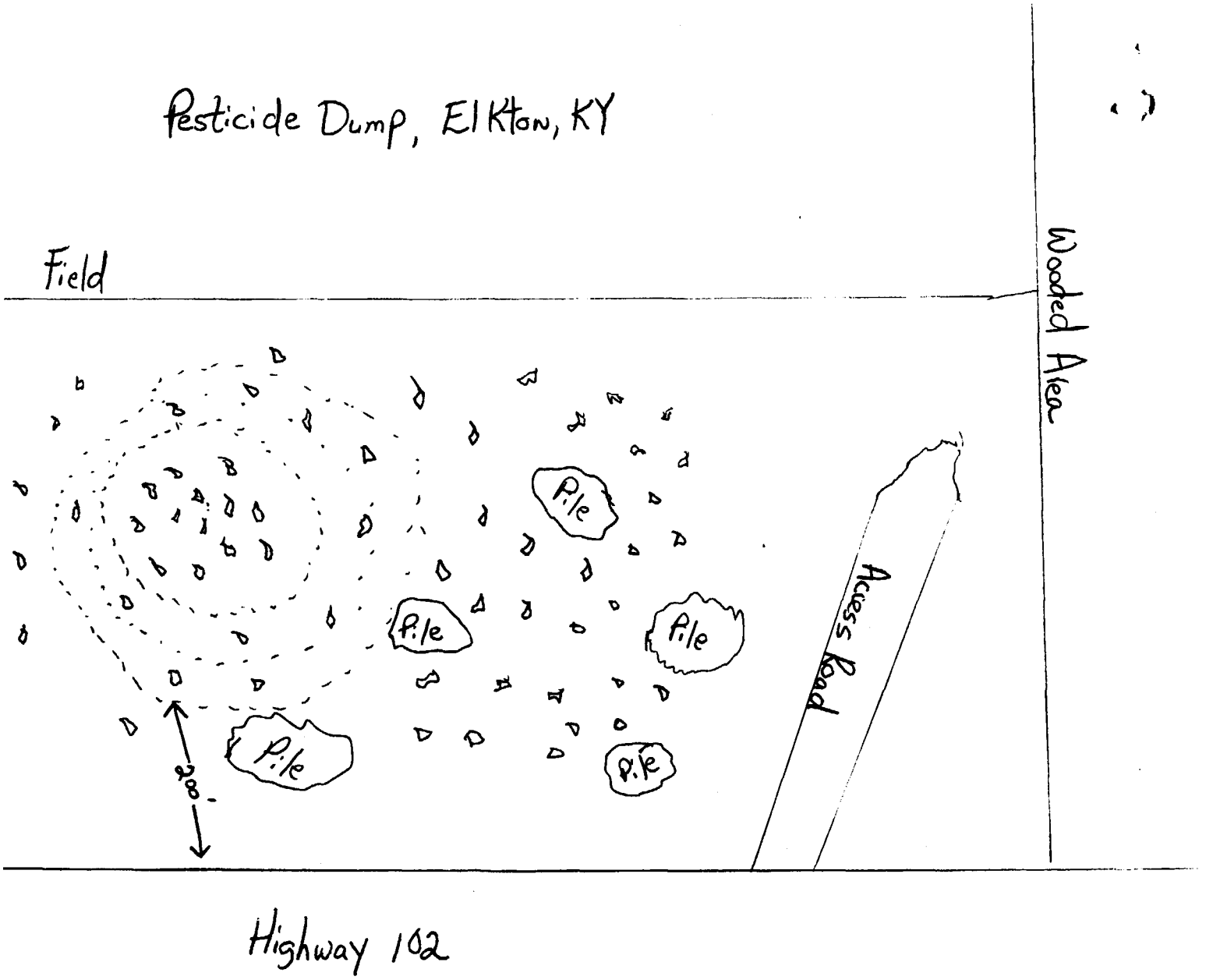
On March 20, 1985 TAT member Lorenzo Richardson provided technical assistance in conducting a preliminary site assessment of a remote pesticide dumping in Elkton, KY.

EPA Project Officer/OSC Dennis Manganiello and Richardson met with Robert Burns of the Department of Environmental Protection, Uncontrolled Site Section and conducted the reconnaissance. The reconnaissance consisted of photo documentation, HNU monitoring, determination of removal equipment needed and site mapping.

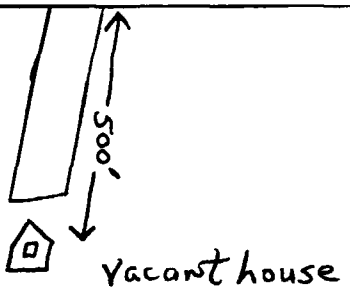
The rural dump was located adjacent to highway 102 approximately seven miles southeast of Elkton. The dump consisted of approximately 200 discarded pesticide and herbicide containers on the ground surface and another estimated 200 containers in a nearby sinkhole. Containers ranged in size from 1-gallon to 5-gallon. Metal and plastic containers, both opened and closed were scattered about the estimated 1/2 acre area. Product label names present were "Roundup", "Paraquat", "Basagran", and "Lasso".

The site was found to be adjacent to cultivated fields and pasture lands. A small creek was located .5 miles upgradient from the site. Within a mile radius of the area, 21 housing units were located. Several well water analysis taken revealed no significant migration of pollutants into the ground water.

Pesticide Dump, Elkton, KY



tainers (Paroquat, Lasso, Round-up, etc.)
of sinkhole
pesticide containers



✱ = map not to scale

SITE INVESTIGATION REPORT

PESTICIDE DUMP

ELKTON, TODD COUNTY

By

Robert Burns
Uncontrolled Site Section
Division of Waste Management

March 1, 1985

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Conclusions	6
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B. Maps
C. Tables
D. Laboratory Reports
E. Site Inspection Form 2070-13

SUMMARY

A site investigation was conducted by the Uncontrolled Site Section on October 23, 1984, at a pesticide dump seven miles east of Elkton in Todd County. Two composite soil samples and two samples of containerized liquids comprised this investigation. The purpose of this investigation was to confirm or deny the presence of contamination as a result of improper disposal of pesticide/herbicide containers. The samples were analyzed by the Environmental Services Division, KNREPC. The soil sample taken from the sinkhole showed the presence of toxaphene at a concentration of 3.92 ppm. Analyses of the soil sample taken from erosion rills showed the presence of P,P'-DDD and P,P'-DDT at concentrations of 0.016 ppm and 0.014 ppm, respectively. Analyses of a sample taken from a container labeled "Round-up" could not be performed due to the lack of a liquid chromatograph by the Environmental Services Division. The quantity of the sample taken from a container labeled "Lennix" was insufficient for analyses for pesticides. Data from the analyses of the "Lennix" sample for herbicides was suspect due to quality control.

It can be concluded from the laboratory results that soil contamination has occurred as a result of improper disposal of these containers.

It is recommended that additional samples of wells in the area be taken to confirm or deny groundwater contamination. Once the extent of contamination is determined, a remedial plan should be constructed to correct the situation that now exists. These groundwater samples will be taken by the middle of January, with results expected in 60 days. If groundwater contamination exists an immediate removal will be requested.

INTRODUCTION

A site investigation was conducted October 23, 1984, at a pesticide dump outside of Elkton in Todd County, Kentucky. This open dump is located adjacent to highway 102 approximately seven miles southeast of Elkton. This open dump consists of approximately 200 discarded pesticide and herbicide containers on the surface of the ground and approximately 200 containers that have been pushed into the sinkhole and covered with soil. This sinkhole has been used as a dump since 1981. Soil samples were taken from the sinkhole and erosion rills downgradient from the surface containers. Samples were also taken of liquids in containers labeled "Round-up" and "Lennix."

Land Use

The site is located adjacent to cultivated fields and pasture land. There are isolated stands of trees scattered about the area, but mainly this area is used for agriculture.

Topography

This area is a rolling upland karst situated approximatley 600 feet above sea level. Dry Branch Creek is located approximatley .5 mile northwest of the site. There are numerous ponds scattered within one mile of the site. There is a large marsh within two miles of the site.

Geology and Hydrogeology

Geologically the underlying strata at the site is Ste. Genevieve limestone. Water yield from most drilled wells in this area is five gallons per minute. Few wells in this area do not produce enough water for domestic use. Water yield from wells drilled in fault zones is greater than five gallons per minute. Residents in the vicinity of the site rely on groundwater for domestic purposes. The soil in this area is pembroke silt loam. The depth of the bedrock ranges from 60 to 120 inches.

Population Characteristics

This area of Todd County is predominantly rural. Within a 1 mile radius of the site, there are 21 housing units, with an estimated population of 80. Between 1 and 2 miles from the site there are 35 housing units with an estimated population of 133. There are 87 housing units between 2 and 3 miles from the site with an estimated population of 331. There are approximatley 60 buildings within two miles of the site.

DESCRIPTION OF ACTIVITIES

The investigation team arrived at the site at 8:00 a.m. Level C protective clothing was donned and a recon of the site was performed.

A composite soil sample was taken from the sinkhole with the aid of a stainless steel spoon. This sample was designated EPD-001. Composite soil sample, EPD-002, was taken from erosion rills downgradient from the surface containers.

Samples EPD-003 and EPD-004 were taken from containerized liquids labeled "Lennix" and "Round-up." Liquids from different containers were not composited

RESULTS

The composite soil sample from the sinkhole, identified as EPD-001, showed the presence of toxaphene at a concentration of 3.92 ppm. Analysis of sample EPD-002 taken from the erosion rills leading to the sinkhole identified P,P'-DDD at a concentration of 0.016 ppm and P,P'-DDT at a concentration of 0.014 ppm (Appendix B, Table 1).

Containers labeled "Round-up" and "Lennix" were also sampled during this investigation. The sample quantity from the containers labeled "Lennix" was insufficient for the analyses of pesticides. The Environmental Services Division does not have the capability to analyze "Round-up" which requires analysis by liquid chromatography.

CONCLUSIONS

Analyses of soil samples taken during this investigation show the soil downgradient from the surface containers is contaminated with P,P'-DDD, P,P'-DDT, and toxaphene. These results indicate the possibility of groundwater contamination. DDT is relatively insoluble in water and is easily dispersed by surface runoff and erosion. Toxaphene is also a threat to groundwater contamination.

Waste Characteristics

Toxaphene is a chlorinated hydrocarbon pesticide that replaced DDT in agricultural uses. It is practically insoluble in water. It is the most heavily used pesticide in the United States. To protect freshwater aquatic life concentrations should never exceed 1.6 ppb.

The use of DDT was banned by the EPA in December of 1972. DDT is a toxicant that is persistent in soil and water and is bioaccumulated in the adipose tissue of wildlife and humans. It is easily dispersed by surface runoff and erosion but is relatively insoluble in water. The solubility of DDT in water is 0.0012 mg/ml. To protect freshwater aquatic life concentrations should not exceed 1.1 ppb.

P,P'-DDD has chemical properties similar to DDT.

RECOMMENDATIONS

Considering the close proximity of this dump to a groundwater source via a sinkhole and the nature of the contaminants identified, it is recommended that additional samples of wells in the vicinity be taken to confirm or deny groundwater contamination. Once the extent of contamination is determined, a remedial plan can be constructed to remedy the situation that now exists.

The land where the dump is located is under the care of an estate, and lacks a responsible party. It is therefore recommended that this site be considered for an immediate removal.

APPENDIX A

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

MEMORANDUM

TO: Barry Burrus, Chief
Uncontrolled Site Section

FROM: Bob Burns, Environmentalist
Uncontrolled Site Section

DATE: October 17, 1984

SUBJECT: Site Investigation Plan for the Pesticide Dump
Todd County

Please find attached the site investigation plan referenced above. The investigation will occur October 22 and 23, 1984, and will be conducted by personnel of the Uncontrolled Site Section.

The results of the investigation are expected to be available 60 days after the investigation.

BB/las

Attachment

I. INTRODUCTION:

This open dump consists of approximately 200 five gallon "empty" cans of pesticides and herbicides as well as several "empty" one gallon containers of paraquat. The cans were dumped near a large sinkhole, with some cans in the sinkhole. This situation poses the immediate danger of groundwater contamination.

II. OBJECTIVES:

The objective of this site investigation is to determine if and to what extent area contamination has occurred.

III. INVESTIGATION ACTIVITIES:

The site investigation will be conducted by personnel of the Uncontrolled Site Section, Division of Waste Management. Planned activities are given below:

Monday, October 22, 1984

The investigation team will travel to Hopkinsville in the morning. After checking in at the Holiday Inn, the investigation team will travel to Elkton in Todd County, to conduct a reconnaissance of the site to familiarize themselves with the site and locate sampling points.

Tuesday, October 23, 1984

6:30 a.m.	Meet for breakfast. At breakfast the activities for the sampling investigation will be disucssed.
7:00 a.m.	Travel to the site.
8:00 - 9:00 a.m.	Set up sampling equipment, SCBA's, and decon area.
9:00 a.m.	Begin sampling. Sampling should be complete by late morning. After the samples have been preserved and loaded, the investigation team will return to Frankfort and deliver the samples to the Division of Environmental Services for analyses.

IV. ORGANIZATION:

The following Uncontrolled Site personnel will conduct the site investigation at the Pesticide Dump:

Name	Responsibilities
Jim Childers	Sampling Logbook Geologic Assessment Photographs
Bob Burns	Site Coordinator Sampling Logbook Environmental Assessment

V. SAMPLE PLAN:

The investigation of the Pesticide Dump will consits of samples from containerized, residual pesticides and/or herbicides and areas where the wastes may have been spilled.

Sampling Equipment

2 SCBA's with 2 backup air cylinders
2 full face respirators
1 box of dermathin gloves
1 box of scorpio gloves
Tyvek protective clothing with hoods
H-Nu
Protective foot covers
6 sample jars
3 stainless steel spoons
Thief tubes

Sample Types

Samples that will be taken during this investigation include:

2 containerized, residue samples of pesticide/herbicide
2 soil samples from areas where spillage may have occurred.

Analyses

Waste and soil samples will be analyzed for pesticides and herbicides.

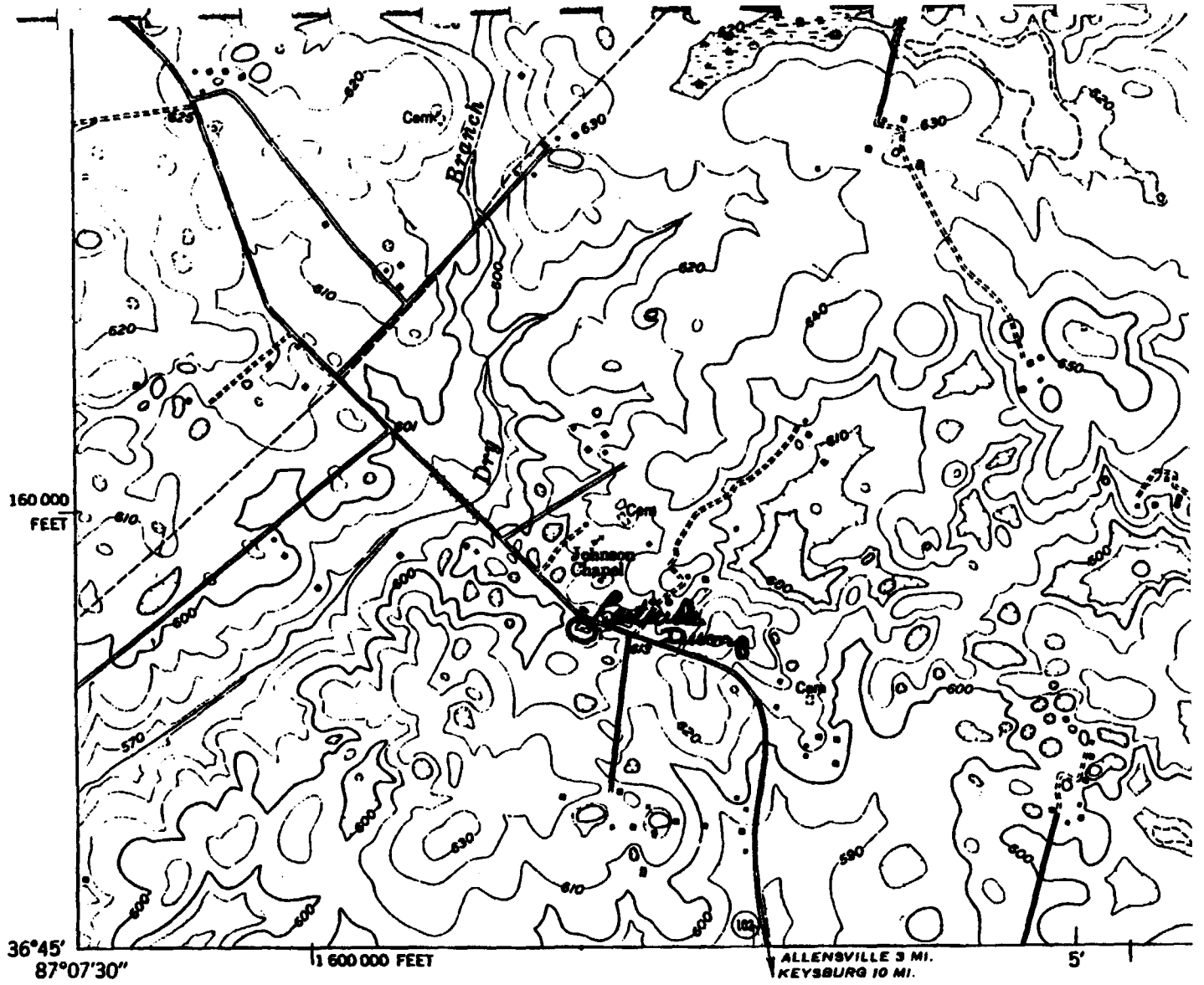
VI. SAFETY PLAN:

During the reconnaissance and sampling of the Pesticide Dump, level C protection will be observed. This protection will include Tyvek protective clothing with hood and a full face respirator. Dermathins and Scorpio gloves will be worn for hand protection.

Below are listed emergency phone numbers in case of an accident.

Elkton Police Department: (502) 265-9877
Elkton Fire Department: (502) 265-2501
Jenny Stewart Hospital (Hopkinsville): (502) 886-5221

APPENDIX B



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS
Culture and drainage in part compiled from aerial photographs taken 1949
Topography by plane-table methods 1950

Polyconic projection. 1927 North American datum
10,000-foot grid based on Kentucky coordinate system, south zone

APPROXIMATE MEAN DECLINATION, 1950

APPENDIX C

TABLE I

CONCENTRATIONS IN PESTICIDES AND HERBICIDES (in ppm)

Parameter	Sample Identification			
	EPD-001	EPD-002	EPD-003	EPD-004
P,P'-DDD	<0.1	0.016	NA	NA
P,P'-DDT	<0.1	0.014	NA	NA
Total DDT	<0.1	0.03	NA	NA
Toxaphene	3.92	<0.1	NA	NA
Dicamba	<0.05	<0.05	* 20	NA
2,4-dichlorophenoxyacetic acid	<0.05	<0.05	* 0.8	NA
2-(2,4,5-trichlorophenoxy) propionic acid	<0.05	<0.05	* 2.0	NA
Picloram	NA	NA	* 0.5	NA

NA: Not Analyzed
*Data suspect due to quality control

APPENDIX D

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 0900

Sample Identification: Sinkhole on site

REPORT OF ANALYSIS

Report No: B06-020 SA No: 84-3087

Received: 10/23/84 Finished: 11/13/85 Approved: 11/14/85

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.1
Hexachlorocyclohexane, alpha isomer	< 0.1
Hexachlorocyclohexane, beta isomer	< 0.1
Hexachlorocyclohexane, gamms isomer	< 0.1
Hexachlorocyclohexane, delta isomer	< 0.1
Heptachlor	< 0.1
Aldrin	< 0.1
Heptachlor Epoxide	< 0.1
oxychlordane	< 0.1
t-Chlordane	< 0.1
c-Chlordane	< 0.1
t-Nonarchlor	< 0.1

O, P' - DDE	< 0.1
P, P' - DDE	< 0.1
Dieldrin	< 0.1
Endrin	< 0.1
O, P' - DDD	< 0.1
P, P' - DDD	< 0.1
O, P' - DDT	< 0.1
P, P' - DDT	< 0.1
Total DDT	< 0.1
Methoxychlor	< 0.1
Mirex	< 0.1
Endosulfan I	< 0.1
Endosulfan II	< 0.1
Endosulfan Sulfate	< 0.1
Endrin Aldehyde	< 0.1
Endrin Ketone	< 0.1
Toxaphene	3.92
Technical Chlordane	< 1.0
Aroclor 1014	< 1.0
Aroclor 1221	< 1.0
Aroclor 1232	< 1.0
Aroclor 1242	< 1.0
Aroclor 1248	< 1.0
Aroclor 1254	< 1.0
Aroclor 1260	< 1.0
Aroclor 1262	< 1.0
Aroclor 1268	< 1.0
Dicamba	< 0.05
2,4-Dichlorophenoxyacetic Acid	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 0915

Sample Identification: Erosion rills on site

REPORT OF ANALYSIS

Report No: B06-021 SA No: 84-3088

Received: 10/23/84 Finished: 11/13/85 Approved: 11/14/85

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.01
Hexachlorocyclohexane, alpha isomer	< 0.01
Hexachlorocyclohexane, beta isomer	< 0.01
Hexachlorocyclohexane, gamms isomer	< 0.01
Hexachlorocyclohexane, delta isomer	< 0.01
Heptachlor	< 0.01
Aldrin	< 0.01
Heptachlor Epoxide	< 0.01
oxychlordane	< 0.01
t-Chlordane	< 0.01
c-Chlordane	< 0.01
t-Nonarchlor	< 0.01

O, P' - DDE	< 0.01
P, P' - DDE	< 0.01
Dieldrin	< 0.01
Endrin	< 0.01
O, P' - DDD	< 0.01
P, P' - DDD	0.016
O, P' - DDT	< 0.01
P, P' - DDT	0.014
Total DDT	0.03
Methoxychlor	< 0.01
Mirex	< 0.01
Endosulfan I	< 0.01
Endosulfan II	< 0.01
Endosulfan Sulfate	< 0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	< 0.01
Toxaphene	< 0.1
Technical Chlordane	< 0.1
Aroclor 1014	< 0.1
Aroclor 1221	< 0.1
Aroclor 1232	< 0.1
Aroclor 1242	< 0.1
Aroclor 1248	< 0.1
Aroclor 1254	< 0.1
Aroclor 1260	< 0.1
Aroclor 1262	< 0.1
Aroclor 1268	< 0.1
Dicamba	< 0.05
2,4-Dichlorophenoxyacetic Acid	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 0950

Sample Identification: Container (5 gal) found on site labeled Lennix

REPORT OF ANALYSIS

Report No: B06-022 SA No: 84-3089

Received: 10/23/84 Finished: 11/15/85 Approved: 11/15/85

Results:

PARAMETER	CONCENTRATION Mg/l)
*Hexachlorobenzene	
*Hexachlorocyclohexane, alpha isomer	
*Hexachlorocyclohexane, beta isomer	
*Hexachlorocyclohexane, gamms isomer	
*Hexachlorocyclohexane, delta isomer	
*Heptachlor	
*Aldrin	
*Heptachlor Epoxide	
*oxychlordane	
*t-Chlordane	
*c-Chlordane	
*t-Nonarchlor	

*O, P' - DDE	
*P, P' - DDE	
*Dieldrin	
*Endrin	
*O, P' - DDD	
*P, P' - DDD	
*O, P' - DDT	
*P, P' - DDT	
*Total DDT	
*Methoxychlor	
*Mirex	
*Endosulfan I	
*Endosulfan II	
*Endosulfan Sulfate	
*Endrin Aldehyde	
*Endrin Ketone	
*Toxaphene	
*Technical Chlordane	
*Aroclor 1014	
*Aroclor 1221	
*Aroclor 1232	
*Aroclor 1242	
*Aroclor 1248	
*Aroclor 1254	
*Aroclor 1260	
*Aroclor 1262	
*Aroclor 1268	
**Dicamba	< 2.0
**2,4-Dichlorophenoxyacetic Acid	< 0.8
**2,4,5-Trichlorophenoxyacetic Acid	< 0.5
**2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 2.0
**Picloram	<0.5

*There was insufficent sample for testing for Pesticides.

**Analytical data suspect because quality control data exeeded control limits.

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DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 1000

Sample Identification: Container (2 gal) found on site labeled Round-up

REPORT OF ANALYSIS

Report No: B06-023 SA No: 84-3090

Received: 10/23/84 Finished: 11/15/85 Approved: 11/15/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamms isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonarchlor	< 0.001

O, P' - DDE	< 0.001
P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.01
Technical Chlordane	< 0.01
Aroclor 1014	< 0.01
Aroclor 1221	< 0.01
Aroclor 1232	< 0.01
Aroclor 1242	< 0.01
Aroclor 1248	< 0.01
Aroclor 1254	< 0.01
Aroclor 1260	< 0.01
Aroclor 1262	< 0.01
Aroclor 1268	< 0.01
Dicamba	< 0.005
2,4-Dichlorophenoxyacetic Acid	< 0.005
2,4,5-Trichlorophenoxyacetic Acid	< 0.005
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.005
Picloram	< 0.005

APPENDIX E

CHARLOTTE E. BALDWIN
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COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

MEMORANDUM

TO: Barry Burrus, Chief BB
Uncontrolled Site Section

FROM: Robert Burns, Environmentalist RB
Uncontrolled Site Section

DATE: January 4, 1985

SUBJECT: Site Investigation Report for the Pesticide Dump
Elkton, Todd County
EPA ID#: KYD980841654

A site investigation was conducted October 23, 1984, at a pesticide dump outside of Elkton in Todd County, Kentucky. Soil and waste samples comprised this investigation. Analyses revealed that the soil downgradient from the dump was contaminated with p,p'-DDD, p,p'-DDT, and toxaphene.

A follow-up investigation will be conducted within the next two weeks. The purpose of this investigation will be to obtain well water samples to determine if groundwater contamination exists. Once the existence and extent of contamination is determined, plans to remedy this situation can be developed.

RB/las

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE: KY | 02 SITE NUMBER: D980841654

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Pesticide Dump	U.S. 102				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Elkton	KY		Todd	219	

09 COORDINATES — LATITUDE: 36° 44 ___.___ | LONGITUDE: 087° 06 ___.___

10 TYPE OF OWNERSHIP (Check one): ☐ A. PRIVATE ☐ B. FEDERAL ____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☑ F. OTHER Estate ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 10 23 84 (MONTH DAY YEAR)

02 SITE STATUS: ☐ ACTIVE ☑ INACTIVE

03 YEARS OF OPERATION: 1981 (BEGINNING YEAR) | 1983 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply): ☐ A. EPA ☐ B. EPA CONTRACTOR ____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ____ (Name of firm) ☑ E. STATE ☐ F. STATE CONTRACTOR ____ (Name of firm) ☐ G. OTHER ____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Robert Burns	Environmentalist	KYNREPC	(502) 564-6716
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Jim Childers	Geologist	KYNREPC	(502) 564-6716
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
NA			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☑ PERMISSION ☐ WARRANT	0900 EST	Rain, 45°

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Ken Yates	KYNREPC	(502) 825-2532

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Robert Burns	KYNREPC	Waste Mgt.	(502) 564-6716	/ / (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☑ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☑ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS *200 5gal cans

03 WASTE CHARACTERISTICS (Check all that apply)

- ☑ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☑ D. PERSISTENT
- ☑ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	200	5gal cans	
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	P,P'-DDD	72-54-8	open dump	0.016	ppm
	P,P'-DDT	50-29-3	open dump	0.014	ppm
	Toxaphene	8001-35-2	open dump	392	ppm

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site investigation by KYNREPC 10-22-84

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
The pesticide dump is adjacent to a sinkhole with drainage from the dump entering the sinkhole. DDT has been identified in the soil; DDT is readily soluable in water.

01 ☑ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
The pesticides identified in the environment are readily soluable in water.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☑ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
There are no physical barriers at the site.

01 ☑ F. CONTAMINATION OF SOIL — 02 ☑ OBSERVED (DATE: 10-22-84) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) 04 NARRATIVE DESCRIPTION
Soil samples taken 10-22-84 showed the presence of P,P'-DDD, P,P'-DDT, and toxaphene

01 ☑ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Residences in this area need groundwater for domestic purposes. DDT, which has been identified in the soil is easily dispersed by surface runoff and erosion and is readily soluable in water.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☑ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
The are no access restrictions to this site

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: KY
02 SITE NUMBER: D980841654

I. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☑ J. DAMAGE TO FLORA — 02 ☑ OBSERVED (DATE: 10-22-84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Bald areas are present below dump

01 ☑ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☑ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
DDT is an environmentally persistant chemical that is bioaccumulated in adipose tissue

01 ☑ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: 10-22-84) ☑ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
DDT is bioaccumulated in adipose tissue, thus forming a migration pathway for contaminants

01 ☑ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☑ OBSERVED (DATE: 10-22-84) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Cans have simply been dumped

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☑ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☑ OBSERVED (DATE: 10-22-84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
This dump is an open, non-permitted, dump

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

II. TOTAL POPULATION POTENTIALLY AFFECTED: 9,581 persons within 3 miles of site.

III. COMMENTS

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Site investigation of 10-22-84 by KYNREPC
Population from house count of USGS topo x 3.8 conversion factor

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA	NA			
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☑ C. ~~DRUMS~~ CANS, ABOVE GROUND	200	5 gal. cans
☐ D. ~~TANK, ABOVE GROUND~~		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☑ H. OPEN DUMP		
☑ I. OTHER Subsurface cans (Specify)	200	5 gal. cans

04 TREATMENT (Check all that apply)
☐ A. INCENERATION
☐ B. UNDERGROUND INJECTION
☐ C. CHEMICAL/PHYSICAL
☐ D. BIOLOGICAL
☐ E. WASTE OIL PROCESSING
☐ F. SOLVENT RECOVERY
☐ G. OTHER RECYCLING/RECOVERY
☐ H. OTHER _____ (Specify)

05 OTHER

☐ A. BUILDINGS ON SITE

06 AREA OF SITE

1/2 (Acres)

07 COMMENTS

Approximately 1982, 200 of the pesticide containers were pushed into the sinkhole and covered by soil.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☑ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Approximately 200 five gallon containers above ground and adjacent to a sinkhole. Containers are not badly rusted, but many are without lids.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☑ YES ☐ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Site investigation of 10-22-84 by KYNREPC

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: KY
02 SITE NUMBER: D980841654

. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
OMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☑

02 STATUS: Potentially

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☑	E. ☐	F. ☐

03 DISTANCE TO SITE
A. _____ (mi)
B. .1 (mi)

III. GROUNDWATER

GROUNDWATER USE IN VICINITY (Check one)

☑ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER ≈550 within 3 miles
03 DISTANCE TO NEAREST DRINKING WATER WELL .1 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
≈20 (ft)	S	≈20 (ft)	5gpm (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)
Wells in this area are used for domestic purposes. The depths range from 22 to 200 feet

10 RECHARGE AREA
☐ YES
☐ NO
COMMENTS

11 DISCHARGE AREA
☐ YES
☐ NO
COMMENTS

. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☑ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Dry Branch Creek	☐	½ (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 79.8 NO. OF PERSONS	B. 133 NO. OF PERSONS	C. 330.6 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: ≈.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 60

04 DISTANCE TO NEAREST OFF-SITE BUILDING: ≈.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
Area is a rural, agricultural setting. Crops and pasture constitute land use.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: KY
02 SITE NUMBER: D980841654

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☑ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☑ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
8-10 (ft)	unknown (ft)	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
12 (in)	2.5 (in)	2 %	NW	2 %

09 FLOOD POTENTIAL

SITE IS IN NA YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. 1 1/2 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL: A. _____ (mi)

RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES: B. _____ (mi)

AGRICULTURAL LANDS: PRIME AG LAND: Site is located in prime ag land C. _____ (mi) AG LAND: D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Dumping occured adjacent to a sinkhole, which are common in this area. The close proximity of this dump to an easy access to groundwater causes grave concern. DDT is readily soluable in water resulting in the distinct possibility of dispersion into groundwater. Approximately 200 cans were buried in the sinkhole in 1982.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site investigation of 10-22-84 by KNREPC
KNREPC files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE	2	KYNREPC laboratory, Frankfort, Ky.	Included with report
AIR			
RUNOFF			
SPILL			
SOIL	2	KYNREPC laboratory, Frankfort, Ky.	Included with report
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☑ GROUND ☐ AERIAL

02 IN CUSTODY OF KYNREPC (Name of organization or individual)

03 MAPS ☑ YES ☐ NO

04 LOCATION OF MAPS KYNREPC

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site investigation on 10-22-84 by KYNREPC

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

CURRENT OWNER(S)

01 NAME: Buck Cole Estate c/o Janie Hollins	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.): (b)(6) Personal Privacy	04 SIC CODE		
05 CITY: (b)(6) Personal Privacy	06 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	
12 CITY	13 STATE	14 ZIP CODE
08 NAME	09 D+B NUMBER	
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	
12 CITY	13 STATE	14 ZIP CODE
08 NAME	09 D+B NUMBER	
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	
12 CITY	13 STATE	14 ZIP CODE
08 NAME	09 D+B NUMBER	
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	
12 CITY	13 STATE	14 ZIP CODE

PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE

SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

KEPC files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

CURRENT OPERATOR (Provide if different from owner)				OPERATOR'S PARENT COMPANY (If applicable)			
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER						

PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)				PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)			
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						
NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						

SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

I. ON-SITE GENERATOR

NAME	02 D+B NUMBER
STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

I. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

'AST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841564

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☑ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

KYD 980841654

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 31, 1986

Mr. Joel Veater
U.S. EPA
345 Courtland Street
Atlanta, GA 30365

Dear Mr. Veater:

This letter describes the results of a site inspection follow-up for the Todd County Pesticide Dump near Elkton, Kentucky. There have actually been two additional sampling trips to this dump since the original site investigation occurred on October 23, 1984. These two additional follow-up sampling events are described below.

1. January 17, 1985 Well Sampling

Seven groundwater wells from local residences surrounding the dump site were sampled. No pesticide compounds or PCB's were detected in any of the samples. The January 29, 1985, laboratory reports from this sampling trip are enclosed in Appendix A.

2. February 25-26, 1986 Soil and Product Sampling.

A site investigation plan for this follow-up was prepared on February 5, 1986 (Appendix B). Although this trip was planned on February 11-12, 1986, it had to be postponed until February 25-26, 1986. A description of activities and the results for this trip are given below.

a. Description of Activities

The field investigation team from the State Uncontrolled Site Section arrived at the site at approximately 1:00 p.m. EST on February 25, 1986. A decontamination line was established and the equipment needed for container inventory was laid out. Keith Burch and Bob Burns then donned Level B protective equipment with protective hoods and began an inventory of the containers to determine the number of containers and approximate amount of waste in the containers.

Many different brands of pesticides and herbicides were noted during the inventory. The following is a list of brands recorded and the number of containers of each brand:

Brand	No. of Containers
Lasso	78
Roundup	17
Unknown Flamable Liquid	5 - 1 gallon; 6 - 2 1/2 gallon
Dyanap	31
Lorsban 4 E	4
Alanap - L	2
Toxaphene	5
Ridomil	1
Ramik	1
Dowfume McFumigant	23 - 12 oz. cans
Esteron	2
Linex 4 L	15
2,4-D low volatile ester 4 ec	2
Unknown (unmarked)	19
Total	213 Containers

It had been reported prior to the sampling trip that there were possibly buried pesticide containers at the site. By examining the immediate vicinity of the sinkhole, it was evident that material has been covered because the topography was very irregular.

After completion of the inventory, the team decontamination and left for the day.

On February 26, the team returned to the site and again established a decontamination line. Brad Lyon and Bob Burns donned Level B protection with hoods and began taking environmental samples. The waste containers that were "staged" the previous day were to be sampled: however, it was discovered that the "staged" containers had been removed from the site during the night by an unknown party. There fore, it was necessary to "stage" some additional containers for sampling. Four samples were taken from containers labeled "paraquat", "Dow Formule 40", "Radomil," and an unknown waste sample. In addition, soil samples were taken from the center of the sinkhole, from an erosion rill downgradient of the site, and a subsurface soil coil was taken. Finally, a background surface soil sample and a background core sample were taken. The following is a list of samples taken and their respective sample numbers:

Sample Number	Description
EPD - 001	Background subsurface soil coil: 0-4"
EPD - 002	Background surface soil
EPD - 003	Surface soil from sinkhole
EPD - 004	Surface soil from erosion rill
EPD - 005	Subsurface soil core 0-4"
EPD - 006	Paraquat Container
EPD - 007	Dow Formula 40 container
EPD - 008	Ridomil container
EPD - 009	Unknown container. Appeared to be a powedered waste mixed with water

After sampling, the team decontaminated and left the site. Samples were returned to the Environmental Services Division in Frankfort for analysis.

b. Results

No pesticides were found in the background soil and core samples or in the on-site core sample. DDT compounds were found in the on-site surface soil from the sinkhole and the soil from the erosion rills. Compounds detected ranged from 0.073 to 1.57 mg/kg.

Three of the container samples were confirmed as containing high levels of pesticides. Sample EPD - 006 contained 29.8% Paraquat, sample EPD - 007 contaned 24.7% 2,4-Dichlorophenoxyacetic Acid, and sample PEED - 008 contained 29.4% Ridomil. Sample EPD - 009 containing the unknown waste in container was lost to analysis due to a laboratory accident. All of the laboratory reports are found in Appendix C.

Other Developments

On March 20, 1985, EPA toured the site to evaluate the possibility for a Superfund removal action. On March 28, EPA decided not to pursue this action; therefore, on April 11, 1985, a recommendation was made to use the Kentucky Hazardous Waste Management Fund to cleanup the site (Appendix D, Documnet 1). On May 27, 1985, an inspection by Field office contact Cecile Thomas revealed a continuing problem at the site. (Appendix D, Document 2). The Director of the Division of Waste Management requested further documentation from EPA Region IV (Appendix D, Document 3), and then responded on September 21, 1985, with a clarification letter on the pesticide dump to ask EPA to re-evaluate their conclusion (Appendix D, Document 4). EPA did not respond; therefore, the February 25-26, 1986, follow-up investigation was undertaken to bolster the request for use of the Kentucky Fund to clean-up the site.

I trust that this letter and enclosed documentation will be sufficient for the follow-up investigation please contact me if you have any questions.

Sincerely,

Barry Burrus

Barry Burrus, Chief
Uncontrolled Site Section

BB/kwb

Enclosure

APPENDIX A

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1049

Sample Identification: E. G. W. - 001 - Well Water

REPORT OF ANALYSIS

Report No: B06-045 SA No: 85-0146

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-045
SA No: 85-0146

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1105

Sample Identification: E. G. W. - 002 - Well Water

REPORT OF ANALYSIS

Report No: B06-046 **SA No: 85-0147**

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1120

Sample Identification: E. G. W. - 003 - Well Water

REPORT OF ANALYSIS

Report No: B06-047 SA No: 85-0148

Received: 01/17/85 Finished: 01/28/85 Approved: 0/128/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-047
SA No: 85-0148

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1140

Sample Identification: E. G. W. - 004 - Well Water

REPORT OF ANALYSIS

Report No: B06-048 SA No: 85-0149

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-048
SA No: 85-0149

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1200

Sample Identification: E. G. W. - 005 - Well Water

REPORT OF ANALYSIS

Report No: B06-049 **SA No: 85-0150**

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-049
SA No: 85-0150

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1230

Sample Identification: E. G. W. - 006 - Well Water

REPORT OF ANALYSIS

Report No: B06-050 SA No: 85-0151

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-050
SA No: 85-0151

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1300

Sample Identification: E. G. W. - 007 - Well Water

REPORT OF ANALYSIS

Report No: B06-051 SA No: 85-0152

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-051
SA No: 85-0152

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

APPENDIX B

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

MEMORANDUM

TO: Barry Burrus, Chief
Uncontrolled Site Section

THRU: Robert L. Prewitt, Environmental Program Coordinator
Uncontrolled Site Section

FROM: Bob Burns, Senior Environmentalist
Uncontrolled Site Section

DATE: February 5, 1986

SUBJECT: Site Investigation Plan for the Elkton Pesticide Dump
Todd County

Find attached the site investigation plan referenced above. The investigation will be conducted February 11, and 12, 1986, and will be conducted by personnel of the Uncontrolled Site Section.

The results of the investigation are expected to be available 60 days after the investigation.

BB/tlj

c: Ken Yates
Cecile Thomas

SITE INVESTIGATION PLAN
Elkton Pesticide Dump
Todd County

I. Introduction

The Elkton pesticide dump consists of approximately 200 surface and 200 subsurface pesticide and herbicide containers that have been discarded in a sinkhole. The sinkhole is located adjacent to highway 102 approximately seven miles southeast of Elkton and has been used for a dump since 1981. Soil samples taken October 23, 1984, from the sinkhole showed contamination by toxaphene, and DDT at concentrations of 3.92 ppm and 0.03 ppm, respectively.

All surface water runoff from the disposal area enters into the groundwater via the sinkhole. Pesticides are characteristically more dense than water and thus settle out of the water and concentrate in the soil or sediment.

On May 2, 1985, Cecile Thomas, of the Madisonville Field Office, inspected this dump and found newly dumped pesticide containers. It was her opinion that this site poses a threat to human health and the environment. This site has been recommended for cleanup under the Kentucky Hazardous Waste Management Fund.

II. Objectives

The purpose of this site investigation is to gather additional environmental data to determine if this site warrants cleanup action by use of the Kentucky Hazardous Waste Management Fund.

III. Investigation Activities

The site investigation will be conducted by personnel of the Uncontrolled Site Section, Division of Waste Management. Planned activities are given below:

Tuesday, February 11, 1986

The investigation team will travel to Hopkinsville in the morning. After checking in at the Holiday Inn, the investigation team will travel to Elkton, to conduct a reconnaissance of the site to familiarize themselves with the area and locate sampling points. An inventory of the disposed containers will be performed to estimate the waste quantity present.

Wednesday, February 12, 1986

6:30 a.m. Meet for breakfast. At breakfast final decisions will be made concerning the investigation.

7:00 a.m. Travel to site.

8:00 - 9:00 a.m. Set up logistical center.

9:00 a.m. Begin sampling. After the samples have been preserved and loaded, the investigation team will return to Frankfort and deliver the samples to the Division of Environmental Services under chain-of-custody procedures.

IV. Organization

The following Uncontrolled Site personnel will conduct the site investigation at the Elkton pesticide dump:

Name	Responsibilities
Robert Burns	Site Coordinator Sampling Media Contact
Keith Burch	Sampling Photographs
Brad Lyon	Sampling Log Book

V. Sample Plan

The investigation of the Elkton pesticide dump will consist of samples from pesticide/herbicide containers, surface, soil, soil core, background surface soil and soil core.

Sample Types

Samples that will be taken during this investigation include:

2 samples of residue remaining in the pesticide/herbicide containers.
3 surface soil samples.
3 soil core samples taken at six inch intervals to a depth of 1.5 feet.
1 background surface soil.
1 background soil core.

Sampling Equipment

3 SCBA's with 6 replacement air cylinders
1 box of dermathin gloves
1 box of Scorpio gloves
Tyveck protective clothing with hoods
Protective boot covers
Chemical resistant rubber boots
12 one liter sample containers
10 stainless steel spoons
H-NU
Hand auger
Glass pans for homogenize soil samples

Analyses

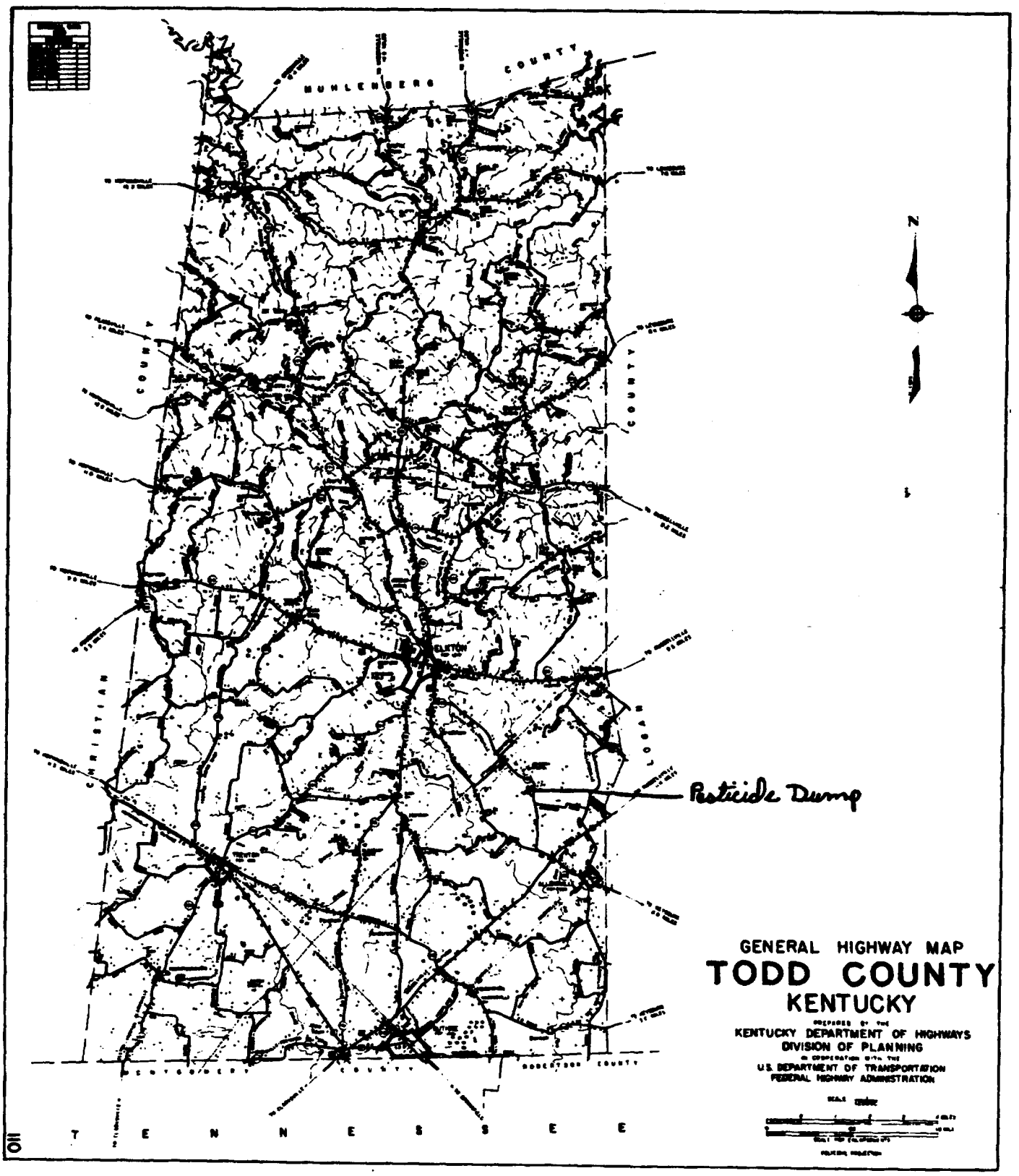
Waste and soil samples will be analyzed for pesticides and herbicides.

VI. Safety Plan

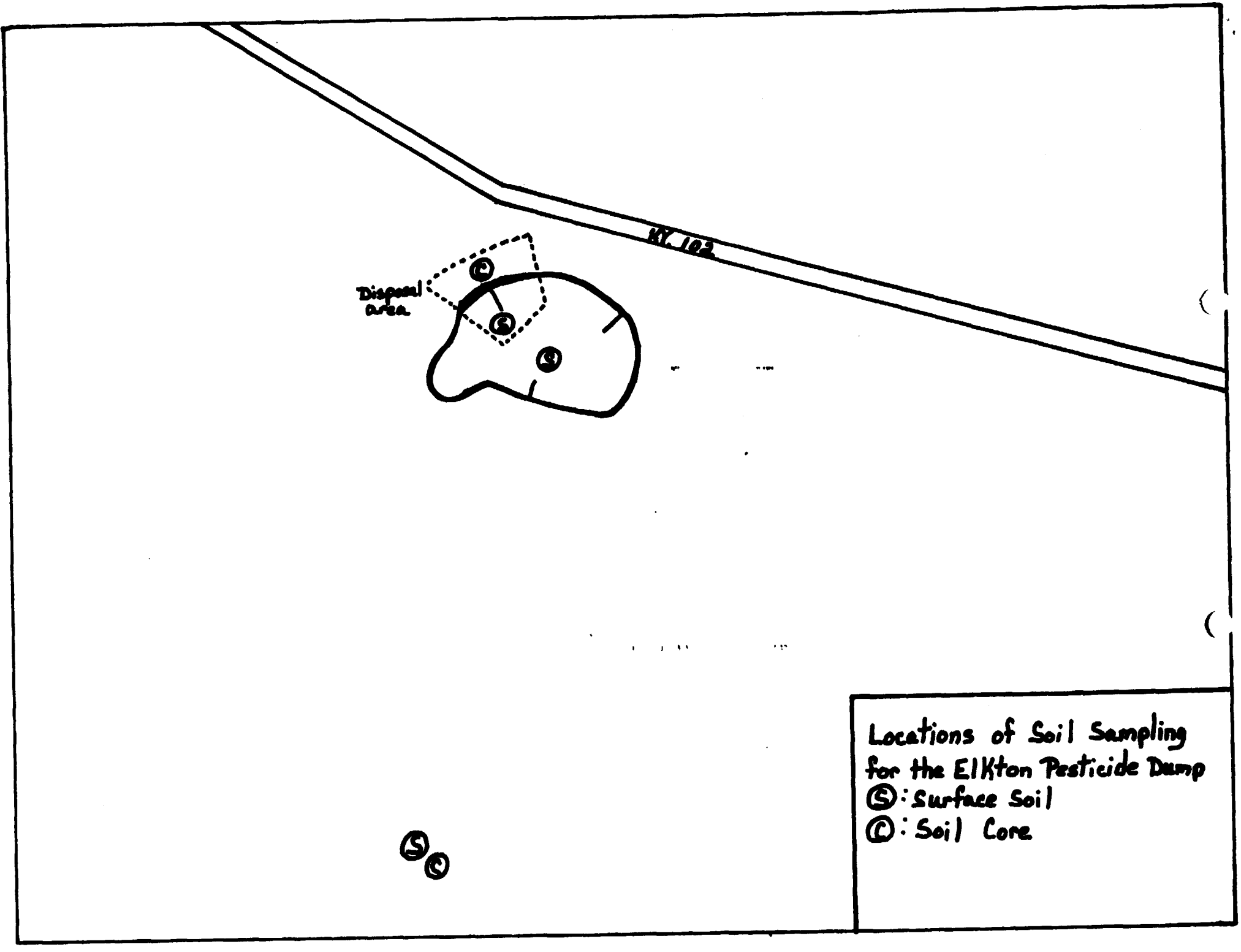
During the container inventory and sampling of the Elkton pesticide dump, level B protection will be observed. Dermathins and gloves will be worn for hand protection.

Below are listed emergency phone numbers in case of an accident.

Elkton Police Department (502) 265-9877
Elkton Fire Department (502) 265-2501
Jenny Stewart Hospital (Hopkinsville) (502) 886-5221


MUHLENBERG COUNTY
CHRISTIAN COUNTY
LOGAN COUNTY
TRIGG COUNTY
ROBERTSON COUNTY
TENNESSEE
N
Pesticide Dump
GENERAL HIGHWAY MAP
TODD COUNTY
KENTUCKY
PREPARED BY THE
KENTUCKY DEPARTMENT OF HIGHWAYS
DIVISION OF PLANNING
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Branch
Dry
Cem
Johnson Chapel
160 000 FEET
36°45'
87°07'30"
1 600 000 FEET
ALLENSVILLE 3 MI.
5'
(ALLEN.
Pesticide Dump


KY. 102
Disposal area
Locations of Soil Sampling
for the Elkton Pesticide Dump
S: Surface Soil
C: Soil Core

APPENDIX C

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 24, 1986

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/26/86 Time: 1000

Sample Identification: EPD - 001 - Bkg. Sub Surface Core 0"-4"

REPORT OF ANALYSIS

Report No: B07-183 SA No: 86-0438

Received: 02/27/86 Finished: 03/21/86 Approved: 03/24/86

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.01
Hexachlorocyclohexane, alpha isomer	< 0.01
Hexachlorocyclohexane, beta isomer	< 0.01
Hexachlorocyclohexane, gamma isomer	< 0.01
Hexachlorocyclohexane, delta isomer	< 0.01
Heptachlor	< 0.01
Aldrin	< 0.01
Heptachlor Epoxide	< 0.01
oxychlordane	< 0.01
t-Chlordane	< 0.01
c-Chlordane	< 0.01
t-Nonachlor	< 0.01
O, P' - DDE	< 0.01
P, P' - DDE	< 0.01
Dieldrin	< 0.01
Endrin	< 0.01

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DIVISION OF
WASTE MANAGEMENT
MAR 25 7 50 AM '86

Report No: B07-183
SA No: 86-0438

O, P' - DDD	< 0.01
P, P' - DDD	< 0.01
O, P' - DDT	< 0.01
P, P' - DDT	< 0.01
Total DDT	< 0.01
Methoxychlor	< 0.01
Mirex	< 0.01
Endosulfan I	< 0.01
Endosulfan II	< 0.01
Endosulfan Sulfate	< 0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	< 0.01
Toxaphene	< 0.01
Technical Chlordane	< 0.01
Aroclor 1016	< 0.01
Aroclor 1221	< 0.01
Aroclor 1232	< 0.01
Aroclor 1242	< 0.01
Aroclor 1248	< 0.01
Aroclor 1254	< 0.01
Aroclor 1260	< 0.01
Aroclor 1262	< 0.01
Aroclor 1268	< 0.01
Dicamba	< 0.05
2,4-Dichlorophenoxyacetric	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05
Picloram	< 0.05

MAR 25 7 30 AM '86
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CHARLOTTE E. BALDWIN
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MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 24, 1986

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/25/86 Time: 1600

Sample Identification: EPD - 002 - Bkg. Surface Soil

REPORT OF ANALYSIS

Report No: B07-184 SA No: 86-0439

Received: 02/27/86 Finished: 03/21/86 Approved: 03/24/86

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.01
Hexachlorocyclohexane, alpha isomer	< 0.01
Hexachlorocyclohexane, beta isomer	< 0.01
Hexachlorocyclohexane, gamma isomer	< 0.01
Hexachlorocyclohexane, delta isomer	< 0.01
Heptachlor	< 0.01
Aldrin	< 0.01
Heptachlor Epoxide	< 0.01
oxychlordane	< 0.01
t-Chlordane	< 0.01
c-Chlordane	< 0.01
t-Nonachlor	< 0.01
O, P' - DDE	< 0.01
P, P' - DDE	< 0.01
Dieldrin	< 0.01
Endrin	< 0.01

RECEIVED
DIVISION OF
WASTE MANAGEMENT
MAR 25 7 30 AM '86

Report No: B07-184
SA No: 86-0439

O, P' - DDD	< 0.01
P, P' - DDD	< 0.01
O, P' - DDT	< 0.01
P, P' - DDT	< 0.01
Total DDT	< 0.01
Methoxychlor	< 0.01
Mirex	< 0.01
Endosulfan I	< 0.01
Endosulfan II	< 0.01
Endosulfan Sulfate	< 0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	< 0.01
Toxaphene	< 0.1
Technical Chlordane	< 0.1
Aroclor 1016	< 0.1
Aroclor 1221	< 0.1
Aroclor 1232	< 0.1
Aroclor 1242	< 0.1
Aroclor 1248	< 0.1
Aroclor 1254	< 0.1
Aroclor 1260	< 0.1
Aroclor 1262	< 0.1
Aroclor 1268	< 0.1
Dicamba	< 0.05
2,4-Dichlorophenoxyacetric	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05
Picloram	< 0.05

MAR 25 7 30 AM '86
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MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 24, 1986

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/26/86 Time: 0900

Sample Identification: EPD - 003 - Surface Soil from Sinkhole

REPORT OF ANALYSIS

Report No: B07-185 SA No: 86-0440

Received: 02/27/86 Finished: 03/21/86 Approved: 03/24/86

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.01
Hexachlorocyclohexane, alpha isomer	< 0.01
Hexachlorocyclohexane, beta isomer	< 0.01
Hexachlorocyclohexane, gamma isomer	< 0.01
Hexachlorocyclohexane, delta isomer	< 0.01
Heptachlor	< 0.01
Aldrin	< 0.01
Heptachlor Epoxide	< 0.01
oxychlordane	< 0.01
t-Chlordane	< 0.01
c-Chlordane	< 0.01
t-Nonachlor	< 0.01
O, P' - DDE	< 0.01
P, P' - DDE	< 0.01
Dieldrin	0.16
Endrin	< 0.01
	< 0.01

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DIVISION OF WASTE MANAGEMENT
MAR 25 7 30 AM '86

Report No: B07-185
SA No: 86-0440

O, P' - DDD	< 0.01
P, P' - DDD	0.94
O, P' - DDT	< 0.01
P, P' - DDT	0.47
Total DDT	1.57
Methoxychlor	< 0.01
Mirex	< 0.01
Endosulfan I	< 0.01
Endosulfan II	< 0.01
Endosulfan Sulfate	< 0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	< 0.01
Toxaphene	< 0.1
Technical Chlordane	< 0.1
Aroclor 1016	< 0.1
Aroclor 1221	< 0.1
Aroclor 1232	< 0.1
Aroclor 1242	< 0.1
Aroclor 1248	< 0.1
Aroclor 1254	< 0.1
Aroclor 1260	< 0.1
Aroclor 1262	< 0.1
Aroclor 1268	< 0.1
Dicamba	< 0.05
2,4-Dichlorophenoxyacetric	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05
Picloram	< 0.05

MAR 25 7 50 AM '88
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DIVISION OF
WASTE MANAGEMENT

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NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 24, 1986

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/26/86 Time: 0930

Sample Identification: EPD - 004 - Surface Soil from Erosion Sill

REPORT OF ANALYSIS

Report No: B07-186 **SA No: 86-0441**

Received: 02/27/86 Finished: 03/21/86 Approved: 03/24/86

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.01
Hexachlorocyclohexane, alpha isomer	< 0.01
Hexachlorocyclohexane, beta isomer	< 0.01
Hexachlorocyclohexane, gamma isomer	< 0.01
Hexachlorocyclohexane, delta isomer	< 0.01
Heptachlor	< 0.01
Aldrin	< 0.01
Heptachlor Epoxide	< 0.01
oxychlordane	< 0.01
t-Chlordane	< 0.01
c-Chlordane	< 0.01
t-Nonachlor	< 0.01
O, P' - DDE	< 0.01
P, P' - DDE	< 0.01
Dieldrin	< 0.01
Endrin	< 0.01

RECEIVED
DIVISION OF
WASTE MANAGEMENT
MAR 25 7 29 AM '86

Report No: B07-186
SA No: 86-0441

O, P' - DDD	< 0.01
P, P' - DDD	0.073
O, P' - DDT	< 0.01
P, P' - DDT	0.044
Total DDT	0.117
Methoxychlor	< 0.01
Mirex	< 0.01
Endosulfan I	< 0.01
Endosulfan II	< 0.01
Endosulfan Sulfate	< 0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	< 0.01
Toxaphene	< 0.1
Technical Chlordane	< 0.1
Aroclor 1016	< 0.1
Aroclor 1221	< 0.1
Aroclor 1232	< 0.1
Aroclor 1242	< 0.1
Aroclor 1248	< 0.1
Aroclor 1254	< 0.1
Aroclor 1260	< 0.1
Aroclor 1262	< 0.1
Aroclor 1268	< 0.1
Dicamba	< 0.05
2,4-Dichlorophenoxyacetric	0.11
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05
Picloram	< 0.05

MAR 25 7 30 AM '86
RECEIVED
DIVISION OF
WASTE MANAGEMENT

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 24, 1986

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/26/86 Time: 1000

Sample Identification: EPD - 005 - Sub Surface Soil 0"-4"

REPORT OF ANALYSIS

Report No: B07-187 SA No: 86-0442

Received: 02/27/86 Finished: 03/21/86 Approved: 03/24/86

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.01
Hexachlorocyclohexane, alpha isomer	< 0.01
Hexachlorocyclohexane, beta isomer	< 0.01
Hexachlorocyclohexane, gamma isomer	< 0.01
Hexachlorocyclohexane, delta isomer	< 0.01
Heptachlor	< 0.01
Aldrin	< 0.01
Heptachlor Epoxide	< 0.01
oxychlordane	< 0.01
t-Chlordane	< 0.01
c-Chlordane	< 0.01
t-Nonachlor	< 0.01
O, P' - DDE	< 0.01
P, P' - DDE	< 0.01
Dieldrin	< 0.01
Endrin	< 0.01

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DIVISION OF
WASTE MANAGEMENT
MAR 25 7 27 AM '86

Report No: B07-187
SA No: 86-0442

O, P' - DDD	< 0.01
P, P' - DDD	< 0.01
O, P' - DDT	< 0.01
P, P' - DDT	< 0.01
Total DDT	< 0.01
Methoxychlor	< 0.01
Mirex	< 0.01
Endosulfan I	< 0.01
Endosulfan II	< 0.01
Endosulfan Sulfate	< 0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	< 0.01
Toxaphene	< 0.01
Technical Chlordane	< 0.01
Aroclor 1016	< 0.01
Aroclor 1221	< 0.1
Aroclor 1232	< 0.1
Aroclor 1242	< 0.1
Aroclor 1248	< 0.1
Aroclor 1254	< 0.1
Aroclor 1260	< 0.1
Aroclor 1262	< 0.1
Aroclor 1268	< 0.1
Dicamba	< 0.1
2,4-Dichlorophenoxyacetric	< 0.1
2,4,5-Trichlorophenoxyacetic Acid	< 0.1
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05
Picloram	< 0.05
	< 0.05
	< 0.05
	< 0.05

MAR 25 7 27 AM '86
RECEIVED
DIVISION OF
WASTE MANAGEMENT

MARTHA LAYNE COLLINS
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SECRETARY

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 5, 1986

Re: Elkton Pesticide Dump
Todd County

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/26/86 Time: 1030

Sample Identification: EPD - 006

REPORT OF ANALYSIS

SA No: 86-0443

Report No: B07-188

Received: 02/27/86 Finished: 03/04/86 Approved: 03/05/86

Results:

PARAMETER	CONCENTRATION (mg/kg)
Paraquat	298,000

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NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 24, 1986

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/26/86 Time: 1100

Sample Identification: EPD - 007 - DOW Formula 40

REPORT OF ANALYSIS

Report No: B07-189 SA No: 86-0444

Received: 02/27/86 Finished: 03/21/86 Approved: 03/24/86

Results:

PARAMETER	CONCENTRATION (mg/kg)
Dicamba	< 80,000
2,4-Dichlorophenoxyacetric	247,000
2,4,5-Trichlorophenoxyacetic Acid	< 80,000
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 80,000
Picloram	< 80,000

MAR 25 7 27 AM '86
RECEIVED
DIVISION OF
WASTE MANAGEMENT

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MARTHA LAYNE COLLINS
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COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 4, 1986

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/26/86 Time: 0930

Sample Identification: EPD - 008

REPORT OF ANALYSIS

Report No: B07-190 SA No: 86-0445

Received: 02/27/86 Finished: 03/04/86 Approved: 03/04/86

Results:

PARAMETER	CONCENTRATION (mg/kg)
Ridomil	294,000

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COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

March 24, 1986

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 02/26/86 Time: 1045

Sample Identification: EPD - 009

REPORT OF ANALYSIS

Report No: B07-191 SA No: 86-0446

Received: 02/27/86 Finished: 03/21/86 Approved: 03/24/86

Results: Sample lost due to laboratory accident.

MAR 25 7 27 AM '86
RECEIVED
DIVISION OF
WASTE MANAGEMENT

APPENDIX D

APPENDIX D

DOCUMENT 1

MEMORANDUM

TO: J. Alex Barber, Director
Division of Waste Management

THRU: Barry Burrus, Chief
Uncontrolled Site Section

FROM: Robert Burns, Environmentalist Senior
Uncontrolled Site Section

DATE: April 11, 1985

SUBJECT: Recommendation to Utilize the Hazardous Waste Management Fund to Remove Waste at the Pesticide Dump in Elkton, Todd County

On March 20, 1985, I met with Dennis Manganiello of the U.S. EPA to tour and evaluate the situation at a pesticide dump in Todd County. The result of this meeting was that the pesticide containers and contaminated soil at this site would be removed by the U.S. EPA.

On March 28, 1985, I received a phone call from Mr. Manganiello stating that the issue at the pesticide dump had been reevaluated and determined that this site did not warrent an EPA immediate removal.

I am recommending the use of the Kentucky Hazardous Waste Management Fund to remove wastes and contaminated soil from this site. The reason I am making this recommendation are as follows:

1) to prevent the possibility of groundwater contamination;
2) the size of the site is small, approximately .25 of an acre;
3) the clean-up is estimated to cost $10,000;
4) the clean-up is expected to be complete within two days.

The estimates concerning the costs and length of the clean-up were arrived at after discussions with Mr. Manganiello.

Due to the presence of pesticide contaminated soil, pesticide residue in disposed containers, and the use of groundwater as a potable source, I feel that removal actions at this site should be initiated. This property is an estate with no definite responsible party; therefore, I am recommending the use of the Kentucky Hazardous Waste Management Fund to conduct a clean-up of this site.

RB/kwb

APPENDIX D
DOCUMENT 2

RECEIVED
MAY 23 1 54 PM '85
DIVISION OF
WASTE MANAGEMENT

Pesticide Dump
Buck Cole Estate
Todd County

MEMORANDUM

TO: Bob Burns, Uncontrolled Sites Section
Frankfort Office

THRU: Carl Schroeder, Manager - Field Operations Branch
Frankfort Office

THRU: Kenneth Yates, Environmental Control Area Supervisor
Madisonville Field Office

FROM: Cecile Schultzman Thomas, Environmental Inspector
Madisonville Field Office

DATE: May 22, 1985

SUBJECT: Uncontrolled Site Status Report: Pesticide Dump
Buck Cole Estate
Todd County

On May 2, 1985, I inspected the pesticide dump on Allensville Road in Todd County. The site is still being used, and I found freshly dumped pesticide containers and garbage. There was one paraquat container.

It is my opinion that this site is a definite threat to human health and the environment. Since the property belongs to an estate, I recommend that we consider using Kentucky's Hazardous Waste Assessment Fund for cleanup.

CST/jec

cc Field Operations Branch

Rev 7/22/85

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

File Todd Co Pesticid

APPENDIX D

DOCUMENT 3

Alex Barber
Dept. of Environmental Protection
18 Reilly Rd.
Franfort, KY 40601

Dear Mr. Barber:

On March 20, 1985, OSC Dennis Manganiello (EPA, Region IV) and technical assistant Lorenzo Richardson of the Westo Sper. Corp. conducted a site investigation of a pesticide container dump in Elkton, KY. The Kentucky state representative present for this investigation was Mr. Robert Burns of the Dept. of Environmental Protection, Frankfort, KY.

Kentucky State Department sampling analysis of the area revealed 3.92 ppm Toxaphene, and .03 ppm DDT in the sinkhole. Analysis of the well-water samples showed the well-water to be free of contamination of any kind.

Subsequent to this investigation, EPA evaluated the information outlined above and determined that the pesticide container dump did not present a release of a hazardous substance into the environment which may present an imminent and substantial danger to the public health or welfare according to CERCLA Sec. 104A.

The basis for the determination was that the dump site involved a small area in a remote location, a significant distance from any private water well and surface waterway. Secondly, contamination in and contiguous to the pesticide containers was minimal compared to the application rates of the identifed pesticides used on cultivated fields.

Therefore due to the above considerations the EPA Region IV will not perform a Superfund removal action on the site and recommends the pesticides containers be excavated and transported to a local landfill.

Sincerely,

Dennis J. Manganiello
On-Scene Coordinator
EPA, Region IV

cc: Bob Burns
Bob Prewitt

Dunn
Cop

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

APPENDIX D
DOCUMENT 4

September 21, 1985

Mr. George Moein
United States Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365

Dear Mr. Moein:

This letter is to serve as clarification to the issues addressed by Mr. Dennis Manganiello concerning the pesticide dump near the City of Elkton, Kentucky. The letter states that the dump is a small, remote location and a significant distance from any private water well and surface waterways. The setting of the pesticide dump is actually within .3 of a mile from three groundwater wells and .8 of a mile from two additional groundwater wells. All of these wells are currently being utilized for potable water. Dry Branch Creek is located within .5 of a mile from the dump.

The groundwater well samples taken January 16, 1985, did not show any contamination, but the sinkhole is continuing to be used to dispose of residue containing pesticide containers. This fact and the characteristic karst topography of the area enhances the possibility of future groundwater contamination.

In light of the above information, the determination not to conduct a Superfund removal action may be in need of re-evaluation. Should you wish to discuss this issue further, please contact me at (502)564-6716.

Sincerely,

J. Alex Barber

J. Alex Barber, Director
Division of Waste Management

JAB/RBB/tlj

EPA

POTENTIAL HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION	SITE NUMBER
IV	KYD 980841654

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency, Site Tracking System, Hazardous Waste Enforcement Task Force (EN-335), 401 M St., SW, Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Pesticide Dump	Route 102	
C. CITY	**D. STATE**	**E. ZIP CODE**
Elkton (Todd Co.)	KY	42220

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED – NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED (If yes, complete Section III.)	X		X		
C. REMEDIAL ACTION NEEDED (If yes, complete Section IV.)					
D. ENFORCEMENT ACTION NEEDED (If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)					

E. RATIONALE FOR DISPOSITION

State did further work on site, Jan 16. Results should be in after 60 days. (mid-March)

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION (mo., day, & yr.)	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED (mo., day, & yr.)

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
Elizabeth Shaver	(404) 881-2234	2-11-85

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

Results of well sampling from KY.
Refer to Moein for possible removal
(on state recommendation)

EPA Form T2070-4 (10-79)

Continue On Reverse

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1049

Sample Identification: E. G. W. - 001 - Well Water

REPORT OF ANALYSIS

Report No: B06-045 **SA No: 85-0146**

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

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COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1105

Sample Identification: E. G. W. - 002 - Well Water

REPORT OF ANALYSIS

Report No: B06-046 **SA No: 85-0147**

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-046
SA No: 85-0147

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

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COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1120

Sample Identification: E. G. W. - 003 - Well Water

REPORT OF ANALYSIS

Report No: B06-047 SA No: 85-0148

Received: 01/17/85 Finished: 01/28/85 Approved: 0/128/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-047
SA No: 85-0148

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

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NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1140

Sample Identification: E. G. W. - 004 - Well Water

REPORT OF ANALYSIS

Report No: B06-048 **SA No: 85-0149**

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1200

Sample Identification: E. G. W. - 005 - Well Water

REPORT OF ANALYSIS

Report No: B06-049 SA No: 85-0150

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-049
SA No: 85-0150

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1230

Sample Identification: E. G. W. - 006 - Well Water

REPORT OF ANALYSIS

Report No: B06-050 SA No: 85-0151

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-050
SA No: 85-0151

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
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COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

January 29, 1985

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton, Kentucky
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns/James Jarman Date: 01/16/85 Time: 1300

Sample Identification: E. G. W. - 007 - Well Water

REPORT OF ANALYSIS

Report No: B06-051 SA No: 85-0152

Received: 01/17/85 Finished: 01/28/85 Approved: 01/28/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamma isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonachlor	< 0.001
O, P' - DDE	< 0.001

Report No: B06-051
SA No: 85-0152

P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.001
Technical Chlordane	< 0.001
Aroclor 1014	< 0.001
Aroclor 1221	< 0.001
Aroclor 1232	< 0.001
Aroclor 1242	< 0.001
Aroclor 1248	< 0.001
Aroclor 1254	< 0.001
Aroclor 1260	< 0.001
Aroclor 1262	< 0.001
Aroclor 1268	< 0.001
Dicamba	< 0.001
2,4-Dichlorophenoxyacetic Acid	< 0.001
2,4,5-Trichlorophenoxyacetic Acid	< 0.001
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.001
Picloram	< 0.001

SITE INVESTIGATION REPORT

PESTICIDE DUMP

ELKTON, TODD COUNTY

Page 7

* State requests an immediate removal

400 empty "Roundup" cans in a sink hole

NFRAP
1/9/90
Benedikt

Robert Burns
Uncontrolled Site Section
Division of Waste Management

December 26, 1984

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SUMMARY

A site investigation was conducted by the Uncontrolled Site Section on October 23, 1984, at a pesticide dump seven miles east of Elkton in Todd County. Two composite soil samples and two samples of containerized liquids comprised this investigation. The purpose of this investigation was to confirm or deny the presence of contamination as a result of improper disposal of pesticide/herbicide containers. The soil sample taken from the sinkhole showed the presence of toxaphene at a concentration of 3.92 ppm. Analyses of the soil sample taken from erosion rills showed the presence of P,P'-DDD and P,P'-DDT at concentrations of 0.016 ppm and 0.014 ppm, respectively. Analyses of a sample taken from a container labeled "Round-up" could not be performed due to the lack of a liquid chromatograph by the Environmental Services Division. The quantity of the sample taken from a container labeled "Lennix" was insufficient for analyses for pesticides. Data from the analyses of the "Lennix" sample for herbicides was suspect due to quality control.

It can be concluded from the laboratory results that soil contamination has occurred as a result of improper disposal of these containers.

It is recommended that additional samples of wells in the area be taken to confirm or deny groundwater contamination. Once the extent of contamination is determined, a remedial plan should be constructed to correct the situation that now exists. These groundwater samples will be taken by the middle of January, with results expected in 60 days. If groundwater contamination exists an immediate removal will be requested.

INTRODUCTION

A site investigation was conducted October 23, 1984, at a pesticide dump outside of Elkton in Todd County, Kentucky. This dump is located adjacent to highway 102 approximately seven miles southeast of Elkton. This dump consists of approximately 200 discarded pesticide and herbicide containers on the surface of the ground and approximately 200 containers that have been pushed into the sinkhole and covered with soil. Soil samples were taken from the sinkhole and erosion rills downgradient from the surface containers. Samples were also taken of liquids in containers labeled "Round-up" and "Lennix."

Land Use

The site is located adjacent to cultivated fields and pasture land. There are isolated stands of trees scattered about the area, but mainly this area is used for agriculture.

Topography

This area is a rolling upland karst situated approximatley 600 feet above sea level. Dry Branch Creek is located approximatley .5 mile northwest of the site. There are numerous ponds scattered within one mile of the site. There is a large marsh within two miles of the site.

Geology and Hydrogeology

Geologically the underlying strata at the site is Ste. Genevieve limestone. Water yield from most drilled wells in this area is five gallons per minute. Few wells in this area do not produce enough water for domestic use. Water yield from wells drilled in fault zones is greater than five gallons per minute. Residents in the vicinity of the site rely on groundwater for domestic purposes. The soil in this area is pembroke silt loam. The depth of the bedrock ranges from 60 to 120 inches.

Population Characteristics

This area of Todd County is predominantly rural. Within a 1 mile radius of the site, there are 21 housing units, with an estimated population of 80. Between 1 and 2 miles from the site there are 35 housing units with an estimated population of 111. There are 87 housing units between 2 and 3 miles from the site with an estimated population of 331. There are approximatley 60 buildings within two miles of the site.

DESCRIPTION OF ACTIVITIES

The investigation team arrived at the site at 8:00 a.m. Level C protective clothing was donned and a recon of the site was performed.

A composite soil sample was taken from the sinkhole with the aid of a stainless steel spoon. This sample was designated EPD-001. Composite soil sample, EPD-002, was taken from erosion rills downgradient from the surface containers.

Samples EPD-003 and EPD-004 were taken from containerized liquids labeled "Lennix" and "Round-up." Acquisition liquid remaining in the containers into 1-liter sample colleciton jars. Liquids from different containers were not composited

RESULTS

The composite soil sample from the sinkhole, identified as EPD-001, showed the presence of toxaphene at a concentration of 3.92 ppm. Analysis of sample EPD-002 taken from the erosion rills leading to the sinkhole identified P,P'-DDD at a concentration of 0.016 ppm and P,P'-DDT at a concentration of 0.014 ppm (Appendix B, Table 1).

Containers labeled "Round-up" and "Lennix" were also sampled during this investigation. The sample quantity from the containers labeled "Lennix" was insufficient for the analyses for pesticides. The Environmental Services Division does not have the capability to analyze "Round-up" which requires analysis by liquid chromatography.

CONCLUSIONS

Analyses of soil samples taken during this investigation show the soil downgradient from the surface containers is contaminated with P,P'-DDD, P,P'-DDT, and toxaphene. These results indicate the possibility of groundwater contamination. DDT is relatively insoluble in water and is easily dispersed by surface runoff and erosion. Toxaphene is also a threat to groundwater contamination.

Waste Characteristics

Toxaphene is a chlorinated hydrocarbon pesticide that replaced DDT in agricultural uses. It is practically insoluble in water. It is the most heavily used pesticide in the United States. To protect freshwater aquatic life concentrations should never exceed 1.6 ppb.

The use of DDT was banned by the EPA in December of 1972. DDT is a toxicant that is persistent in soil and water and is bioaccumulated in the adipose tissue of wildlife and humans. It is easily dispersed by surface runoff and erosion but is relatively insoluble in water. The solubility of DDT in water is 0.0012 mg/ml. To protect freshwater aquatic life concentrations should not exceed 1.1 ppb.

P,P'-DDD has chemical properties similar to DDT.

RECOMMENDATIONS

Considering the close proximity of this dump to a groundwater source via a sinkhole and the nature of the contaminants identified, it is recommended that additional samples of wells in the vicinity be taken to confirm or deny groundwater contamination. Once the extent of contamination is determined, a remedial plan can be constructed to remedy the situation that now exists. This investigation will be completed by the middle of January, 1985. After these results are reported, this site will receive a hazard ranking score.

The land where the dump is located in under the care of an estate, and lacks a responsible party. It is therefore recommended that this site be considered for an immediate removal.

TABLE I

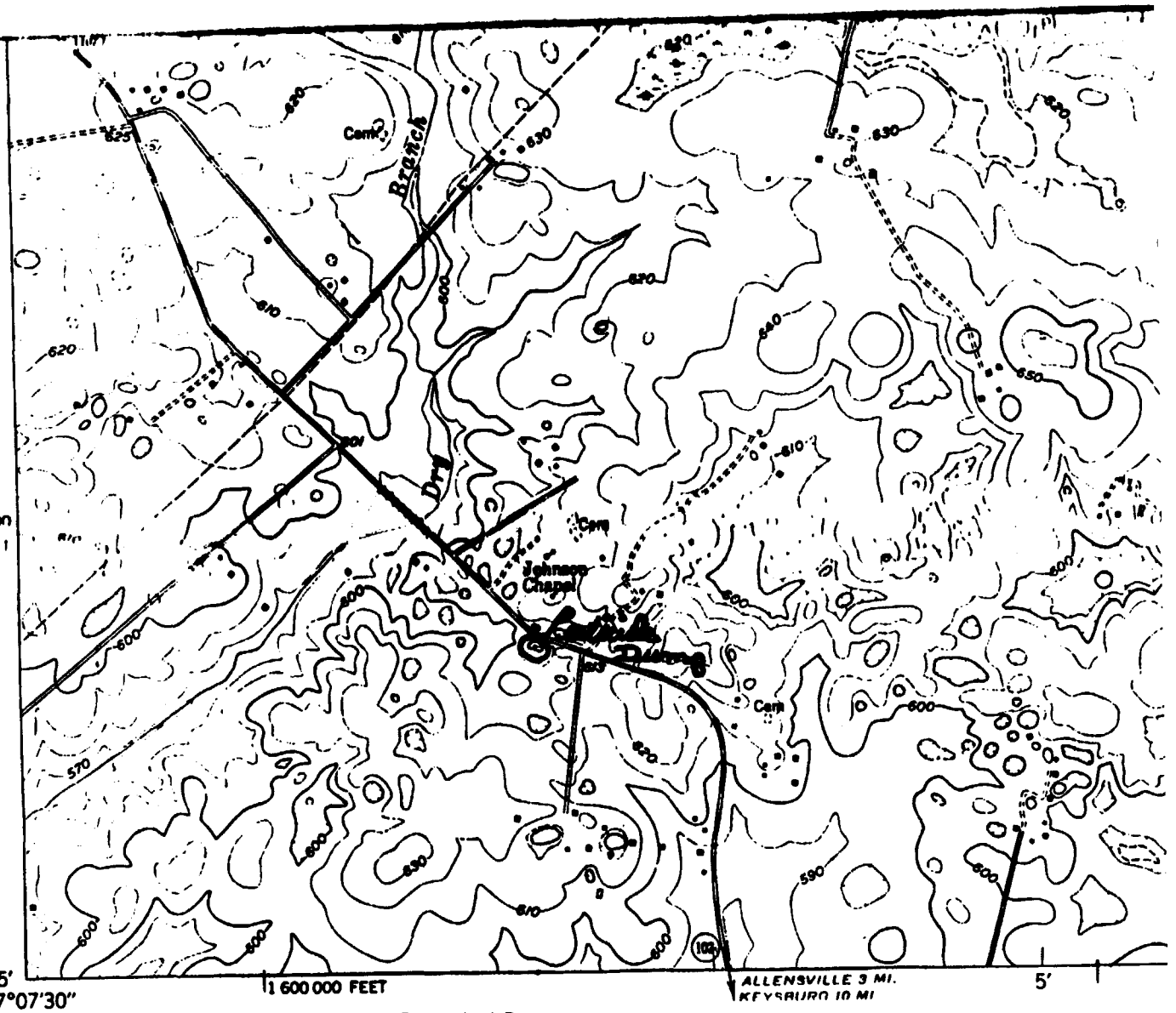
CONCENTRATIONS IN PPM OF PESTICIDES AND HERBICIDES

Parameter	Sample Identification EPD-001	EPD-002	EPD-003	EPD-004
Hexachlorobenzene	0.1	0.01	NA	NA
Hexachlorocyclohexane, alpha isomer	0.1	0.01	NA	NA
Hexachlorocyclohexane, beta isomer	0.1	0.01	NA	NA
Hexachlorocyclohexane, gamma isomer	0.1	0.01	NA	NA
Hexachlorocyclohexane, delta isomer	0.1	0.01	NA	NA
Heptachlor	0.1	0.01	NA	NA
Aldrin	0.1	0.01	NA	NA
Heptachlor Epoxide	0.1	0.01	NA	NA
Axychlordane	0.1	0.01	NA	NA
t-Chlordane	0.1	0.01	NA	NA
c-Chlordane	0.1	0.01	NA	NA
t-Nonarchlor	0.1	0.01	NA	NA
O,P'-DDE	0.1	0.01	NA	NA
P,P'-DDE	0.1	0.01	NA	NA
Dieldrin	0.1	0.01	NA	NA
Endrin	0.1	0.01	NA	NA
O,P'-DDD	0.1	0.01	NA	NA
P,P'-DDD	0.016	0.01	NA	NA
O,P'-DDT	0.1	0.01	NA	NA
P,P'-DDT	0.1	0.014	NA	NA
Total DDT	0.1	0.03	NA	NA
Methoxychlor	0.1	0.01	NA	NA
Mirex	0.1	0.01	NA	NA
Endosulfan I	0.1	0.01	NA	NA
Endosulfan II	0.1	0.01	NA	NA
Endosulfan Sulfate	0.1	0.01	NA	NA
Endrin Aldehyde	0.1	0.01	NA	NA
Endrin Ketone	0.1	0.01	NA	NA
Toxaphene	3.92	0.1	NA	NA
Technical Chlordane	0.1	0.1	NA	NA
Aroclor 1014	0.1	0.1	NA	NA
Aroclor 1221	0.1	0.1	NA	NA
Aroclor 1232	0.1	0.1	NA	NA
Aroclor 1242	0.1	0.1	NA	NA
Aroclor 1248	0.1	0.1	NA	NA
Aroclor 1254	0.1	0.1	NA	NA
Aroclor 1260	0.1	0.1	NA	NA
Aroclor 1262	0.1	0.1	NA	NA
Aroclor 1268	0.1	0.1	NA	NA
Dicamba	0.05	0.05	* 2.0	NA
2,4-Dichlorophenoxyacetic Acid	0.05	0.05	* 0.8	NA

Parameter	Sample Identification EPD-001	EPD-002	EPD-003	EPD-004
2,4,5-Trichlorophenoxyacetic Acid	0.05	0.05	* 0.5	NA
2-(2,4,5-Trichlorophenoxy) Propionic Acid	0.05	0.05	* 2.0	NA
Picloram	NA	NA	* 0.5	NA

NA: Not Analyzed
*Data suspect due to quality control

APPENDIX A



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS
Culture and drainage in part compiled from aerial photographs taken 1949
Topography by plane-table methods 1950

Polyconic projection. 1927 North American datum
10,000-foot grid based on Kentucky coordinate system, south zone

APPROXIMATE MEAN DECLINATION, 1950

APPENDIX B

TABLE I

CONCENTRATIONS IN PPM OF PESTICIDES AND HERBICIDES

Parameter	Sample Identification EPD-001	EPD-002	EPD-003	EPD-004
Hexachlorobenzene	<0.1	<0.01	NA	NA
Hexachlorocyclohexane, alpha isomer	<0.1	<0.01	NA	NA
Hexachlorocyclohexane, beta isomer	<0.1	<0.01	NA	NA
Hexachlorocyclohexane, gamma isomer	<0.1	<0.01	NA	NA
Hexachlorocyclohexane, delta isomer	<0.1	<0.01	NA	NA
Heptachlor	<0.1	<0.01	NA	NA
Aldrin	<0.1	<0.01	NA	NA
Heptachlor Epoxide	<0.1	<0.01	NA	NA
Axychlordane	<0.1	<0.01	NA	NA
t-Chlordane	<0.1	<0.01	NA	NA
c-Chlordane	<0.1	<0.01	NA	NA
t-Nonarchlor	<0.1	<0.01	NA	NA
O,P'-DDE	<0.1	<0.01	NA	NA
P,P'-DDE	<0.1	<0.01	NA	NA
Dieldrin	<0.1	<0.01	NA	NA
Endrin	<0.1	<0.01	NA	NA
O,P'-DDD	<0.1	<0.01	NA	NA
P,P'-DDD	<0.1	0.016	NA	NA
O,P'-DDT	<0.1	<0.01	NA	NA
P,P'-DDT	<0.1	0.014	NA	NA
Total DDT	<0.1	0.03	NA	NA
Methoxychlor	<0.1	<0.01	NA	NA
Mirex	<0.1	<0.01	NA	NA
Endosulfan I	<0.1	<0.01	NA	NA
Endosulfan II	<0.1	<0.01	NA	NA
Endosulfan Sulfate	<0.1	<0.01	NA	NA
Endrin Aldehyde	<0.1	<0.01	NA	NA
Endrin Ketone	<0.1	<0.01	NA	NA
Toxaphene	3.92	<0.1	NA	NA
Technical Chlordane	<0.1	<0.1	NA	NA
Aroclor 1014	<0.1	<0.1	NA	NA
Aroclor 1221	<0.1	<0.1	NA	NA
Aroclor 1232	<0.1	<0.1	NA	NA
Aroclor 1242	<0.1	<0.1	NA	NA
Aroclor 1248	<0.1	<0.1	NA	NA
Aroclor 1254	<0.1	<0.1	NA	NA
Aroclor 1260	<0.1	<0.1	NA	NA
Aroclor 1262	<0.1	<0.1	NA	NA
Aroclor 1268	<0.1	<0.1	NA	NA
Dicamba	<0.05	<0.05	* [illegible]	NA
2,4-Dichlorophenoxyacetic Acid	<0.05	<0.05	* [illegible]	NA

Parameter	Sample Identification EPD-001	EPD-002	EPD-003	EPD-004
2,4,5-Trichlorophenoxyacetic Acid	<0.05	<0.05	* 0.5	NA
2-(2,4,5-Trichlorophenoxy) Propionic Acid	<0.05	<0.05	* 2.0	NA
Picloram	NA	NA	* 0.5	NA

NA: Not Analyzed
*Data suspect due to quality control

APPENDIX C

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 0900

Sample Identification: Sinkhole on site

REPORT OF ANALYSIS

Report No: B06-020 SA No: 84-3087

Received: 10/23/84 Finished: 11/13/85 Approved: 11/14/85

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	<0.1
Hexachlorocyclohexane, alpha isomer	<0.1
Hexachlorocyclohexane, beta isomer	<0.1
Hexachlorocyclohexane, gamms isomer	<0.1
Hexachlorocyclohexane, delta isomer	<0.1
Heptachlor	<0.1
Aldrin	<0.1
Heptachlor Epoxide	<0.1
oxychlordane	<0.1
t-Chlordane	<0.1
c-Chlordane	<0.1
t-Nonarchlor	<0.1

O, P' - DDE	< 0.1
P, P' - DDE	< 0.1
Dieldrin	< 0.1
Endrin	< 0.1
O, P' - DDD	< 0.1
P, P' - DDD	< 0.1
O, P' - DDT	< 0.1
P, P' - DDT	< 0.1
Total DDT	< 0.1
Methoxychlor	< 0.1
Mirex	< 0.1
Endosulfan I	< 0.1
Endosulfan II	< 0.1
Endosulfan Sulfate	< 0.1
Endrin Aldehyde	< 0.1
Endrin Ketone	< 0.1
Toxaphene	3.92
Technical Chlordane	< 1.0
Aroclor 1014	< 1.0
Aroclor 1221	< 1.0
Aroclor 1232	< 1.0
Aroclor 1242	< 1.0
Aroclor 1248	< 1.0
Aroclor 1254	< 1.0
Aroclor 1260	< 1.0
Aroclor 1262	< 1.0
Aroclor 1268	< 1.0
Dicamba	< 0.05
2,4-Dichlorophenoxyacetic Acid	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director SB for WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 0915

Sample Identification: Erosion rills on site

REPORT OF ANALYSIS

Report No: B06-021 SA No: 84-3088

Received: 10/23/84 Finished: 11/13/85 Approved: 11/14/85

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	<0.01
Hexachlorocyclohexane, alpha isomer	<0.01
Hexachlorocyclohexane, beta isomer	<0.01
Hexachlorocyclohexane, gamms isomer	<0.01
Hexachlorocyclohexane, delta isomer	<0.01
Heptachlor	<0.01
Aldrin	<0.01
Heptachlor Epoxide	<0.01
oxychlordane	<0.01
t-Chlordane	<0.01
c-Chlordane	<0.01
t-Nonarchlor	<0.01

O, P' - DDE	< 0.01
P, P' - DDE	< 0.01
Dieldrin	< 0.01
Endrin	< 0.01
O, P' - DDD	< 0.01
P, P' - DDD	0.016
O, P' - DDT	< 0.01
P, P' - DDT	0.014
Total DDT	0.03
Methoxychlor	< 0.01
Mirex	< 0.01
Endosulfan I	< 0.01
Endosulfan II	< 0.01
Endosulfan Sulfate	< 0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	< 0.01
Toxaphene	< 0.1
Technical Chlordane	< 0.1
Aroclor 1014	< 0.1
Aroclor 1221	< 0.1
Aroclor 1232	< 0.1
Aroclor 1242	< 0.1
Aroclor 1248	< 0.1
Aroclor 1254	< 0.1
Aroclor 1260	< 0.1
Aroclor 1262	< 0.1
Aroclor 1268	< 0.1
Dicamba	< 0.05
2,4-Dichlorophenoxyacetic Acid	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05

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GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director SB for WEP
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 1000

Sample Identification: Container (2 gal) found on site labeled Round-up

REPORT OF ANALYSIS

Report No: B06-023 SA No: 84-3090

Received: 10/23/84 Finished: 11/15/85 Approved: 11/15/85

Results:

PARAMETER	CONCENTRATION (mg/l)
Hexachlorobenzene	< 0.001
Hexachlorocyclohexane, alpha isomer	< 0.001
Hexachlorocyclohexane, beta isomer	< 0.001
Hexachlorocyclohexane, gamms isomer	< 0.001
Hexachlorocyclohexane, delta isomer	< 0.001
Heptachlor	< 0.001
Aldrin	< 0.001
Heptachlor Epoxide	< 0.001
oxychlordane	< 0.001
t-Chlordane	< 0.001
c-Chlordane	< 0.001
t-Nonarchlor	< 0.001

O, P' - DDE	< 0.001
P, P' - DDE	< 0.001
Dieldrin	< 0.001
Endrin	< 0.001
O, P' - DDD	< 0.001
P, P' - DDD	< 0.001
O, P' - DDT	< 0.001
P, P' - DDT	< 0.001
Total DDT	< 0.001
Methoxychlor	< 0.001
Mirex	< 0.001
Endosulfan I	< 0.001
Endosulfan II	< 0.001
Endosulfan Sulfate	< 0.001
Endrin Aldehyde	< 0.001
Endrin Ketone	< 0.001
Toxaphene	< 0.01
Technical Chlordane	< 0.01
Aroclor 1014	< 0.01
Aroclor 1221	< 0.01
Aroclor 1232	< 0.01
Aroclor 1242	< 0.01
Aroclor 1248	< 0.01
Aroclor 1254	< 0.01
Aroclor 1260	< 0.01
Aroclor 1262	< 0.01
Aroclor 1268	< 0.01
Dicamba	< 0.005
2,4-Dichlorophenoxyacetic Acid	< 0.005
2,4,5-Trichlorophenoxyacetic Acid	< 0.005
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.005
Picloram	< 0.005

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County

ATTN: Barry Burrus

FROM: William E. Davis, Director SB for WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 0950

Sample Identification: Container (5 gal) found on site labeled Lennix

REPORT OF ANALYSIS

Report No: B06-022 **SA No: 84-3089**

Received: 10/23/84 Finished: 11/15/85 Approved: 11/15/85

Results:

PARAMETER	CONCENTRATION Mg/l)
Hexachlorobenzene	
Hexachlorocyclohexane, alpha isomer	
Hexachlorocyclohexane, beta isomer	
Hexachlorocyclohexane, gamms isomer	
Hexachlorocyclohexane, delta isomer	
Heptachlor	
Aldrin	
Heptachlor Epoxide	
oxychlordane	
t-Chlordane	
c-Chlordane	
t-Nonarchlor	

O, P' - DDE	
P, P' - DDE	
Dieldrin	
Endrin	
O, P' - DDD	
P, P' - DDD	
O, P' - DDT	
P, P' - DDT	
Total DDT	
Methoxychlor	
Mirex	
Endosulfan I	
Endosulfan II	
Endosulfan Sulfate	
Endrin Aldehyde	
Endrin Ketone	
Toxaphene	
Technical Chlordane	
Aroclor 1014	
Aroclor 1221	
Aroclor 1232	
Aroclor 1242	
Aroclor 1248	
Aroclor 1254	
Aroclor 1260	
Aroclor 1262	
Aroclor 1268	
**Dicamba	< 2.0
**2,4-Dichlorophenoxyacetic Acid	< 0.8
**2,4,5-Trichlorophenoxyacetic Acid	< 0.5
**2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 2.0
**Picloram	<0.5

*There was insuffic ent sample for testing for Pesticides.

**Analytical data suspect because quality control data exeeded control limits.

APPENDIX D

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

MEMORANDUM

TO: Barry Burrus, Chief
Uncontrolled Site Section

FROM: Bob Burns, Environmentalist
Uncontrolled Site Section

DATE: October 17, 1984

SUBJECT: Site Investigation Plan for the Pesticide Dump
Todd County

Please find attached the site investigation plan referenced above. The investigation will occur October 22 and 23, 1984, and will be conducted by personnel of the Uncontrolled Site Section.

The results of the investigation are expected to be available 60 days after the investigation.

BB/las

Attachment

I. INTRODUCTION:

This open dump consists of approximately 200 five gallon "empty" cans of pesticides and herbicides as well as several "empty" one gallon containers of paraquat. The cans were dumped near a large sinkhole, with some cans in the sinkhole. This situation poses the immediate danger of groundwater contamination.

II. OBJECTIVES:

The objective of this site investigation is to determine if and to what extent area contamination has occurred.

III. INVESTIGATION ACTIVITIES:

The site investigation will be conducted by personnel of the Uncontrolled Site Section, Division of Waste Management. Planned activities are given below:

Monday, October 22, 1984

The investigation team will travel to Hopkinsville in the morning. After checking in at the Holiday Inn, the investigation team will travel to Elkton in Todd County, to conduct a reconnaissance of the site to familiarize themselves with the site and locate sampling points.

Tuesday, October 23, 1984

6:30 a.m.	Meet for breakfast. At breakfast the activities for the sampling investigation will be disucssed.
7:00 a.m.	Travel to the site.
8:00 - 9:00 a.m.	Set up sampling equipment, SCBA's, and decon area.
9:00 a.m.	Begin sampling. Sampling should be complete by late morning. After the samples have been preserved and loaded, the investigation team will return to Frankfort and deliver the samples to the Division of Environmental Services for analyses.

IV. ORGANIZATION:

The following Uncontrolled Site personnel will conduct the site investigation at the Pesticide Dump:

Name	Responsibilities
Jim Childers	Sampling Logbook Geologic Assessment Photographs
Bob Burns	Site Coordinator Sampling Logbook Environmental Assessment

V. SAMPLE PLAN:

The investigation of the Pesticide Dump will consits of samples from containerized, residual pesticides and/or herbicides and areas where the wastes may have been spilled.

Sampling Equipment

2 SCBA's with 2 backup air cylinders
2 full face respirators
1 box of dermathin gloves
1 box of scorpio gloves
Tyvek protective clothing with hoods
H-Nu
Protective foot covers
6 sample jars
3 stainless steel spoons
Thief tubes

Sample Types

Samples that will be taken during this investigation include:

2 containerized, residue samples of pesticide/herbicide
2 soil samples from areas where spillage may have occurred.

Analyses

Waste and soil samples will be analyzed for pesticides and herbicides.

VI. SAFETY PLAN:

During the reconnaissance and sampling of the Pesticide Dump, level C protection will be observed. This protection will include Tyvek protective clothing with hood and a full face respirator. Dermathins and Scorpio gloves will be worn for hand protection.

Below are listed emergency phone numbers in case of an accident.

Elkton Police Department: (502) 265-9877
Elkton Fire Department: (502) 265-2501
Jenny Stewart Hospital (Hopkinsville): (502) 886-5221

APPENDIX E

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

MEMORANDUM

TO: Barry Burrus, Chief
Uncontrolled Site Section

FROM: Robert Burns, Environmentalist
Uncontrolled Site Section

DATE: January 4, 1985

SUBJECT: Site Investigation Report for the Pesticide Dump
Elkton, Todd County
EPA ID#: KYD980841654

A site investigation was conducted October 23, 1984, at a pesticide dump outside of Elkton in Todd County, Kentucky. Soil and waste samples comprised this investigation. Analyses revealed that the soil downgradient from the dump was contaminated with p,p'-DDD, p,p'-DDT, and toxaphene.

A follow-up investigation will be conducted within the next two weeks. The purpose of this investigation will be to obtain well water samples to determine if groundwater contamination exists. Once the existence and extent of contamination is determined, plans to remedy this situation can be developed.

RB/las

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☑ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☑ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS _____

NO. OF DRUMS #200 5gal cans

03 WASTE CHARACTERISTICS (Check all that apply)

- ☑ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☑ D. PERSISTENT
- ☑ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	200	5gal cans	
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	P,P'-DDD	72-54-8	open dump	0.016	ppm
	P,P'-DDT	50-29-3	open dump	0.014	ppm
	Toxaphene	8001-35-2	open dump	392	ppm

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site investigation by KYNREPC 10-22-84

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA	NA			
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☑ C. DRUMS, ABOVE GROUND	200	5 gal. cans
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☑ H. OPEN DUMP		
☑ I. OTHER Subsurface cans (Specify)	200	5 gal. cans

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

1/2 (Acres)

07 COMMENTS

Approximately 1982, 200 of the pesticide containers were pushed into the sinkhole and covered by soil.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☑ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKES, LINERS, BARRIERS, ETC.

Approximately 200 five gallon containers above ground and adjacent to a sinkhole. Containers are not badly rusted, but many are without lids.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☑ YES ☐ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Site investigation of 10-22-84 by KYNREPC

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Buck Cole Estate c/o Janie Hollins	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) (b)(6) Personal Privacy	04 SIC CODE
05 CITY (b)(6) Personal Privacy	06 STATE / 07 ZIP CODE (b)(6) Personal Privacy

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

KYNREPC files

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE	2	KYNREPC laboratory, Frankfort, Ky.	Included with report
AIR			
RUNOFF			
SPILL			
SOIL	2	KYNREPC laboratory, Frankfort, Ky.	Included with report
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☑ GROUND ☐ AERIAL

02 IN CUSTODY OF KYNREPC (Name of organization or individual)

03 MAPS ☑ YES ☐ NO

04 LOCATION OF MAPS KYNREPC

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site investigation on 10-22-84 by KYNREPC

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	05 CITY / 06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	05 CITY / 06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	05 CITY / 06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	05 CITY / 06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841654

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

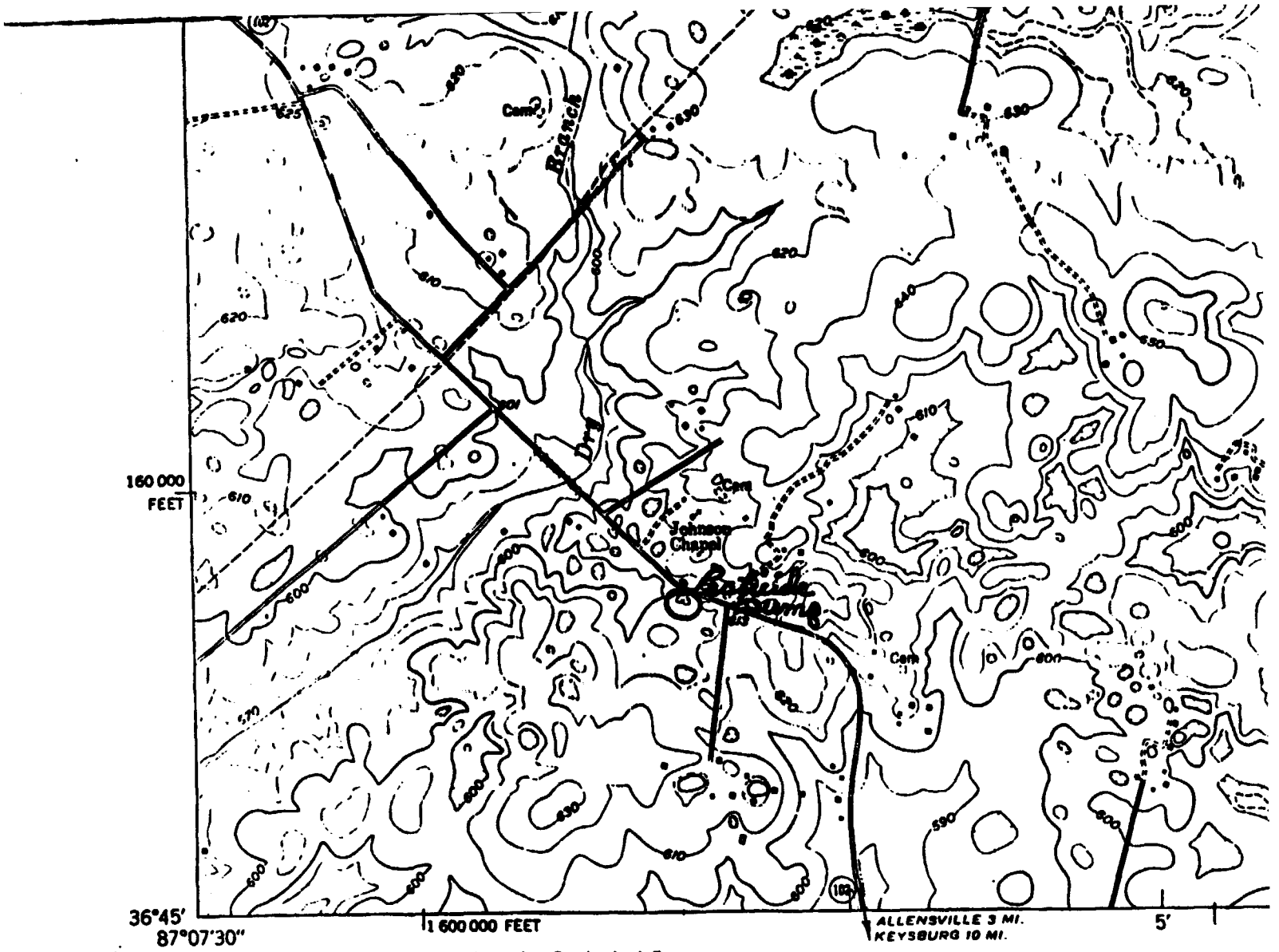
I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
KY	D980841564

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS
Culture and drainage in part compiled from aerial photographs taken 1949
Topography by plane-table methods 1950

Polyconic projection. 1927 North American datum
10,000-foot grid based on Kentucky coordinate system, south zone

APPROXIMATE MEAN DECLINATION, 1950

APPENDIX F

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

MEMORANDUM

TO: Barry Burrus, Chief
Uncontrolled Site Section

FROM: Robert Burns, Environmentalist Sr. RB
Uncontrolled Site Section

DATE: January 15, 1985

RE: Well Sampling Investigation in the Vicinity of the Elkton Pesticide Dump
Todd County, Kentucky

Please find attached the site investigation follow-up plan referenced above. The investigation will be conducted by personnel of the Uncontrolled Site Section on January 16, 1985. The results of this investigation are expected to be available 60 days after the investigation.

BB:akw

I. Introduction

A site investigation was conducted at the Elkton pesticide dump on October 22, and 23, 1984, by personnel of the Uncontrolled Site Section. The results of this investigation indicated soil contamination by pesticides in the sinkhole where disposal has occured. The contaminants identified were p,p'-DDT, p,p'-DDD, and toxaphene at concentrations of 0.014 ppm, 0.016 ppm, aNd 3.92 ppm, respectively.

II. Objectives

The objective of this investigation is to confirm or deny the presence of groundwater contamination as a result of the improper disposal of pesticide and herbicide containers.

III. Investigation Activities

The site investigation will be conducted by personnel of the Uncontrolled Site Section, Division of Waste Management. Planned activities are given below:

Wednesday, January 16, 1985

6:00 a.m. Investigation team will leave Frankfort for the pesticide dump

9:00 a.m. Team will meet Cecile Thomas at the dump and days activities will be discussed

9:30 a.m. Team will begin to sample wells used as a potable source of water.

2:00 p.m. Team will complete well sampling, pack samples, and return to Frankfort. Samples will be relinquished to the Environmental Services Division on January 17, 1985.

IV. Organization

The following Uncontrolled Site personnel will conduct the site investigation at the Elkton pesticide dump:

Name	Responsibilities
Jim Jarman	Sampling Photographs
Bob Burns	Site Coordinator Sampling Log book

V. Sample Plan

This investigation will consist of potable well water from homes in the vicinity of the pesticide dump.

Sampling Equipment

1 box of dermathin gloves
30 1 liter sample jars

Sample Types

Samples will be taken from groundwater wells that are used as a potable source of water by residents in close proximity to the Elkton pesticide dump. Up to ten (10) resident water sources will be sampled.

Analyses

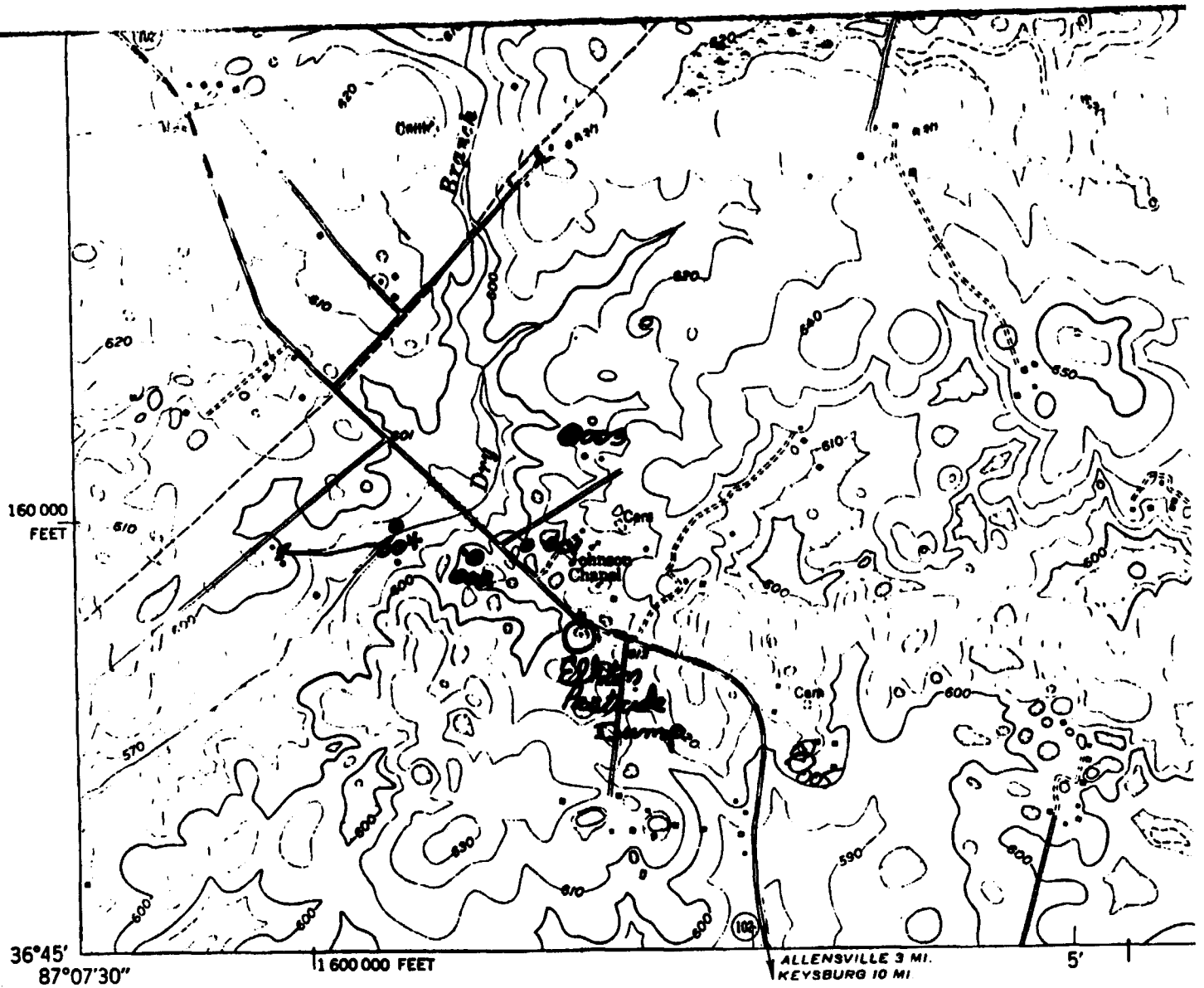
Potable water samples will be analyzed for the presence of pesticides and herbicides.

VI. Safety Plan

During the sampling of domestic water sources, dermathin gloves will be worn.

Below are listed emergency phone numbers in case of an accident:

Elkton Police Department: (502) 265-9877
Elkton Fire Department: (502) 265-2501
Jenny Stewart Hospital (Hopkinsville): (502) 886-5221



(GUTHRIE)

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS
Culture and drainage in part compiled from aerial photographs taken 1949
Topography by plane table methods 1950

Polyconic projection 1927 North American datum
10,000 foot grid based on Kentucky coordinate system, south zone

APPROXIMATE MEAN DECLINATION, 1950

APPENDIX G

KENT[illegible] [illegible]ATURAL RESOURCES AND ENVIRONMENTAL PROTECTION
[illegible] ENVIRONMENTAL PROTECTION

CHA[illegible] CUSTODY RECORD

TYPE OF INSPECTION: ☐ COMPLAI[illegible] ☐ [illegible] ☐ EMERGENCY ☐ ENFORCEMENT ☒ UNCONTROLLED

SAMPLING LOCATION: Elkton [illegible] Dump - Todd County, KY.

I.D. NUMBER:

DATE: 10/23/[illegible]

SAMPLE NUMBER	DATE TIME	STATION [illegible]	[illegible]OD	TYPE	SIZE	TYPE OF PRESERVATION	
EPD #001	10/23/[illegible] 9:[illegible]	Sink hole [illegible]	[illegible]	[illegible]	1 Lit - Glo	None	Pest,
EPD #002	10/23/[illegible] 9:[illegible]	Erosion [illegible]	[illegible]	[illegible]	"	"	
EPD #003	10/23/[illegible] 9:[illegible]	[illegible] site	[illegible]	[illegible]	"	"	
EPD #004	10/23/[illegible] [illegible]	[illegible] site	[illegible]	[illegible]	"	"	
				[illegible]			
				[illegible]			

SAMPLERS (SIGNATURES) [illegible]

RELINQUISHED BY (Signature)	TIME	RECEIVED BY (Signature)
[illegible]	[illegible]	[illegible]
Representing [illegible]		Representing [illegible]
RELINQUISHED BY (Signature)	TIME	RECEIVED BY (Signature)
Representing		Representing

White Copy - CENTRAL OFFICE [illegible] LABORATORY
Pink Copy - SHIPPER [illegible] INSPECTOR

BEP5005

ENVIRONMENTAL PROTECTION CABINET
FOR ENVIRONMENTAL PROTECTION

CHAIN OF CUSTODY RECORD

TYPE OF INSPECTION: ☐ COMPLAINT ☐ EMERGENCY ☐ ENFORCEMENT ☑ UNCONTROLLED

SAMPLING LOCATION:

I.D. NUMBER: DATE:

SAMPLE NUMBER	DATE TIME	STATION	TYPE	SIZE	TYPE OF PRESERVATION	

SAMPLERS (SIGNATURES)

RELINQUISHED BY (Signature)	RECEIVED BY (Signature)
Representing	Representing
RELINQUISHED BY (Signature)	RECEIVED BY (Signature)
Representing	Representing

White Copy - CENTRAL OFFICE
Pink Copy - SHIPPER

DEP5005

VIRONMENTAL PROTECTION CABINET
VIRONMENTAL PROTECTION

CH STODY RECORI

TYPE OF INSPECTION: ☐ COMPE NCY ☐ ENFORCEMENT ☑ UNCONTRO ED

SAMPLING LOCATION:

I.D. NUMBER: DATE:

SAMPLE NUMBER	DATE TIME	STATI E	SIZE	TYPE OF PRESERVATION	

SAMPLERS (SIGNATURES)

RELINQUISHED BY (Signature)	RECEIVED BY (Signature)
Representing	Representing
RELINQUISHED BY (Signature)	RECEIVED BY (Signature)
Representing	Representing

White Copy - CENTRAL OFFIC
Pink Copy - SHIPPER

DEP5005

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County
KYD980841654

ATTN: Barry Burrus

FROM: William E. Davis, Director SB for WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 0915

Sample Identification: Erosion rills on site

REPORT OF ANALYSIS

Report No: B06-021 SA No: 84-3088

Received: 10/23/84 Finished: 11/13/85 Approved: 11/14/85

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.01
Hexachlorocyclohexane, alpha isomer	< 0.01
Hexachlorocyclohexane, beta isomer	< 0.01
Hexachlorocyclohexane, gamms isomer	< 0.01
Hexachlorocyclohexane, delta isomer	< 0.01
Heptachlor	< 0.01
Aldrin	< 0.01
Heptachlor Epoxide	< 0.01
oxychlordane	< 0.01
t-Chlordane	< 0.01
c-Chlordane	< 0.01
t-Nonarchlor	< 0.01

Report No: B06-021
SA No: 84-3088

O, P' - DDE	< 0.01
P, P' - DDE	< 0.01
Dieldrin	< 0.01
Endrin	< 0.01
O, P' - DDD	< 0.01
P, P' - DDD	0.016
O, P' - DDT	< 0.01
P, P' - DDT	0.014
Total DDT	0.03
Methoxychlor	< 0.01
Mirex	< 0.01
Endosulfan I	< 0.01
Endosulfan II	< 0.01
Endosulfan Sulfate	< 0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	< 0.01
Toxaphene	< 0.1
Technical Chlordane	< 0.1
Aroclor 1014	< 0.1
Aroclor 1221	< 0.1
Aroclor 1232	< 0.1
Aroclor 1242	< 0.1
Aroclor 1248	< 0.1
Aroclor 1254	< 0.1
Aroclor 1260	< 0.1
Aroclor 1262	< 0.1
Aroclor 1268	< 0.1
Dicamba	< 0.05
2,4-Dichlorophenoxyacetic Acid	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

November 16, 1984

TO: Division of Waste Management
#18 Reilly Road, Fort Boone Plaza
Frankfort, Kentucky 40601

Re: Elkton Pesticide Dump
Todd County
KYD980841654

ATTN: Barry Burrus

FROM: William E. Davis, Director WED
Division of Environmental Services

Sample Collector: Robert Burns Date: 10/23/84 Time: 0900

Sample Identification: Sinkhole on site

REPORT OF ANALYSIS

Report No: B06-020 SA No: 84-3087

Received: 10/23/84 Finished: 11/13/84 Approved: 11/14/84

Results:

PARAMETER	CONCENTRATION (mg/kg)
Hexachlorobenzene	< 0.1
Hexachlorocyclohexane, alpha isomer	< 0.1
Hexachlorocyclohexane, beta isomer	< 0.1
Hexachlorocyclohexane, gamms isomer	< 0.1
Hexachlorocyclohexane, delta isomer	< 0.1
Heptachlor	< 0.1
Aldrin	< 0.1
Heptachlor Epoxide	< 0.1
oxychlordane	< 0.1
t-Chlordane	< 0.1
c-Chlordane	< 0.1
t-Nonarchlor	< 0.1

Report No: B06-020
SA No: 84-3087

O, P' - DDE	< 0.1
P, P' - DDE	< 0.1
Dieldrin	< 0.1
Endrin	< 0.1
O, P' - DDD	< 0.1
P, P' - DDD	< 0.1
O, P' - DDT	< 0.1
P, P' - DDT	< 0.1
Total DDT	< 0.1
Methoxychlor	< 0.1
Mirex	< 0.1
Endosulfan I	< 0.1
Endosulfan II	< 0.1
Endosulfan Sulfate	< 0.1
Endrin Aldehyde	< 0.1
Endrin Ketone	< 0.1
Toxaphene	3.92
Technical Chlordane	< 1.0
Aroclor 1014	< 1.0
Aroclor 1221	< 1.0
Aroclor 1232	< 1.0
Aroclor 1242	< 1.0
Aroclor 1248	< 1.0
Aroclor 1254	< 1.0
Aroclor 1260	< 1.0
Aroclor 1262	< 1.0
Aroclor 1268	< 1.0
Dicamba	< 0.05
2,4-Dichlorophenoxyacetic Acid	< 0.05
2,4,5-Trichlorophenoxyacetic Acid	< 0.05
2-(2,4,5-Trichlorophenoxy) Propionic Acid	< 0.05

Emory Vickers
8-556-9387

Quin Lagose

Test Stackbar

Kile

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Pesticide Dump	U.S. 102

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Elkton	KY		Todd		

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
36°44'.__	087°06'.__	☐ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☑ F. OTHER Estate ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 23 84 (MONTH DAY YEAR)	☐ ACTIVE ☑ INACTIVE	1981 (BEGINNING YEAR) 1983 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☑ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Robert Burns	Environmentalist	KYNREPC	(502) 564-6716

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Jim Childers	Geologist	KYNREPC	(502) 564-6716
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
NA			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☑ PERMISSION ☐ WARRANT	0800 EST	Rain, 45°

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Ken Yates	KYNREPC	502 825-6532

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Robert Burns	KYNREPC	Waste Mgt.	(502) 564-6716	/ / (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The pesticide dump is adjacent to a sinkhole with drainage from the dump entering the sinkhole. DDT has been identified in the soil; DDT is readily soluable in water.

01 ☑ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The pesticides identified in the environment are readily soluable in water.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☑ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

There are no physical barriers at the site.

01 ☑ F. CONTAMINATION OF SOIL — 02 ☑ OBSERVED (DATE: 10-30-84) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

Soil samples taken 10-30-84 showed the presence of P,P'-DDD, P,P'-DDT, and toxaphene

01 ☑ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Residences in this area used groundwater for domestic purposes. DDT, which has been identified in the soil is easily dispersed by surface runoff and erosion and is readily soluable in water.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☑ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The are no access restrictions to this site

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: KY 02 SITE NUMBER: KD980841654

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☑ J. DAMAGE TO FLORA — 02 ☑ OBSERVED (DATE: 10-22-84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Bald areas are present below dump

01 ☑ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☑ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
DDT is an environmentally persistant chemical that is bioaccumulated in adipose tissue

01 ☑ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: 10-22-84) ☑ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
DDT is bioaccumulated in adipose tissue, thus forming a migration pathway for contaminants

01 ☑ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☑ OBSERVED (DATE: 10-22-84) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Cans have simply been dumped

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☑ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☑ OBSERVED (DATE: 10-22-84) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
This dump is an open, non-permitted, dump

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 8,581 persons within 3 miles of site.

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Site investigation of 10-22-84 by KYNREPC
Population from house count of USGS topo x 3.8 conversion factor

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: KY
02 SITE NUMBER: D980841654

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☑

02 STATUS: Potentially

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☑	E. ☐	F. ☐

03 DISTANCE TO SITE
A. _____ (mi)
B. .1 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☑ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER ≈500 within 3 miles
03 DISTANCE TO NEAREST DRINKING WATER WELL .1 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
≈20 (ft)	S	≈20 (ft)	5gpm (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)
Wells in this area are used for domestic purposes. The depths range from 22 to 200 feet

10 RECHARGE AREA: ☐ YES ☐ NO COMMENTS

11 DISCHARGE AREA: ☐ YES ☐ NO COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☑ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
Dry Branch Creek	☐	½ (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 79.9 NO. OF PERSONS	B. 133 NO. OF PERSONS	C. 330.6 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: ≈.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 60

04 DISTANCE TO NEAREST OFF-SITE BUILDING: ≈.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
Area is a rural, agricultural setting. Crops and pasture constitute land use.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	D980841654

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☑ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☑ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
8-10 (ft)	unknown (ft)	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
12 (in)	2.5 (in)	2 %	NW	2 %

09 FLOOD POTENTIAL

SITE IS IN NA YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. 1 1/2 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL: A. _____ (mi)

RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES: B. _____ (mi)

AGRICULTURAL LANDS — PRIME AG LAND: Site is located in prime ag land C. _____ (mi)

AG LAND: D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Dumping occured adjacent to a sinkhole, which are common in this area. The close proximity of this dump to an easy access to groundwater causes grave concern. DDT is readily soluable in water resulting in the distinct possibility of dispersion into groundwater. Approximately 200 cans were buried in the sinkhole in 1982.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site investigation of 10-22-84 by KYNREPC

KYNREPC files

PA Start 84/07
Pa End 84/08
PJA 8/28/84
Pending

STATE

MEMORANDUM

TO: Barry Burrus, Chief
Uncontrolled Site Section

THRU: Bob Prewitt, Environmentalist
Uncontrolled Site Section

FROM: Robert Burns, Environmentalist RB
Uncontrolled Site Section

SUBJECT: Preliminary Assessment Report for the Pesticide Dump
Todd County

DATE: May 18, 1984

This open dump was reported to the Madisonville field office in March, 1981. The site consists of approximately 200 five gallon empty cans of pesticides and herbicides and several empty one gallon containers of paraquat. These cans did have some residue remaining.

The cans were dumped near a large sinkhole with some cans in the sinkhole. This situation poses immediate danger of groundwater contamination. People in this area use groundwater for drinking purposes.

One of the few facilities in the vicinity that sells pesticides is Smith-Douglas Fertilizers. This facility maybe responsible for the dumping.

This property is an estate. Permission to conduct a state site investigation will be requested. This site should be investigated promptly.

RB/las

cc Bob Prewitt
Cecile Thomas
U.S. EPA
File

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: KY | 02 SITE NUMBER: D980841654

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Pesticide Dump
02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: KY. 102
03 CITY: Elkton
04 STATE: KY | 05 ZIP CODE: | 06 COUNTY: Todd | 07 COUNTY CODE: 110 | 08 CONG DIST:
09 COORDINATES LATITUDE: 36°47'42"_ | LONGITUDE: 087°08'13"0
10 DIRECTIONS TO SITE (Starting from nearest public road): Located approximately 2.5 miles south of Elkton, off Ky. 102

III. RESPONSIBLE PARTIES

01 OWNER (If known): Buck Cole Estate c/o Janie Hollins
02 STREET (Business, mailing, residential): 2802 Halifax
03 CITY: Indianapolis
04 STATE: Ind. | 05 ZIP CODE: 46222 | 06 TELEPHONE NUMBER: (317) 925-3645
07 OPERATOR (If known and different from owner):
08 STREET (Business, mailing, residential):
09 CITY:
10 STATE: | 11 ZIP CODE: | 12 TELEPHONE NUMBER: ( )
13 TYPE OF OWNERSHIP (Check one): ☑ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply): ☐ A. RCRA 3001 DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☑ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION: ☑ YES DATE 10 29 82 (MONTH DAY YEAR) ☐ NO
BY (Check all that apply): ☐ A. EPA ☐ B. EPA CONTRACTOR ☑ C. STATE ☐ D. OTHER CONTRACTOR ☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S):
02 SITE STATUS (Check one): ☐ A. ACTIVE ☑ B. INACTIVE ☐ C. UNKNOWN
03 YEARS OF OPERATION: _____ BEGINNING YEAR | _____ ENDING YEAR ☐ UNKNOWN
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED: Pesticides and herbicides
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION: Contamination of groundwater/surface water

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents): ☑ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Cecil Thomas	KYNREPC	(502) 821-4150

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Robert Burns	KYNREPC	Waste Mgt.	(502) 564-6716	5 18 84 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
KY	

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS
- ☐ O. OTHER _____ (Specify)

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____
CUBIC YARDS _____
NO. OF DRUMS 200

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES	200 drums with	residue remaining	
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	Linuron		5 gallon can	unknown	
	Metribuzin		" "	" "	
	Carbofuran		" "	" "	
	Paraquat		1 gallon cans	" "	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site investigation report by field office personnel

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE KY	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☑ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☑ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

01 ☑ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Residences of the area use well water as a drinking source

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☑ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

There are no barriers at this site to prevent human access

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: KY
02 SITE NUMBER:

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☑ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☑ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☑ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☑ ALLEGED
04 NARRATIVE DESCRIPTION
Drums were dumped by the roadside

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

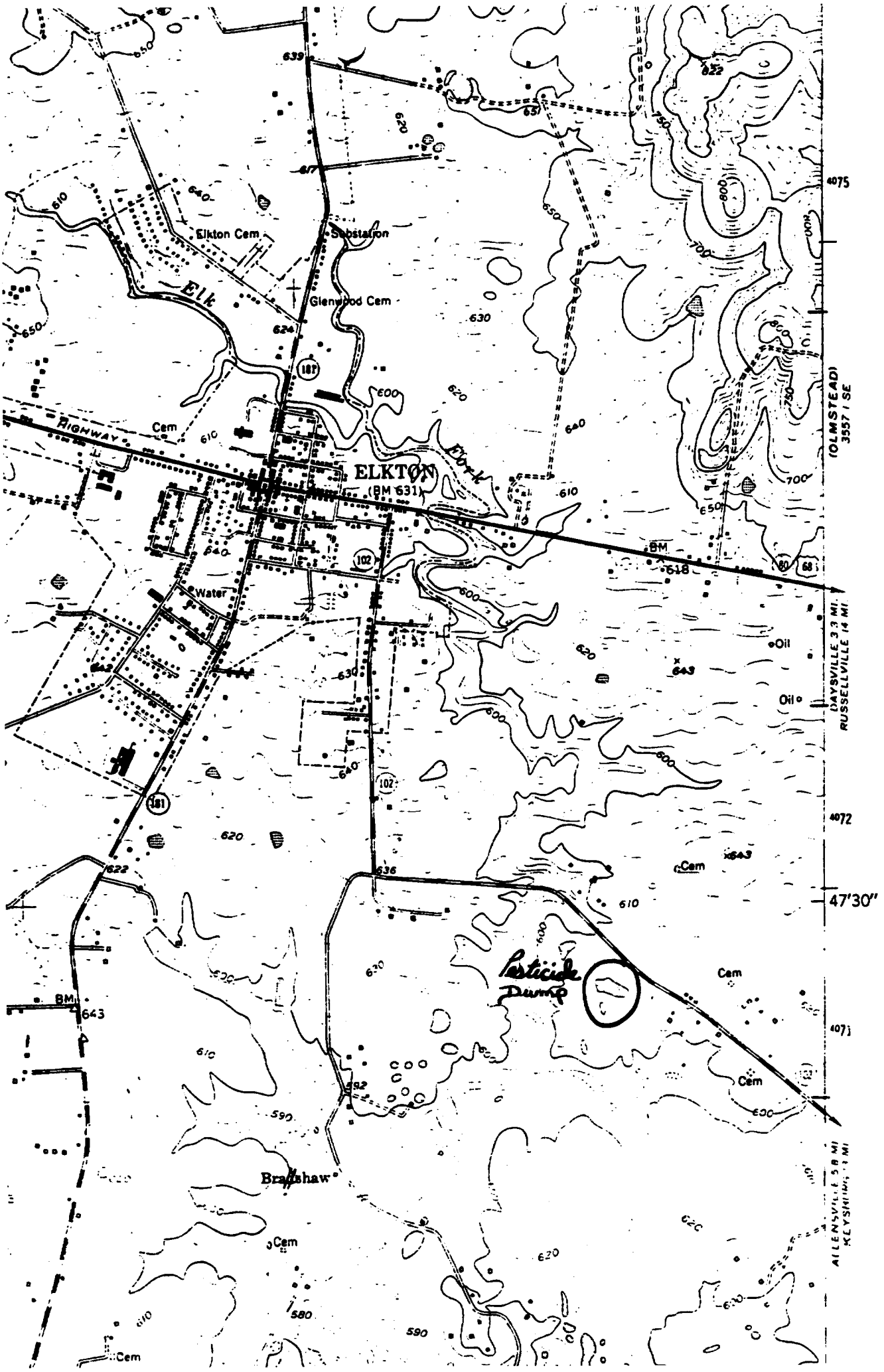
III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PESTICIDE CONTAINERS - TODD COUNTY

Product Name	Container	Chemical	Use	Signal Word	Toxicity Level
Balan	can/1 gal.		herbicide	"caution"	in excess of 10,000 mg/kg
Lorox		Linuran	herbicide	"caution"	40,000 mg/kg
Lexone-DF		Metribuzin	herbicide	none	1090 mg/kg
Lasso	can/5 gal.		herbicide	"danger"	1800 mg/kg
Paraquat CL	can/1 gal.		herbicide	"danger-poison"	150 "mg/kg
Furadan	empty sacks	carbonfuran	insecticide	"warning"	11 mg/kg
Dyanap	can/5 gal.		herbicide	"warning"	8200 mg/kg


Elkton Cem
Substation
Glenwood Cem
Elk
HIGHWAY
Cem
ELKTON
(BM 631)
E Fork
BM
Water
Oil
Oil
Cem
Pesticide Dump
Cem
Cem
BM
Bradshaw
Cem
Cem
4075
4072
47'30"
(OLMSTEAD)
3557 I SE
DAYSVILLE 3.3 MI.
RUSSELLVILLE 14 MI.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

ACTION MEMORANDUM

DATE:

SUBJECT: Immediate Removal Request for the Pesticide Dump Site, Elkton, Ky.

FROM: Dennis J. Manganiello
Environmental Engineer

TO: Charles R. Jeter
Regional Administrator, Region IV

PURPOSE

This request is for authorization to proceed with an immediate removal for $10,265.00 at the Pesticide Dump Site in Elkton, Kentucky. A significant threat to the environment exists at this time and may worsen if the clean-up response is delayed for the site.

BACKGROUND

A. Site Setting/Description:

1. Physical location - The Pesticide Dump Site is located off Highway 102, five miles southeast of Elkton, Kentucky in Todd County.

2. General character of site - This site is adjacent to highway 102 five miles southeast of Elkton. It consists of approximately 200 five and one gallon discarded pesticide and herbicide containers on the surface of the ground and 200 containers that have been pushed into a sinkhole and covered with soil and garbage.

   The site is located adjacent to cultivated fields and pasture land. There are isolated stands of trees scattered about the area, but mainly this area is used for agriculture.

   The topography of the area can be described as a rolling upland harst situated approximately 600 feet above sea level. Dry Branch Creek is located approximately. 5 miles northwest of the site. There are numerous ponds scattered within one mile of the site. There is a large marsh within two miles of the site.

3. Waste Management- A site investigation was conducted on Oct 23, 1984 by the Kentucky State Dept of Environmental Services. Soil samples were taken from the discarded containers above the surface.

   Considering the close proximity of this dump to a groundwater source via the sinkhole and the nature of the contaminants indentified, another sampling trip was performed on January 16, 1985. The objective of this investigation was to confirm or deny the presence of groundwater contamination as a result of this improper disposal of pesticide and herbicide containers. Several water samples of potable well water from homes in the vicinity of the pesticide dump by the Uncontrolled Site Section of the Kentucky State Dept of Environmental Services.

   The EPA conducted on investigation on March 20, 1985 with a representative of the state and decided that the area does pose threat to the nearby environs.

4. Surrounding Areas - This area of Todd County is predominantly rural. Within a one mile radius of the site there are 21 housing units, with an estimated population of 80. Between one and two miles from the site there are 35 housing units with an estimated population of 130. All of these units are served by groundwater wells.

B. Quality and types of Substances Present:

The composite soil sample from the sinkhole showed the presence of toxaphene at a concentration of 3.92 ppm. Analysis of the samples taken from the erosion wells leaking to the sinkhole identified P,P'-DDD at a concentration of .016 ppm and P,P' DDT at a concentration of .014 ppm.

There are also empty five gallon and one gallon containers labelled "Lorax", "Lexone-DF," "Lasso," "Paraquat" and "Roundup" scattered about the area. A number of these containers have small amounts of residual chemical substances (linuran, metribuzin, and carbonfuran still remaining inside the can.

The well water sample analysis showed there are no detectable amounts of pesticide chemicals or any other hazardous substance present at this time.

C. The site is not on the N.P.L.

THREAT

A. Toxaphene is a chlorinated hydrocarbon pesticide that replaced DDT in agricultural uses. It is practically insoluble in water. It is the most heavily used pesticide in the United States. To protect freshwater aquatic life concentrations should never exceed 1.6 ppb.

The use of DDT was banned by the EPA in December of 1972. DDT is a toxicant that is persistent in soil and water and is bioaccumulated in the adipose tissue of wildlife and humans. It is easily dispersed by surface runoff and erosion but is relatively insoluble in water. The solubility of DDT in water is 0.0012 mg ml. To protect freshwater aquatic life concentrations should not exceed 1.1 ppb.

P,P'-DDD has chemical properties similar to DDT.

B. Evidence of Extent of Release - As previously documented, the soil sample taken from the sinkhole showed the presence of toxaphene at a concentration of 3.92 ppm, and the erosion well sample showed the presence of P,P'-DDD and P,P'DDT at a concentrations of .016 ppm and .014 ppm, respectively. This release resulted from the haphazard and illegal dumping of 400 five gallon and one gallon pesticide containers over the past year. Residual amount of chemical waste in the containers effected the soil contamination. Since toxaphene and DDT which have been identified in the soil are easily dispered by surface runoff and erosion, this release threatens the residence in the area who use the water for domestic purposes.

C. Previous Actions to Abate Threat - No previous action has been taken to curtail the threat of this release of hazardous waste into the environment.

D. Current Action to Abate Threat - EPA Region IV utilizing the ERCS contract, plan to remove the discarded pesticide containers and the contaminated soil and transport this material to an approved hazardous waste landfill.

E. Enforcement - The land where the pesticide dumps is located is in care of an estate and lacks a responsible party. A notice letter was sent to the executor of this estate, Janie Holins, 2802 Halifax Rd. Indianapolis, Indiana. A response has not been received to date.

Proposed Project and Cost:

A. Objectives of the Project:

1. Crush and remove several hundred empty five gallon and one gallon pesticide cans from the area and dispose offset at the Chem Waste Management landfill in Fort Wayne, Indiana.

2. Excavate contaminated soil from the sinkhole and erosion wells and dispose offsite at the hazardous waste landfill in Fort Wayne, Indiana.

B. Project Cost:

Personnel/Equipment	$6586.00
Disposal	1180.00
Transportation	1200.00
TAT Representative	800.00
EPA Representative	500.00
Total Project Ceiling Cost	$10,265.00

C. Project Schedule:

April '85

D. No remedial action is anticipated at this time.

REGIONAL RECOMMENDATION

Because conditions at the Pesticide Dump Site meet the NCP section 300.65 criteria for an immediate removal, I recommend your approval of this immediate removal request. The estimated total project costs are $10,265.00 of which $9,765.00 is for extramural cleanup contractors costs. You may indicate your approval or disapproval by signing below.

Approved: _____ Date: _____

Disapprove: _____ Date: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE:

SUBJECT: Trip-Report - Pesticide Dump Site in Elkton, KY

FROM: Dennis J. Manganiello

TO: Henry Hudson

On Mar. 20, 1985 Dennis J. Manganiello and Lorenzo Richardson of T.A.T. held a meeting with Bob Burns of the Kentucky Department of Environmental Services and discussed the Pesticide Dump Site.

Bob Burns, who investigated the site in October 1984 and January 1985 explained that the dump is located adjacent to highway 102 approximately seven miles southeast of Elkton. The dump consisted of approximately 200 discarded pesticide and herbicide containers on the surface of the ground and approximately 200 containers that have been pushed into a sinkhold and covered with soil. We then asked Bob Burns questions about the possibility of recycling any of the cans, contacting a RP, identifying labels on the cans and the soil and water analysis completed by the state lab in Oct, 1984.

Afterwards, we drove to the site. We parked on the side of highway 102 and we proceeded to put on level C protective gear with full-face respirators.

For the next forty five minutes to an hour we reconnoitered the site which included taking photos and air monitoring.

The site contained several hundred five gallon and one gallon cans scattered in a quarter of an acre area. About 150-200 of the cans were under a pile of garbage in a hole about five feet deep. The majority of the cans were empty, rusted and were perforated with holes. Bob explained that some of the cans were buried here as far back as 1980. The ground was solid and dry and appeared relatively clean and void of contamination. Bob Burns identified the areas where samples were taken for analysis. These areas were suspect to pesticide contamination since the majority of cans were dumped at these locations.

The area was semi-rural with some private homes scattered about the area approximately quarter of a mile from the site. All these homes are on private wells 60-90' deep. Bob explained these wells were free of contamination. There were no barriers to preclude human access to the site.

Subsequent to the site investigation we returned to Hopkinsville. EPA explained to the State Rep. that the EPA will contact the state in several days to inform Mr. Burns the results of this investigation.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE:

SUBJECT: Trip-Report - Pesticide Dump Site in Elkton, KY

FROM: Dennis J. Manganiello

TO: Henry Hudson

On Mar. 20, 1985 Dennis J. Manganiello and Lorenzo Richardson of T.A.T. held a meeting with Bob Burns of the Kentucky Department of Environmental Services and discussed the Pesticide Dump Site.

Bob Burns, who investigated the site in October 1984 and January 1985 explained that the dump is located adjacent to highway 102 approximately seven miles southeast of Elkton. The dump consisted of approximately 200 discarded pesticide and herbicide containers on the surface of the ground and approximately 200 containers that have been pushed into a sinkhole and covered with soil. We then asked Bob Burns questions about the possibility of recycling any of the cans, containing an RP, identifying labels on the cans, and the soil and water analysis completed by the state lab in Oct, 1984.

Afterwards, we drove to the site. We parked on the side of highway 102 and we proceeded to put on level-C protective gear with full-face respirators.

For the next forty five minutes to an hour we reconnoitered the site which included taking photos and air monitoring.

The site contained several hundred five gallon and one gallon cans scattered in a quarter of an acre area. About 150-200 of the cans were under a pile of garbage in a hole about five feet deep. The majority of the cans were empty, rusted and were perforated with holes. Bob explained that some of the cans were buried here as far back as 1980. The ground was solid and dry and appeared relatively clean and void of contamination. Bob Burns identified the areas where samples were taken for analysis. These areas were suspect to pesticide contamination since the majority of cans were dumped at these locations (Samples analysis showed these locations contaminated with DDT and Toxaphene).

The area was semi-rural with some private homes scattered about the area approximately quarter of a mile from the site. All these homes are on private wells 60-90' deep. Bob explained these wells were free of contamination although the site poses a potential threat to these nearby wells. There were no barriers to preclude human access to the site and Dennis Manganiello directed Bob Burns to identify the site to nearby residents and people who ride the site with yellow hazardous waste tape.

Subsquent to the site investigation we returned to Hopkinsville - Dennis Manganiello told Bob Burns that the cans shouuuld be removed from the area. Dennis explained that he will proceed to acquire authorization to use Superfund money to remove the hazardous waste and cans that exist at the Pesticide Dump.

Betsy,

The Pesticide Dump Site in Elkton, Ky. is DROPED - NOT A THREAT - NO ACTION WILL BE Taken!

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

Alex Barber
Dept. of Environmental Protection
18 Reilly Rd.
Franfort, KY 40601

Dear Mr. Barber:

On March 20, 1985, OSC Dennis Manganiello (EPA, Region IV) and technical assistant Lorenzo Richardson of the Westo Sper. Corp. conducted a site investigation of a pesticide container dump in Elkton, KY. The Kentucky state representative present for this investigation was Mr. Robert Burns of the Dept. of Environmental Protection, Frankfort, KY.

Kentucky State Department sampling analysis of the area revealed 3.92 ppm Toxaphene, and .03 ppm DDT in the sinkhole. Analysis of the well-water samples showed the well-water to be free of contamination of any kind.

Subsequent to this investigation, EPA evaluated the information outlined above and determined that the pesticide container dump did not present a release of a hazardous substance into the environment which may present an imminent and substantial danger to the public health or welfare according to CERCLA Sec. 104A.

The basis for the determination was that the dump site involved a small area in a remote location, a significant distance from any private water well and surface waterway. Secondly, contamination in and contiguous to the pesticide containers was minimal compared to the application rates of the identifed pesticides used on cultivated fields.

Therefore due to the above considerations the EPA Region IV will not perform a Superfund removal action on the site and recommends the pesticides containers be excavated and transported to a local landfill.

Sincerely,

Dennis J. Manganiello
On-Scene Coordinator
EPA, Region IV

cc: Bob Burns
Bob Prewitt

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

S644245

EPx2611

RE: 4WD-ERR

Alex Barber
Dept. of Environmental Protection
18 Reilly Rd.
Frankfort, KY 40601

Dear Mr. Barber:

On March 20, 1985, OSC Dennis Manganiello (EPA, Region IV) and technical assistant Lorenzo Richardson of the Westo Sper. Corp. conducted a site investigation of a pesticide container dump in Elkton, KY. The Kentucky state representative present for this investigation was Mr. Robert Burns of the Dept. of Environmental Protection, Frankfort, KY.

The site investigation was conducted in protective gear and consisted of indentifying labels on pesticide containers, photo documentation, air monitoring and site mapping of the entire area.

The rural dump was located adjacent to State Highway 102 approximately seven miles southeast of Elkton. The dump consisted of approximately two hundred discarded pesticide and herbicide containers on the ground surface and another two hundred containers in a nearby sinkhole. Containers ranged in size from one gallon to five gallon cans. These metal and plastic containers were scattered about an estimated one-half acre area. The product label names were "Roundup", "Paraquat", "Basagran", and "Lasso". The containers were either empty and/or entirely corroded throughout, and there were several containers that contained soil, water and what appeared as small amounts of residual pesticide product.

The site was found to be adjacent to cultivated fields and pasture lands. A small creek was located one-half mile upgradient from the site and the site was within a one mile radius of a number of housing units.

Kentucky State Department sampling analysis of the area revealed 3.92 ppm Toxaphene, and .03 ppm DDT in the sinkhole. Analysis of the well-water samples showed the well-water to be free of contamination of any kind.

Subsequent to this investigation, EPA evaluated the information outlined above and determined that the pesticide container dump did not present a release of a hazardous substance into the enivornment which may present an imminent and substantial danger to the public health or welfare according to CERCLA Sec. 104A.

The basis for the determination was that the dump site involved a small area in a remote location, a significant distance from any private water well and surface waterway. Secondly, contamination in and contiguous to the pesticide containers was minimal compared to the application rates of the identified pesticide used on cultivated fields.

Therefore due to the above considerations the EPA Region IV will not perform a Superfund removal action on the site and recommends the pesticides containers be excavated and transported to a local landfill.

Sincerely,

Dennis J. Manganiello
On-Scene Coordinator
EPA, Region IV

cc: Bob Burns
Bob Prewitt

Dennis

Let's rewrite this letter!

By that I mean you do not need to explain your field investigation details and the rationale. Just write a one concise paragraph saying that the drums were empty and we did not see any need for ~~emergency~~ removal action there, period.

Let me see your second draft, before sending it.

Thanks

George M

Chapter 14

MISCELLANEOUS PESTICIDES OF LOW OR MODERATE TOXICITY

These compounds are included in the manual because their wide use generates inquiries as to their potential for causing adverse effects.

Description of the toxic potential of these chemicals as low or moderate does not preclude the need for cautious handling. Many agents have irritant properties, and individuals vary widely in their reactions to them. Certain predisposed persons may suffer dermal and respiratory illness from substances that have no effect on other persons or experimental animals. It is also true that the sum total of potential effects of a chemical, and by-products formed in synthesis and storage, plus the metabolites formed into vivo is never fully known. Reasonable precautions to avoid contact with pesticides are always recommended regardless of the reported toxicity of the principal active ingredient.

Lowest reported acute oral LD_{50} in the rat is cited in this listing as an indication of overall toxicity, manifest as killing power. The LD_{50} rating says nothing of dosages necessary to produce symptoms or signs, disease conditions characterized by long latency, subclinical biochemical effects, or other nonlethal effects on health. It is essential that high LD_{50} ratings not be interpreted as indications that the subject chemicals are innocuous.

Knowledge of use is sometimes helpful in identifying chemicals. Agents on this list are used as herbicides (H), fungicides (F), or insecticides (I).

There are many proprietary MIXTURES of these chemicals and it is common to tank mix many of them according to the grower's requirements. Intelligent management of exposures requires that the full list of active ingredients in mixtures be ascertained from the producer or applicator. In general, management is aimed at the most toxic ingredient.

Chemical Class	Generic Name	Use	LD_{50}	Proprietary Name	Known or Suspected Adverse Effects
Acetamides	allidochlor	H	750	Randox, CDAA	Moderately irritating to skin and eyes.
	metolachlor	H	2,780	Dual, Bicep, Primegram, Primextra	
Acetanilides	alachlor	H	1,800	Lasso, Lazo, Alanex	Mild irritant
	propachlor	H	710	Ramrod, Bexton	Dermal irritant and sensitizer
	propanil	H	1,384	DPA, Propanex, Riselect, Rosanil, Stam F34, Strel, Supernox, Surcopur, Surpur, Vertac	Mild irritant

Chemical Class	Generic Name	Use	LD_{50}	Proprietary Name	Known or Suspected Adverse Effects
	trifluralin	H	>10,000	Trefian, Crisalina, Digermin, Elancolan, Ipersan	Slightly to to moderately irritating to skin, eyes, and mucous membranes. These agents do not uncouple oxidative phosphorylation.
Oxadiazolinone	oxadiazon	H	3,500	Ronstar	Irritating to skin and eyes
Phthalate	chlorthal-dimethyl	H	3,000	Dacthal, DCPA	Mild irritant
Picolinic acid Derivative	picloram	H	8,200	Tordon, Amdon	Irritating to skin, eyes, and respiratory tract
Pyridazinone	maleic hydrazide	Growth retardant	6,950	Burtolin, Chemform, De-Cut, De-Sprout, Regulox, KMH, Maintain, Stunt-Man	Slightly irritating
Phosphonomethyl glycine	glyphosate	H	4,300	Roundup	Irritant to eyes and respiratory tract
Thiadiazin (ol)	bentazon	H	2,063	Basagran	Moderately irritating to skin, eyes, respiratory tract. On ingestion, has caused vomiting, diarrhea, dyspnea, tremors, weakness.
	terrazole	F	1,077	Terrazole	Moderately irritating to skin, eyes, and respiratory tract.
Triazines	ametryn	H	1,750	Evik, Ametrex, Gesapax	Some triazines are mildly irritating to skin, eyes, and upper respiratory tract. Systemic toxicity is unlikely unless very large amounts have been ingested.
	anilazine	H	5,000	Dyrene, Direz, Kemate, Triasyn	
	atraton	H	1,465	Atratone, Gesatamin	
	atrazine	H	3,080	AAtrex, Atranex, Gesaprim, Primatol A, Atred, Crisazine, Vectal SC	
	cyanazine	H	334	Bladex, SD 15418	
	desmetryn	H	1,390	Semeron	
	isomethiozin	H	10,000	Tantizon	
	metribuzin	H	1,100	Sencor, Lexone, Sencorex, Sencoral	
	prometone	H	2,980	Pramitol, Gesafram-80, Prometon, Primatol 25E	
	prometryn	H	5,235	Caparol, Gesagard, Primatol Q, Prometrex	
	propazine	H	>5,000	Milogard, Gesamil, Primatol P, Prozinex	
	Simazine	H	>10,000	Princep, Gesatop, Simadex, Simanex	

waste landfill in Fort Wayne, Indiana.

B. Project Cost:

	Costs
Personnel/Equipment	$6585.00
Disposal	$1180.00
Transportation	$1200.00
TAT Representative	$800.00
EPA Representative	$500.00
Total Projected Ceiling Cost	$10,265.00

C. Project Schedule: April '85

D. No remedial action is anticipated at this time

Regional Recommendation

Because conditions at the Pesticide Dump Site meet the NCP section 300.65 criteria for an immediate removal, I recommend your approval of this immediate removal request. The estimated total project costs are _____ of which _____ is for extraordinary cleanup contractors costs. You may indicate your approval or disapproval by sig below.

FLIGHTS: EA
.615pm FL 675

DL .410pm FL 1081
.535pm FL 579

BURNS May 18, 1984 Report

{ pesticides
herbicides
paraquat

Smith-Douglas Fertilizer

[redacted] (b)(6) Personal Privacy

Property in Estate: Janice Hollins [redacted] (b)(6) Personal Privacy

[redacted] (b)(6) Personal Privacy

Called Rec Mar 22, 1985

How long you pm 3-4 years property takes

Harrises farmland next door to property pesticide dump

Substances:

Linuran
Metribuzin } 5 gal. cars
Carbonfuran
Paraquat - 1 gal cars

Concentration - Unknown

- No barriers to prevent human access
- Note Product Name List on next to last page

Analyzed of metals, cyanides, sulfides

TRANSPORTATION TO FT. WAYNE

DISTANCE : 400 miles

~~Cost~~ : [redacted]

Rate $3/mile

Cost : (b)(5) Financial Information [redacted]

Disposal Ft Wayne

Rate : (b)(5) Financial Information [redacted]

yd^3 :

Cost :

(b)(5) Financial Information [redacted] $2380

MOBILIZATION / DEMOB

2 ~~[illegible]~~s OTR (Nicholasville, Ky → ELKTON, KY) 220 miles + 220 miles = 440

OTR ~~Lowboy~~ #1
OTR ~~Lowboy~~ #2

(b)(5) Financial Information

Lowboy #1
Lowboy #1

(b)(5) Financial Information

Pick-up Truck (Atlanta ↔ ELKTON, KY) 340 miles

(b)(5) Financial Information

$ ~~[illegible]~~

(b)(5) Financial Information

$2942

So Personel/Equipment = $6585.00
TAT $800.00
EPA $500.00

$7885

		RATE	HRS	COST
HAZTECH: FORUM TECH		(b)(5) Financial Information [redacted]		
CLAY CORNAM	Operator #1			
	Operator #2			
EPA/TAT	OSC	—	—	800
	TAT	—	—	800
DRIVERS	#1	(b)(5) Financial Information [redacted]		
	#2			

$3628

Equipment:

	Quantity	Rate	Cost
Visqueen	(b)(5) Financial Information [redacted]		
Personal Protection			
Trackhoe			
Dozer			
Pickup Truck			

$1315

Mobilization + Demobilization

Men

Equipment (b)(5) Financial Information

On site: men, equipment, per diem, (b)(5) Financial Information

$ (b)(5) Financial Information / 1 day

[redacted] (b)(5) Financial Information

Transportation + Hotel

(b)(5) Financial Information

2 Days / 8 hours

Total = (b)(5) Financial Information one day

Two days / (b)(5) Financial Information

1360	11	3000
1200	1200	828

Cost Estimate for Pesticide Dump:

Personnel:

CONTRACTORS:	RATE	HRS	COST
HAZTECH: FORUM	[redacted]		
TECH			
~~OPERA~~CLAY: Operator #1			
Operator #2			
Drivers (Tw			
EPA/TAT: OSC			
TAT			

(b)(5) Financial Information

Equipment:

TRACHOE	Daily	~~[redacted]~~	[redacted]
DOZIER	Daily	~~[redacted]~~	
~~[redacted]~~			
PICK-UP TRUCK	Daily	~~[redacted]~~	
MISCELLANEOUS GEAR		LEVEL C	
		LINING	

(b)(5) Financial Information

2 Operator - [redacted] (b)(5) Financial Information $672

2 Truck Driver [redacted] (b)(5) Financial Information =$504

1 Tech [redacted] (b)(5) Financial Information $288

1 Foreman [redacted] (b)(5) Financial Information $396

Daily rate on ~~ORT~~ over Road Tractor (2) [redacted] (b)(5) Financial Information $706

Two day 4629 (2) Low Boy [redacted] (b)(5) Financial Information =$350

8 hr work day

Per Diem = For Two days [redacted] (b)(5) Financial Information

2 Visqueen [redacted] (b)(5) Financial Information

Pickup Truck [redacted] - 2 day = [redacted] (b)(5) Financial Information

(Daily) Trackhoe ~~513~~ Day [redacted] (b)(5) Financial Information 2 days

(Daily) 450 Dozer = [redacted] (b)(5) Financial Information [redacted] (b)(5) Financial Information 1 day

PPE $6[redacted] People = [redacted] (b)(5) Financial Information 2 Day [redacted] (b)(5) Financial Information

[redacted] (b)(5) Financial Information Transportation → $ [redacted] (b)(5) Financial Information

[redacted] (b)(5) Financial Information

2 Operators - [redacted] (b)(5) Financial Information = [redacted] (b)(5) Financial Information [redacted] (b)(5) Financial Information 16 hours

~~2 Tech~~ - [redacted] (b)(5) Financial Information 10 hours Two day

1 Tech [redacted] (b)(5) Financial Information = [redacted] (b)(5) Financial Information one day [redacted] (b)(5) Financial Information 10 hrs one day

[redacted] (b)(5) Financial Information one day [redacted] (b)(5) Financial Information 10 hrs Two Days

Foreman [redacted] (b)(5) Financial Information [redacted] (b)(5) Financial Information hrs = [redacted] (b)(5) Financial Information 10 hrs one day

[redacted] (b)(5) Financial Information 10 hrs [redacted] (b)(5) Financial Information 10 hrs/2 day