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SCREENING SITE INSPECTION REPORT
FOR
SINCLAIR AND VALENTINE COMPANY, INC.
KALAMAZOO, MICHIGAN

U.S. EPA ID: MID005360235
SS ID: NONE
TDD: F05-8711-066
PAN: FMI0293SB

MARCH 18, 1991

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

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Prepared by: Scott A. Turek Date: 3/18/91
Scott A. Turek
FIT Team Leader
Ecology and Environment, Inc.

Reviewed by: Cynthia W. Schultz Date: 3/18/91
Cynthia W. Schultz
FIT Unit Manager
Ecology and Environment, Inc.

Approved by: Jerome D. Oskvarek Date: 3/18/91
Jerome D. Oskvarek
FIT Office Manager
Ecology and Environment, Inc.

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1. INTRODUCTION

Ecology and Environment, Inc., Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Sinclair and Valentine Company, Inc. (S & V), site under contract number 68-01-7347.

The site was initially discovered by U.S. EPA on June 4, 1981, when Martin Marietta Corporation notified U.S. EPA concerning their past ownership of the Sinclair and Valentine Company, Inc. (Sinclair and Valentine), building, at which hazardous materials may have been handled in the past (Light 1981).

The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Scott McCone of Ecology and Environment, Inc. (E & E), and is dated April 1, 1983.

FIT prepared an SSI work plan for the S & V site under technical directive document (TDD) F05-8711-066, issued on November 23, 1987. The SSI work plan was approved by U.S. EPA on April 10, 1990. The SSI of the S & V site was conducted on June 22, 1990, under TDD F05-8711-066, reissued on June 1, 1990.

The FIT SSI included an interview with site representatives, a reconnaissance inspection of the site, and the collection of four soil samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined

> preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and the reconnaissance inspection of the site.

2.2 SITE DESCRIPTION

The S & V site consists of an active manufacturing facility which produces printing inks, located on a parcel of land approximately 2 acres in size. The site is located at 2309 North Burdick Street in a commercial/industrial area approximately 1/4 mile north of the Kalamazoo corporate limits and 3/4 miles southwest of the Parchment corporate limits, in Kalamazoo County, Michigan (SE1/4NW1/4 sec. 10, T.2S., R.11W.) (see Figure 2-1 for site location). The site is approximately 5/8 miles west of the Kalamazoo River. A 4-mile radius map of the S & V site is provided in Appendix A.

2.3 SITE HISTORY

The building currently used by Sinclair and Valentine was built originally for Martin Marietta Corporation, and the facility has always been known as Sinclair and Valentine. The date of the construction of the building is not known. In February, 1971, Martin Marietta sold the site to Frye Industries, Inc., which operated under the name of Wheelabrator-Frye, Inc. In 1986, Allied Signal, Inc., bought the site from Wheelabrator Frye. In March 1987, Sinclair and Valentine Limited Partnership (S & V L.P.) acquired the site from Allied Signal. In May

SOURCE: USGS, Kalamazoo, MI Quadrangle, 7.5 Minute Series, 1967, photorevised 1973.

SCALE

0 ½ 1 MILE

FIGURE 2-1 SITE LOCATION

1990, Flint Ink Corporation acquired the site from S & V L.P. In January 1991, the company will be known as Flint Inks (Kievit, Large, and Punchocar 1990).

The facility produces paste and fluid inks (Kievit, Large, and Punchocar 1990). The process of manufacturing the ink involves grinding dry ink into smaller particles, blending pigments and solvents with the dry ink, and then packaging the liquid inks in drums and cans for shipment. According to file information from Sinclair and Valentine, some components of the ink include ethylene glycol monobutyl ether, ammonia, propylene glycol, ethanol, and isopropanol. Barium and copper are among the coloring agents that may be added to the pigments.

Manufacturing processes at the S & V site generate two to three 55-gallon drums of waste per month. The wastes include waste ink, waste solvents, ink dust, sludge from production of water-based inks, and a caustic liquid. Solvents are used to wash the machines between the production of different batches of ink. The caustic liquid is used in the cleaning of tubs in which ingredients are weighed (Kievit, Large, and Punchocar 1990). The caustic liquid was analyzed in 1981 by Ana-Qual Laboratory, Inc., of Plainwell, Michigan, for a waste characterization report of the Michigan Department of Natural Resources (MDNR). Results of the chemical analysis of the caustic liquid revealed lead (2,650.6 mg/kg), nickel (5.8 mg/kg), copper (325.2 mg/kg), and chromium (384.1 mg/kg) (Kalish 1981). File information provided by Sinclair and Valentine indicated that some transporters of the waste produced at the S & V site are AmerEco Environmental Services, Inc., of Kingsville, Missouri, and United Solvent Services, Inc., of Kansas City, Missouri. According to site representatives, the solvent-based waste is blended for incinerator fuel. The water-based waste is devatered and put in a landfill (Kievit, Large, and Punchocar 1990).

An off-site inspection of the S & V site performed by FIT on March 23, 1983, revealed approximately 40 drums scattered throughout the western part of the site (E & E 1983). On November 30, 1987, an on-site underground storage tank containing fuel oil used for heating purposes was emptied and excavated from an area near the southeast corner of the manufacturing building. In 1989, a containment shed with its own fire control system was built west of the manufacturing building for storage

of drums containing flammable liquids (Royer 1990). Prior to the building of the shed, the drums had been stored on a curbless concrete slab at the same location on the site. During the construction of the shed, the concrete slab was broken up and removed. Some soil was removed from the area and replaced with sand to allow the new concrete floor of the shed to settle properly. Upon removal, the soil was piled in an open area west of the new shed.

In 1989, 5 gallons of a white ink used on food wrappers was spilled inside the plant, and flowed into a floor drain that led to the city sever system. The ink reacted with the water in the floor drain and hardened, producing a cement-like material. The ink did not reach the city sever system. The floor drains were capped shortly after the incident (Kievit, Large, and Punchocar 1990). According to the fire chief of Kalamazoo Township, the proper authorities were notified at the time of the spill and a hazardous waste cleanup crew was immediately sent in to clean up the spill (Royer 1990). FIT was unable to obtain information regarding how much material was removed, who transported it, or where it was taken.

In an off-site inspection on February 8, 1990, in preparation for the SSI of the S & V site, FIT observed drums located on the southwest side of the building on a paved parking area and on the ground surface near the parking area. Some of the drums were upright and others were stored on their sides. Some of the drums were rusted, but no leaks were observed. Approximately 20 drums were observed; most were labelled. FIT could not determine whether the drums were full or empty. Some ink stains were also observed on the pavement of the parking area (E & E 1990). No regulatory actions have taken place at the site.

3. SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the S & V site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the S & V site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Scott A. Turek, FIT team leader, conducted an interview with Tom Kievit, Plant Operator, and Zaro Large, Flexo Solvents Manager, both of the Kalamazoo plant of Sinclair and Valentine; and Paul Punchocar, Environmental Health Specialist, from the Sinclair and Valentine corporate offices in St. Paul, Minnesota. The interview was conducted on June 22, 1990, at 9:05 a.m. in the Sinclair and Valentine office in Kalamazoo. Cynthia W. Schultz of FIT was also present during the interview. The interview was conducted to gather information that would aid FIT in conducting SSI activities.

3.3 RECONNAISSANCE INSPECTION

Following the site representative interview, FIT conducted a reconnaissance inspection of the S & V site and surrounding area in accordance with Ecology and Environment, Inc. (E & E), health and safety guidelines. The reconnaissance inspection began at 10:25 a.m. and

included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection. FIT was accompanied by Kievit, Large, and Punchocar during the reconnaissance inspection.

Reconnaissance Inspection Observations. The S & V site is located 1/4 mile north of the city of Kalamazoo corporate limits. The site is surrounded by commercial, manufacturing, residential, and agricultural areas. The northern site boundary is 15 feet north of the building. The western site boundary is 60 feet west of the storage shed in an area of grass and trees. The southern boundary is formed by a tree-lined driveway. The eastern boundary is North Burdick Street. The nearest residence is located approximately 600 feet south of the S & V site. The surface topography of the area is flat and slopes slightly toward the west (see Figure 3-1 for site features).

Drums were stored in three areas at the S & V site: the drum storage shed, which is connected to the west end of the main manufacturing building; on a paved parking area at the northwest end of the driveway; and in a small area adjacent to the driveway, south of what site representatives indicated as the southern boundary of the site.

Drums and stacks of empty buckets were also observed in a curbed concrete area adjacent to the west exterior wall of the manufacturing building, north and south of the connection between the storage shed and the manufacturing building. A plastic-lined trough was being constructed in an area along the south side of the storage shed for storage of empty drums awaiting transport. Some drums were observed on the ground surface near the trough area.

Drums and cans of ink were stored on the pavement at the northwest end of the asphalt driveway. Site representatives indicated that the drums in this area contained products that had been returned to Sinclair and Valentine because of customer dissatisfaction or excess product (Kievet, Large, and Punchocar 1990). Numerous drum ring stains were observed on the western end of the driveway, as well as some ink stains. Some purple/pink particles of ink were observed on the soil bordering

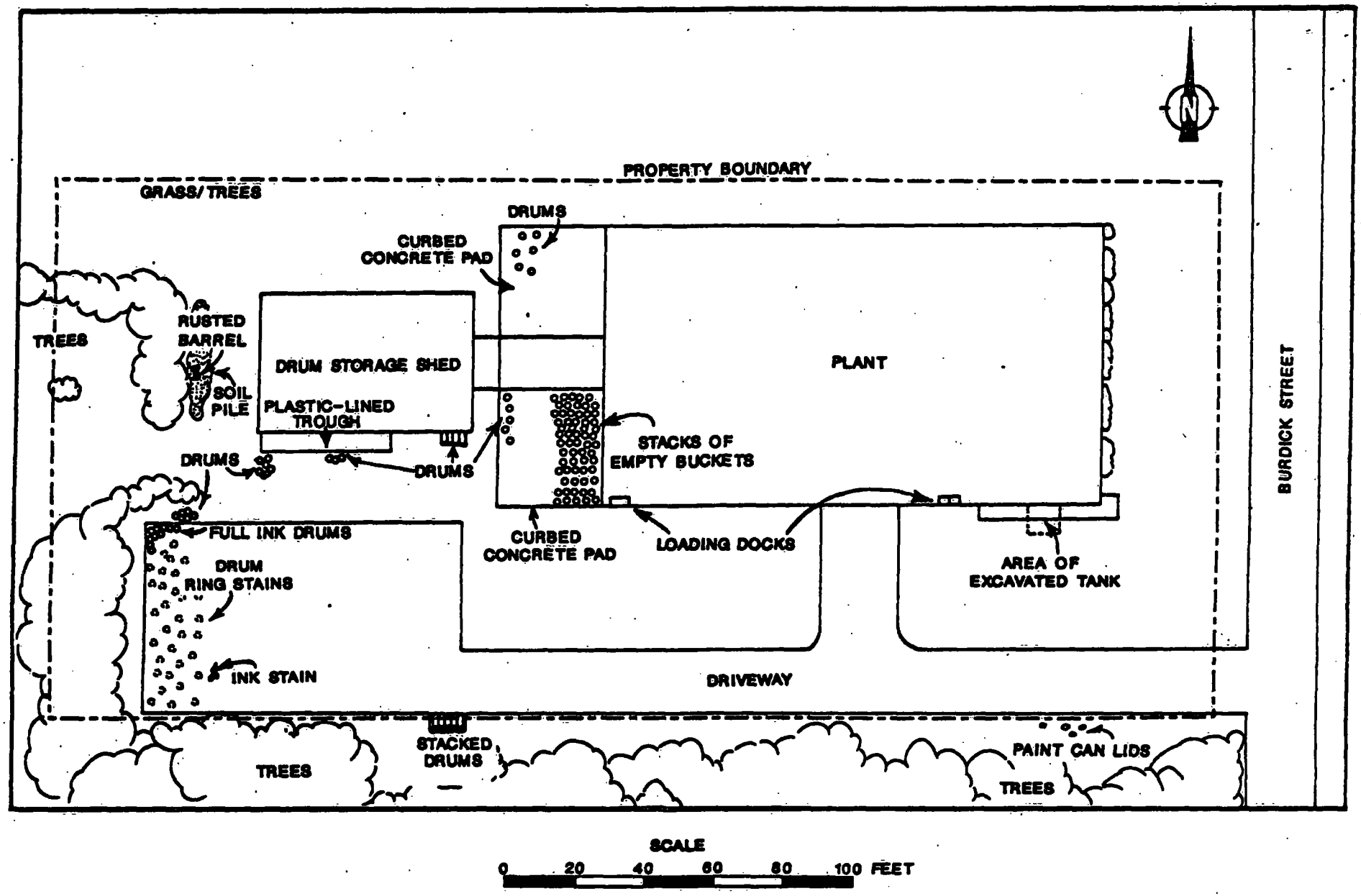

FIGURE 3-1 SITE FEATURES

the western edge of the driveway. Five empty drums were also placed here.

FIT observed 33 empty drums stacked horizontally in the area adjacent to the driveway, south of the southern boundary of the site. A transport company was loading some of these drums onto a truck during the SSI. One drum was marked as having once contained phenol acetate. No leaks or spills were observed around the stacked drums, and no barrier was observed beneath the drums in this area. Lids from paint cans were observed among the trees south of the driveway, near the entrance to the site on Burdick Street. FIT was informed that the lids were probably blown out of the dumpster from past high winds (Kievet, Large, and Punchocar 1990).

The soil that had been removed during construction of the new shed remained on-site, in a pile located approximately 20 feet west of the shed. The pile of soil was vegetated, and a severely rusted half-drum filled with soil was observed within the pile. Brown and orange particles were observed around the drum. FIT observed an area approximately 8 feet by 12 feet near the southeastern side of the building, which was the former location of the underground fuel oil storage tank. The area was bordered by railroad ties and covered with grass.

FIT safety equipment detected organic vapors at 8 ppm above background emanating from the manufacturing building near a loading dock at the southwestern corner of the building. The organic vapors were most likely from the on-site manufacturing process of mixing dry ink and solvents.

The driveway entrance to the Sinclair and Valentine facility was the only access to the S & V site. No fencing, gates, or other security features prevented access to the site. The area surrounding the on-site buildings was well vegetated with grasses, bushes, and trees, with the exception of the area around the storage shed, which was cleared of vegetation when the shed was constructed.

FIT photographs from the SSI of the S & V site are provided in Appendix C.

3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine whether U.S. EPA Target Compound List (TCL) compounds or Target Analyte List (TAL) analytes were present at the site. The TCL and TAL are included with corresponding quantitation/detection limits in Appendix D.

On June 22, 1990, FIT collected three surface soil samples and one potential background surface soil sample. FIT offered portions of on-site soil samples to site representative Punchocar. The samples were accepted.

Soil Sampling Procedures. Surface soil sample S1 was collected from a location at the western edge of the parking area at the west end of the driveway, where purple/pink particles had been observed on the soil (see Figure 3-2 for on-site soil sampling locations). Surface soil sample S2 was collected approximately 6 feet south of the drum storage area at the west end of the driveway, in a low-lying area where TCL compounds and TAL analytes would be likely to accumulate from rainfall runoff from the asphalt pavement. These sampling locations were selected to determine whether TCL compounds or TAL analytes had migrated to the soil near the drum storage on the parking area.

Surface soil sample S3 was collected from the vegetated pile of soil west of the drum storage shed, where the rusted half barrel and brown and orange particles had been observed. This sampling location was selected to determine whether TCL compounds or TAL analytes were present in the soil that had been removed from the area of the former concrete from the storage pad. A potential background surface soil sample, indicated as S4, was collected off-site in a grassy field west of the S & V property. The background soil sample was collected to determine the representative chemical content of the soil of the area surrounding the site (see Figure 3-3 for off-site soil sampling location).

Surface soil samples S1 through S4 were obtained using a garden trovel to dig to a depth of up to 6 inches. Sample material was transferred to sample bottles, using stainless steel spoons. The volatile organic portions of all samples were transferred to sample bottles first.

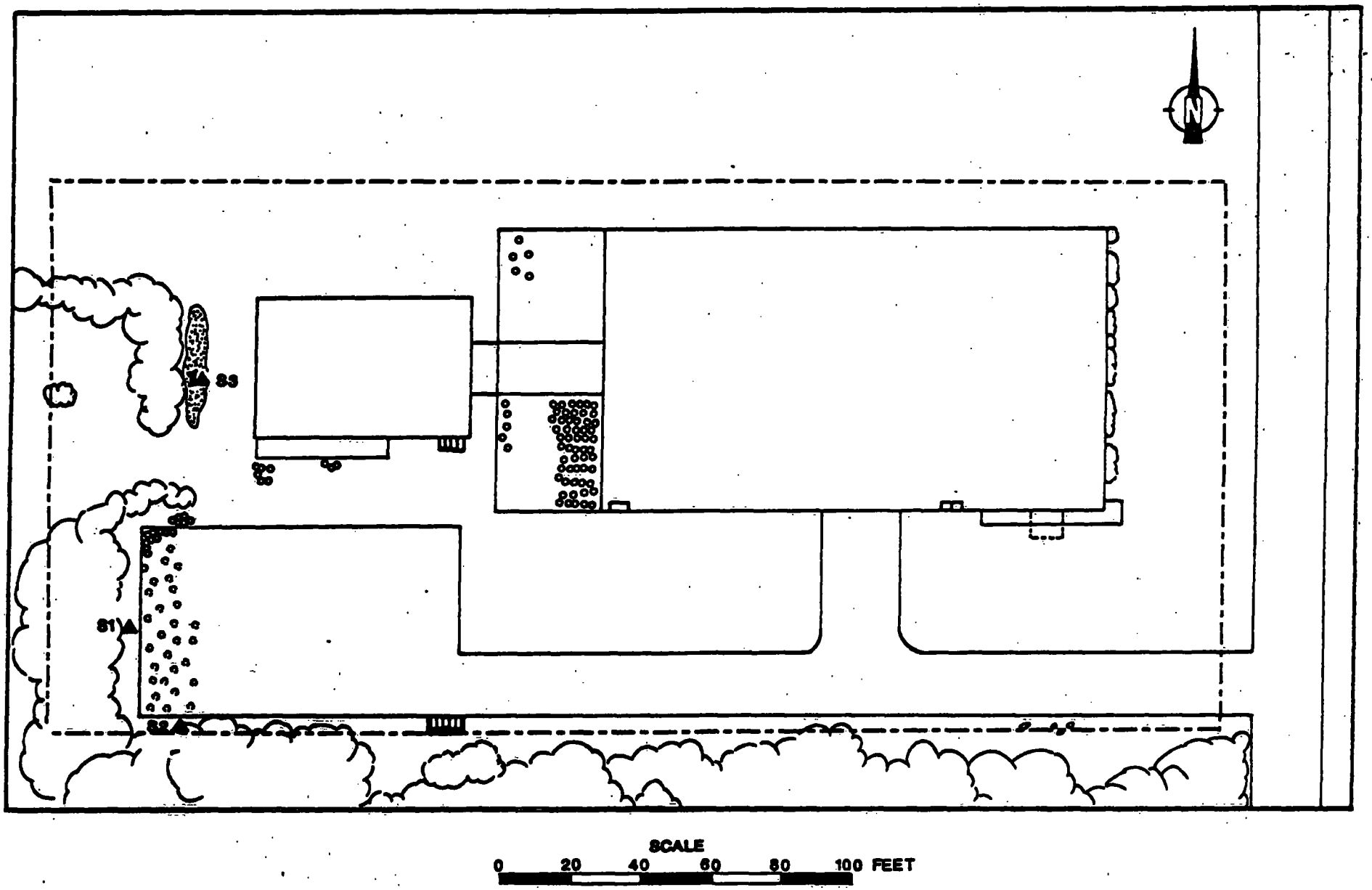

FIGURE 3-2 ON-SITE SOIL SAMPLING LOCATIONS

SOURCE: USGS, Kalamazoo, MI Quadrangle, 7.5 Minute Series, 1967, photorevised 1973.

SCALE

0 ½ 1 MILE

FIGURE 3-3 OFF-SITE SOIL SAMPLING LOCATION

Standard E & E decontamination procedures were adhered to during the collection of all soil samples. The procedures included the scrubbing of all equipment (e.g., trowels and spoons) within a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987). All soil samples were packaged and shipped in accordance with U.S. EPA-required procedures.

As directed by U.S. EPA, all soil samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP).

4. ANALYTICAL RESULTS

This section presents results of the chemical analysis of FIT-collected soil samples for TCL compounds and TAL analytes. All samples were analyzed for volatile organics, semivolatile organics, pesticides/polychlorinated biphenyls (PCBs), metals, and cyanides. Complete chemical analysis results of FIT-collected soil samples are provided in Table 4-1. In addition, significant tentatively identified compounds (TICs) detected in the analysis of FIT-collected samples are also provided in Table 4-1.

Quantitation/detection limits used in the analysis of soil samples are provided in Appendix D.

The analytical data for the chemical analysis of soil samples collected for this SSI have been reviewed by U.S. EPA for compliance with terms of CLP, and the review has been approved by U.S. EPA. The analytical data have also been reviewed by FIT for validity and usability. Any additions, deletions, or changes to the data have been incorporated in the chemical analysis results table presented in this section.

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
PIT-COLLECTED SOIL SAMPLES

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4
Date	5/22/90	5/22/90	5/22/90	5/22/90
Time	1100	1115	1130	1145
CLP Organic Traffic Report Number	EKF43	EKF44	EKF45	EKF46
CLP Inorganic Traffic Report Number	MEJW26	MEJW27	MEJW28	MEJW29
Compound Detected (values in µg/kg)				
Volatile Organics				
acetone	—	—	—	190J
Semivolatile Organics				
n-nitrosodiphenylamine	650	—	—	—
phenanthrene	740	—	—	—
di-n-butylphthalate	—	—	3,300	—
fluoranthene	980	—	—	—
pyrene	830	—	—	—
benzo[a]anthracene	410J	—	—	—
chrysene	700	—	—	—
bis(2-ethylhexyl)phthalate	420J	—	4,500	—
di-n-octylphthalate	260J	—	—	—
benzo[b]fluoranthene	1,000	—	—	—
benzo[a]pyrene	470	—	—	—
indeno[1,2,3-cd]pyrene	370J	—	—	—
benzo[g,h,i]perylene	320J	—	—	—
TICs†				
benzamine, 4,4',4"-methyl (603-48-5)	6,000J	—	—	—
phosphoric acid,2-ethylhexyl diphenyl ester (1241-94-7)	—	4,000J	3,000J	—

Table 4-1 (Cont.)

Sample Collection Information and Parameters	Sample Number S1	S2	S3	S4
benzenesulfonamide, 4-methyl (70-55-3)	—	—	900J	—
oxacycloheptadec-8-en-2-one (123-69-3)	—	—	1,000J	—
1-phenanthrenecarboxylic acid (1235-74-1)	—	—	3,000J	—
Analyte Detected (values in mg/kg)				
aluminum	5,670	10,600	5,730	4,160
arsenic	8.1JN	3.2JN	6.5JN	20.7JN
barium	240	120	536	220
beryllium	0.69B	—	—	—
cadmium	2.3J	1.4J	3.1J	3.5J
calcium	22,900	6,690	20,900	14,700
chromium	45	18.7	219	9.2
cobalt	12.3	5.7B	14.5	5.1B
copper	311JE	1.5JEB	119JE	78.1JE
iron	24,500	18,500	29,400	45,200
lead	188	22.3	2,870	59.4
magnesium	9,580	3,160	5,460	1,540B
manganese	356	128	322	286
mercury	0.12	—	0.11	0.30
nickel	14	8.2B	11.9	6.1B
potassium	830B	1,220B	556B	764B
selenium	0.84JNB	0.93JNWB	—	1.6JNB
sodium	121B	177B	186B	210B
thallium	0.57B	0.88B	—	—
vanadium	26.2	25.8	13.2	15.6B
zinc	154	65	275	79.7
cyanide	—	—	22.4	—

— Not detected.

† TIC Chemical Abstracts Service (CAS) numbers, if available, are provided in parentheses.

Table 4-1 (Cont.)

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Analyte or element was not detected, or value may be semiquantitative.
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the S & V site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

No groundwater samples were collected during the SSI of the S & V site because no monitoring wells exist at the site, and FIT had determined that the area surrounding the site is served by the Kalamazoo municipal water system.

A potential exists for TCL compounds and TAL analytes to migrate to groundwater in the vicinity of the site. This potential is based on the following information.

- TCL compounds, TAL analytes, and TICs were detected in on-site soils, including di-n-butylphthalate (detected at a concentration 10 times the detection limit), bis(2-ethylhexyl)phthalate (detected at 14 times the detection limit), benzo[b]fluoranthene (detected at 3 times the detection limit), chromium (detected at 24 times the background concentration and 109 times the detection limit), lead (detected at 48 times the background concentration and 2,870

times the detection limit), and cyanide (detected at 11 times the detection limit) (refer to Table 4-1).

- FIT observed two areas where drums from the S & V site were in contact with the ground surface.

The potential for TCL compounds and TAL analytes to migrate to groundwater is also based on the following geologic and hydrological information.

The general geology of the area of the site consists of Pleistocene glacial outwash deposits overlying the Mississippian Coldwater Formation. The outwash deposits consist of medium to very coarse sand, gravel, silt, and clay, and are approximately 140 feet thick (Western Michigan University 1981). The underlying bedrock, the Coldwater Formation, consists of gray shales with numerous beds of gray to brown dolomite (Forstat and Sorensen 1982).

The depths of wells in the vicinity of the site range from 28 to 230 feet. According to logs of wells in the area of the site, no continuous impermeable confining layers exist in surficial deposits throughout a 3-mile radius of the site. The water table in the area of the site is approximately 12 feet below the ground surface. The glacial outwash deposits form the aquifer of concern in the area of the site, and no other aquifers are utilized within a 3-mile radius of the site. The direction of groundwater flow is assumed to be eastward, toward the Kalamazoo River. Well logs of the area of the site are provided in Appendix E. The nearest municipal drinking water well is located approximately 1 1/2 miles east of the site.

The total target population obtaining drinking water from the aquifer of concern within a 3-mile radius of the site is calculated to be approximately 70,250 persons. The target population includes persons served by the municipal water systems of Kalamazoo and Parchment, Michigan, the municipal wells of which lie within a 3-mile radius of the site and obtain water from the aquifer of concern. A planimeter was used to calculate the urban portion of the population served by these systems. The rural portion of the population was calculated by counting houses from United States Geological Survey (USGS) topographic maps

(USGS 1967, 1967a) and multiplying the house count figure by a persons-per-household figure of 2.67 for Kalamazoo County (U.S. Bureau of the Census 1982). The target population also includes the populations of the townships of Comstock, Kalamazoo, Oshtemo, Richland, and Texas Township (U.S. EPA 1987), portions of which lie outside the 3-mile radius of the site. These townships obtain drinking water from the Kalamazoo municipal water system. The water from the Kalamazoo municipal wells is blended before distribution (Ferraro 1990).

5.3 SURFACE WATER

The surface water body nearest to the S & V site is the Kalamazoo River, approximately 5/8 miles east of the site. According to observations made by FIT during the SSI, no overland route exists for TCL compounds and TAL analytes from the S & V site to migrate to surface water; therefore no surface water sampling was conducted during the SSI of the S & V site. No surface water intakes are located within a 3-mile radius of the S & V site (Ferraro 1990).

5.4 AIR

Organic vapors were detected at a concentration of 8 ppm in the area of the loading dock at the southwest corner of the manufacturing building, but the release was localized. No other release of TCL compounds or TAL analytes to the air was documented during the SSI of the S & V site. During the reconnaissance inspection, FIT site-entry instruments (OVA 128, oxygen meter, explosimeter, radiation detector, and colorimetric monitoring tubes for hydrogen cyanide) did not detect levels above background concentrations in other areas of the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does not appear to exist for TCL compounds and TAL analytes to migrate from the site via windblown particulates. This potential is based on the following information. Surface soil samples S1 and S2, collected at the west end of the driveway at the S & V site, contained elevated levels of TCL compounds and TAL analytes. However, based on the amount of vegetative cover in this area, there does not

appear to be a potential for the TCL compounds and TAL analytes to migrate from the site via windblown particulates.

5.5 FIRE AND EXPLOSION

According to federal, state, and local file information reviewed by FIT, and a telephone conversation with Fire Chief Jack Royer of the Kalamazoo Township Northwood Station, no documentation exists of an incident of fire or explosion at the site. Royer indicated that he does not believe there is a risk of a fire or an explosion at the site (Royer 1990). According to FIT observations and readings from site-entry equipment, no potential for fire or explosion existed at the site at the time of the SSI.

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, observations made during the SSI, and the interview with the site representatives, no incidents of direct contact with TCL compounds or TAL analytes at the S & V site have been documented.

However, a potential exists that the public may come into direct contact with TCL compounds and TAL analytes detected at the site. The potential for direct contact is based on the following information.

- TCL compounds and TAL analytes have been detected in the on-site surface soil samples.
- Full and empty drums from the ink-production processes were observed on-site.
- Access to the site is not restricted.

The population within a 1-mile radius of the site potentially affected through direct contact with TCL compounds and TAL analytes at the site is 15,853 persons. This population was calculated by counting houses within a 1-mile radius of the site on a USGS topographic map (USGS 1967) and multiplying this number by a persons-per-household value of 2.67 for Kalamazoo County (U.S. Bureau of the Census 1982). This

number was added to the population counts for those urban areas of Kalamazoo and Parchment lying within the 1-mile radius, which were obtained through use of a planimeter.

6. REFERENCES

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Kievit, Tom, Zaro Large, and Paul Punchocar, June 22, 1990, interview, conducted by Scott A. Turek of E & E.

Light, Elliot D., June 4, 1981, Assistant General Counsel, Martin Marietta Corporation, letter to U.S. EPA Region 3, Sites Notification Department.

Royer, Jack, February 2, 1990, Fire Chief, Kalamazoo Township, Northwood Station, telephone conversation, contacted by Scott A. Turek of E & E.

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_____, February 12, 1988, Office of Solid Waste and Emergency Response, Pre-Remedial Strategy for Implementing SARA, Directive number 9345.2-01, Washington, D.C.

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Western Michigan University, 1981, Hydrogeologic Atlas of Michigan, Department of Geology, Kalamazoo, Michigan.

5809:3

APPENDIX A

SITE 4-MILE RADIUS MAP

R12W R11W

R11W R10W

T1S
T2S

T1S
T2S

R12W R11W

PARCHMENT MUNICIPAL WELLS

PARCHMENT MUNICIPAL WATER SUPPLY BOUNDARY

KALAMAZOO MUNICIPAL WATER SUPPLY BOUNDARY

KALAMAZOO MUNICIPAL WATER SUPPLY BOUNDARY

KALAMAZOO MUNICIPAL WELLS

SITE

1/4-MILE RADIUS

1/2-MILE RADIUS

1-MILE RADIUS

2-MILE RADIUS

3-MILE RADIUS

4-MILE RADIUS

WL1 WL2 WL3 WL4 WL5 WL6 WL7 WL8

#1 #2 #3 #4 #5 #7 #11 #12 #14 #15 #16 #17 #19 #20

ecology and environment, inc.

SE1/4, NW1/4, SEC.10, T2S, R11W
SITE NAME SINCLAIR AND VALENTINE CO., INC.
U.S. EPA ID# MID005360235
TDD: F05-8711-066
CONTOUR INTERVAL: 10FT.

USGS TOPOGRAPHIC MAPS:

NAME KALAMAZOO SW QUAD	NAME KALAMAZOO QUAD
DATE 1967	DATE 1967
REVISED 1973	REVISED 1973
NAME	NAME
DATE	DATE
REVISED	REVISED

SCALE
0 ½ 1 MILE

MICHIGAN
QUADRANGLE LOCATION

APPENDIX B

U.S. EPA FORM 2070-13

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MI	D005360235

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Sinclair and Valentine Company, Inc	2309 North Burdick ST.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Kalamazoo	MI	49007	Kalamazoo	077	03

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
42° 18' 49.6"	085° 35' 03.3"	■ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION (Month Day Year)	02 SITE STATUS	03 YEARS OF OPERATION (Beginning Year, Ending Year)
5 22 90	■ ACTIVE ☐ INACTIVE	1971 , presently active ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ■ B. EPA CONTRACTOR Ecology & Environment, Inc (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.
Scott A Turek	Geologist	Ecology & Environment, Inc	(312) 663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Cynthia Schultz	Environmental Health Specialist	same	( ) same
Ray Whitlock	Chemist	same	( ) same
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Tom Kievit	plant operator	2309 N Burdick St. Kalamazoo, MI 49007	(616) 381-1955
Paul Punchocar	environmental health specialist	2520 Pilot Knob Road St. Paul, MN 55120	(800) 736-3465
Zaro Large	flexo solvents manager	2309 N Burdick ST. Kalamazoo, MI 49007	(616) 381-1955
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	0845 - 1250	Sunny 75°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Lynn Spurr	Michigan Department of Natural Resources	(616) 685-9886

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE (Month Day Year)
Scott A Turek	U.S. EPA	Ecology & Environment, Inc.	(312) 663-9415	9 10 90

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
MI	D005360235

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: unknown
CUBIC YARDS: unknown
NO. OF DRUMS: 2-3 per month

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	unknown		
OLW	OILY WASTE			
SOL	SOLVENTS	unknown		
PSD	PESTICIDES			Refer to table 4-1
OCC	OTHER ORGANIC CHEMICALS	unknown		
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES	unknown		
MES	HEAVY METALS	unknown		

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
	Refer to table 4-1				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS	Refer to section 2-3		FDS		
FDS			FDS		
FDS			FDS		

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

FIT SSI 5/22/90
FIT file information

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: MI
02 SITE NUMBER: D005360235

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 70,250
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Refer to Section 5-2

01 ☐ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: no intakes within 3 miles
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Refer to Section 5-3

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

Refer to Section 5-4

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

Refer to Section 5-5

01 ■ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 15,853
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Refer To Section 5-6

01 ■ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: unKnown (Acres)
02 ■ OBSERVED (DATE: 5/22/90) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Refer to Table 4-1

01 ■ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 70,250
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Refer to Section 5-2

01 ■ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: 21
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Active facility

01 ■ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 70,250
02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Refer to A, C, G above
Also refer to Section 5-6

EPA

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

I. IDENTIFICATION
01 STATE: MI
02 SITE NUMBER: D005360235

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ■ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Flora could become contaminated by the absorption of contaminated soils.

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
Fauna could be affected by the consumption of contaminated flora.

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The food chain could be indirectly affected through the bioaccumulation of TCL compounds and TAL analytes

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 70,250
04 NARRATIVE DESCRIPTION
Soil contamination could affect the groundwater (70,250 people)
Barrels stored outside did not have a liner underneath them.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
none Known

01 ■ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ■ ALLEGED
04 NARRATIVE DESCRIPTION
5 gallons of a white ink was spilled and went into the floor drain which empties into the sewer system.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
none Known

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
none Known

III. TOTAL POPULATION POTENTIALLY AFFECTED: 70,250

IV. COMMENTS
The white ink which turned to a concrete like material when it came into contact with water was cleaned up soon after the incident.
The floor drains were later capped.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
FIT file information
FIT SSI 5/22/90

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MI	D005360235

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				
☐ 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	min. 11 full	55gal-Dr
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

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 Liquid - Incinerator fuel or dewatered and landfilled (Specify)

05 OTHER

■ A. BUILDINGS ON SITE

2 (connected)

06 AREA OF SITE

2 (Acres)

07 COMMENTS

Barrels of excess ink and ink that was sent back to the company because of quality problems were observed on the western side of the driveway.
Empty barrels were observed standing upright and on their side on the ground surface without any liner underneath.
Ink stains were observed on the driveway.

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.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ■ YES ☐ NO

02 COMMENTS The barrels of ink outside was easily accessible. Surface soil contamination detected. The other barrels of waste that is generated was not observed to be outside.

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

FIT file information
FIT SSI 5/22/90

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: MI
02 SITE NUMBER: D005360235

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ■
NON-COMMUNITY	C. ☐	D. ■

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ■
unknown D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE
A. 1 1/2 (mi)
B. 2 (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: 70,250

03 DISTANCE TO NEAREST DRINKING WATER WELL: 1 1/2 (mi)

04 DEPTH TO GROUNDWATER: 12 (ft)

05 DIRECTION OF GROUNDWATER FLOW: assumed to be flowing Toward Kalamazoo River

06 DEPTH TO AQUIFER OF CONCERN: 12 (ft)

07 POTENTIAL YIELD OF AQUIFER: unknown (gpd)

08 SOLE SOURCE AQUIFER: ☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including average, depth, and location relative to population and buildings)

Mainly municipal wells along with some private wells are used within a 3-mile radius of the site. It is estimated that 26,311 houses obtain water from the aquifer of concern with an average per household value of 2.67 in Kalamazoo County. The total population potentially affected is estimated to be 70,250.

10 RECHARGE AREA: ■ YES ☐ NO
COMMENTS: precipitation percolating down to aquifer

11 DISCHARGE AREA: ■ YES ☐ NO
COMMENTS: Local rivers, lakes, and wetlands may act as discharge areas.

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
None, no overland route to surface water bodies.	☐	(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. 15,853	B. 42,322	C. 70,250
NO. OF PERSONS	NO. OF PERSONS	NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: 600 ft (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: ~15,851

04 DISTANCE TO NEAREST OFF-SITE BUILDING: 10 ft (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)

Refer to Section 2-2

EPA

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

I. IDENTIFICATION
01 STATE: MI
02 SITE NUMBER: D005360235

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
140 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
4.26 (in)	2.33 (in)	↙ %	west	↘ %

site separated by levels of higher elevation

09 FLOOD POTENTIAL
SITE IS IN NA YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. 1.0 (mi)
OTHER: B. none (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

none (mi)

ENDANGERED SPECIES: none

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 350 ft (mi)	B. 600 ft (mi)	C. unknown (mi)	D. 2500 ft (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

2/3 mile west of the Kalamazoo River
See Appendix A

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

FIT file information
U.S. Dept. of Commerce, 1979, Climatic Atlas of the U.S. Climatic Center, Ashville, NC
USGS Kalamazoo Quadrangle, 1967, Photorevised 1973, 1:24,000

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MI	D005360235

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL		refer to Section 3-4	
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
OVA 128	8 ppm above background near the dock area.
Oxygen meter	21% O_2
Explosimeter	0% Lower explosive limit
Monitor 4	none above background.
Drager with #CN Tubes	no color change

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☒ AERIAL

02 IN CUSTODY OF Ecology and Environment, Inc. Chicago IL (Name of organization or individual) ASCS office, Salt Lake City, Utah

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Ecology and Environment, Inc. Chicago IL

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

none

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

SSI 5/22/90

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
MI	D005360235

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Limited partnership between Sinclair & Valentine and Flint Inks	unk	Sinclair and Valentine Co Inc	unk
03 STREET ADDRESS	**04 SIC CODE**	**10 STREET ADDRESS**	**11 SIC CODE**
2309 N Burdick ST	unk	2520 Pilot Knob Road	unk
05 CITY / 06 STATE / 07 ZIP CODE		**12 CITY / 13 STATE / 14 ZIP CODE**	
Kalamazoo / MI / 49007		ST. Paul / MN / 55120	
01 NAME: NA	02 D+B NUMBER	08 NAME: NA	09 D+B NUMBER
03 STREET ADDRESS	04 SIC CODE	10 STREET ADDRESS	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE
01 NAME: NA	02 D+B NUMBER	08 NAME: NA	09 D+B NUMBER
03 STREET ADDRESS	04 SIC CODE	10 STREET ADDRESS	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE
01 NAME: NA	02 D+B NUMBER	08 NAME: NA	09 D+B NUMBER
03 STREET ADDRESS	04 SIC CODE	10 STREET ADDRESS	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Limited partnership between Sinclair & Valentine and Allied Signal	unk	— NA	
03 STREET ADDRESS	**04 SIC CODE**	**03 STREET ADDRESS**	**04 SIC CODE**
2309 N Burdick ST	unk		
05 CITY / 06 STATE / 07 ZIP CODE		**05 CITY / 06 STATE / 07 ZIP CODE**	
Kalamazoo / MI / 49007			
01 NAME: Frye Industries Inc	02 D+B NUMBER: unk	01 NAME: NA	02 D+B NUMBER
03 STREET ADDRESS: unk	04 SIC CODE: unk	03 STREET ADDRESS	04 SIC CODE
05 CITY: unk / 06 STATE	07 ZIP CODE: unk	05 CITY / 06 STATE	07 ZIP CODE
01 NAME: Martin Marietta Corporation	02 D+B NUMBER: unk	01 NAME: NA	02 D+B NUMBER
03 STREET ADDRESS: 6801 Rockledge Drive	04 SIC CODE: unk	03 STREET ADDRESS	04 SIC CODE
05 CITY: Bethesda / 06 STATE: MD	07 ZIP CODE: 20034	05 CITY / 06 STATE	07 ZIP CODE

IV. REALTY OWNER(S)

V. SOURCES OF INFORMATION

FIT file information

SSI site interview 5/22/90

EPA Form 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MI	D005360235

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER	10 NAME (OPERATOR'S PARENT COMPANY)	11 D+B NUMBER
Tom Klevit	unk	Sinclair and Valentine Co	unk

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
2309 N Burdick ST	unk	2520 Blot Knob Road	unk

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Kalamazoo	MI	49007	ST Paul	MN	55120

08 YEARS OF OPERATION	09 NAME OF OWNER
4 months	Limited partnership between Sinclair + Valentine and Flint Inks

III. 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
Dale Waterman	unk	same	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
unk	unk		

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
unk					

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
2	Limited partnership between Sinclair + Valentine and Allied Signal

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Sinclair and Valentine Co	unk	Frye Industries	unk

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
2309 N Burdick ST	unk	unk	unk

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Kalamazoo	MI	49007	unk		unk

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
15	Frye Industries

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Martin Marietta Corp	unk	NA	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
6801 Rockledge Drive	unk		

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Bethesda	MD	20034			

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
unk	Martin Marietta Corp

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

FIT file information

SSI site interview 5/22/90

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MI	D005360235

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
Sinclair and Valentine Co Inc	unk

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
2309 N Burdick ST	unk

05 CITY	06 STATE	07 ZIP CODE
Kalamazoo	MI	49007

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
NA		NA	

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
NA		NA	

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
AmerEco Environmental Services Inc	unk	NA	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
RT 1, Box 159	unk		

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Kingsville	MO	64061			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
United Solvent Services Inc	unk	NA	

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

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Kansas City	MO	64101			

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

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: MI
02 SITE NUMBER: D005360235

II. PAST RESPONSE ACTIVITIES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EPA

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

I. IDENTIFICATION
01 STATE: MI
02 SITE NUMBER: D005360235

II. PAST RESPONSE ACTIVITIES (Continued)

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

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

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

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

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

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

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

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

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

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

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

01 ■ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE 1989 — 03 AGENCY none
04 DESCRIPTION

- Company built a storage shed with a curbed concrete floor for storing flammable liquids. The shed has its own fire control system.
- Company capped its floor drains to prevent spills flowing into the sewer.
- Company is building a trough lined with plastic to store empty drums until a truck can pick them up.
- 1987 - Company's underground fuel storage tank was excavated.

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

FIT SSI 5/22/90

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MT	D005360235

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

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

Refer to Section 2-3

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

refer to references.

EPA FORM 2070-13 (7-81)

APPENDIX C

FIT SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc

U.S. EPA ID: MID005360235 TDD: F05-8711-066 PAN: FMI0293SB

DATE: > 5/22/90

TIME: > 1115

DIRECTION OF PHOTOGRAPH: > W

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): > S1

DESCRIPTION: > This photograph shows the location of soil sample > #S1 (closeup). This is the western end of the driveway.

DATE: > 5/22/90

TIME: > 1115

DIRECTION OF PHOTOGRAPH: > N

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): > S1

DESCRIPTION: > This photograph shows the location of soil sample > #S1 (distant). Note rings on driveway where drums were once sitting.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc. PAGE 2 OF 9

U.S. EPA ID: MID 005360235 TDD: F05-8711-066 PAN: FMI 02935B

DATE: > 5/22/90

TIME: > 1125

DIRECTION OF PHOTOGRAPH: > S

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): > S2

DESCRIPTION: > This photograph shows the location of soil sample

> #S2 (closeup)

DATE: > 5/22/90

TIME: > 1125

DIRECTION OF PHOTOGRAPH: > NE

WEATHER CONDITIONS: > partly cloudy 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): > S2

DESCRIPTION: > This photograph

> shows the location of

> soil sample #S2 (distant)

>

>

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc. PAGE 3 OF 9

U.S. EPA ID: MID005360235 TDD: F05-8711-235 PAN: FMI0293SB

DATE: > 5/22/90

TIME: > 1145

DIRECTION OF PHOTOGRAPH: > E

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): > S3

DESCRIPTION: > This photograph shows the location of soil sample > #S3 (closeup) The metal is the bottom half of a barrel sticking out of the pile of dirt.

DATE: > 5/22/90

TIME: > 1145

DIRECTION OF PHOTOGRAPH: > E

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): > S3

DESCRIPTION: > This photograph shows the location of soil sample > #S3 (distant). The pile of dirt is from the construction of the new shed.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc

U.S. EPA ID: MID005360235 TDD: F05-8711-235 PAN: FMI02935B

DATE: > 5/22/90

TIME: > 1200

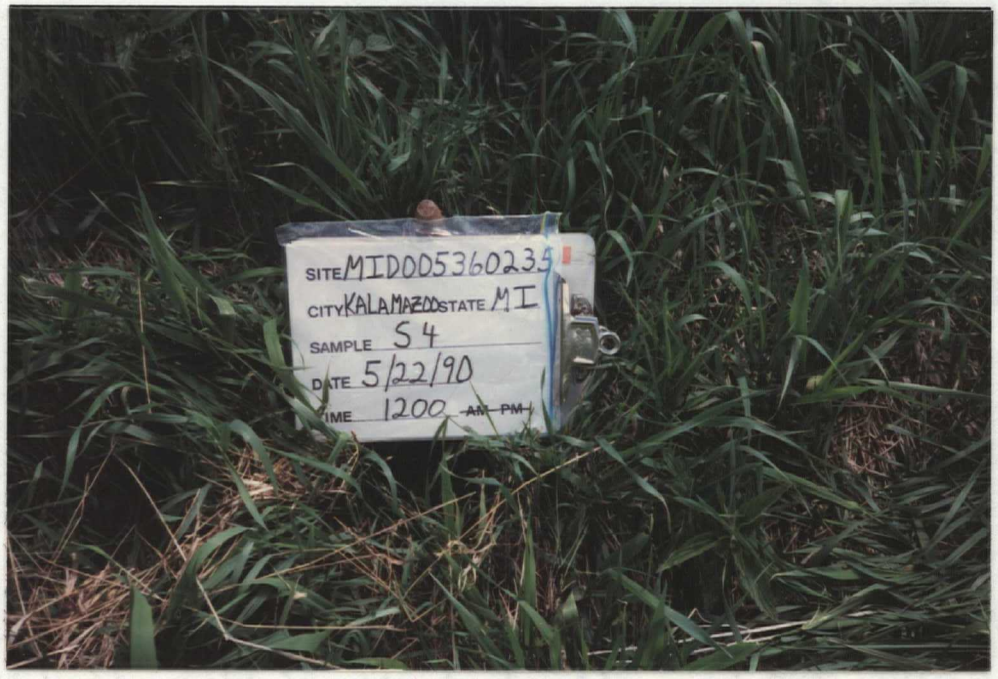
DIRECTION OF PHOTOGRAPH: > SE

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): > S4



DESCRIPTION: > This photograph shows the location of soil sample

> #S4 (closeup)

DATE: > 5/22/90

TIME: > 1200

DIRECTION OF PHOTOGRAPH: > SE

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): > S4

DESCRIPTION: > This photograph shows the location of soil sample

> #S4 (distant). The shed is behind the trees in the center of picture.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc PAGE 5 OF 9

U.S. EPA ID: MID005360235 TDD: F05-8711-066 PAN: FMI0293SB

DATE: > 5/22/90

TIME: > 1215

DIRECTION OF PHOTOGRAPH: > SW

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): >

DESCRIPTION: > This photograph shows the northwest corner of the

> driveway where barrels of excess ink and ink that was sent back because of quality problems are stored. It is not known what the empty tanks are on their side.

DATE: > 5/22/90

TIME: > 1215

DIRECTION OF PHOTOGRAPH: > NW

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): >

DESCRIPTION: > This photograph shows the south side of the shed. The area

> boxed in by wood will be the storage area for empty drums until they can be hauled away.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc

U.S. EPA ID: MID005360235 TDD: F05-8711-235 PAN: FMI0293SB

DATE: > 5/22/90

TIME: > 1220

DIRECTION OF PHOTOGRAPH: > N

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): >

DESCRIPTION: > This photograph shows the northwest corner of the driveway

> where barrels of excess ink and ink that was sent back because of quality problems are stored. Note the rings on the pavement from previous barrel locations.

DATE: > 5/22/90

TIME: > 1205

DIRECTION OF PHOTOGRAPH: > W

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): >

DESCRIPTION: > This photograph shows the western end of the driveway.

> Note the rings on the pavement from previous barrel locations and some spilled ink.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc. PAGE 7 OF 9

U.S. EPA ID: MID005360235 TDD: F05-8711-066 PAN: FMI02935B

DATE: > 5/22/90

TIME: > 1215

DIRECTION OF PHOTOGRAPH: > SW

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): >

DESCRIPTION: > This photograph shows the southern edge of the driveway

> where empty barrels are stored.

DATE: > 5/22/90

TIME: > 1005

DIRECTION OF PHOTOGRAPH: > E

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): >

DESCRIPTION: > This photograph shows the southern edge of the driveway

> and a truck that started loading the empty barrels.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc. PAGE 8 OF 9

U.S. EPA ID: MID005360235 TDD: F05-8711-066 PAN: FMI02935B

DATE: 5/22/90 TIME: 1210 DIRECTION OF PHOTOGRAPH: NE PHOTOGRAPHED BY: Scott Turek

WEATHER CONDITIONS: partly cloudy 70° SAMPLE ID (if applicable):

DESCRIPTION: These photographs show the southern side of the building. Some barrels are stored in the concrete curbed area in the center. Also stored here are stacks of empty buckets.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: Sinclair and Valentine Co., Inc. PAGE 9 OF 9

U.S. EPA ID: MID005360235 TDD: F05-8711-066 PAN: FMI0293SB

DATE: > 5/22/90

TIME: > 1220

DIRECTION OF PHOTOGRAPH: > NE

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): >

DESCRIPTION: > This photograph shows the southeastern side of the building.

> The area surrounded by railroad ties was where the companys fuel oil tank was once located. IT was excavated.

DATE: > 5/22/90

TIME: > 1220

DIRECTION OF PHOTOGRAPH: > NW

WEATHER CONDITIONS: > partly cloudy

> 70°

PHOTOGRAPHED BY: > Scott Turek

SAMPLE ID (if applicable): >

DESCRIPTION: > This photograph shows the front of the building.

>

APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS

ROUTINE ANALYTICAL SERVICES
CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Table A (Cont.)

CONTRACT LABORATORY PROGRAM

TARGET ANALYTE LIST (TAL)

INORGANIC DETECTION LIMITS

Compound	Procedure	Detection Limits Water (µg/L)	Detection Limits Soil Sediment Sludge (mg/kg)
aluminum	ICP	200	40
antimony	furnace	60	2.4
arsenic	furnace	10	2
barium	ICP	200	40
beryllium	ICP	5	1
cadmium	ICP	5	1
calcium	ICP	5,000	1,000
chromium	ICP	10	2
cobalt	ICP	50	10
copper	ICP	25	5
iron	ICP	100	20
lead	furnace	5	1
magnesium	ICP	5,000	1,000
manganese	ICP	15	3
mercury	cold vapor	0.2	0.008
nickel	ICP	40	8
potassium	ICP	5,000	1,000
selenium	furnace	5	1
silver	ICP	10	2
sodium	ICP	5,000	1,000
thallium	furnace	10	2
tin	ICP	40	8
vanadium	ICP	50	10
zinc	ICP	20	4
cyanide	color	10	2

3767:1

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

APPENDIX E REDACTED

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:
5HR-11-SSI

George Carpenter
Environmental Quality Manager
Site Assessment Unit
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Site Name: Sinclair & Valentine
Location: Kalamazoo
U.S. EPA ID#: MID005360235
Date: 21 April 91

Dear Mr. Carpenter:

Attached is a copy of the screening site inspection report (SSIR) which has been prepared for the site listed above. This document is considered to be final and any changes and modifications based on comments made by your agency and the U.S. Environmental Protection Agency (U.S. EPA) during the 30 calendar day comment period have already been incorporated.

Because this is considered to be the final form of this document, this version of the SSIR may be distributed outside of your agency without prior notification and approval of U.S. EPA.

Please remember that the revised estimate of the Hazard Ranking System (HRS) score, which has already been furnished to your agency by **FIT** is still considered to be predecisional. Therefore, it should not be released. If you have any questions concerning the release of this information, please contact Ms. Jeanne Griffin, of my staff, at (312) 886-3007.

As was previously agreed upon, one set of original photographs for this SSIR has already been sent to your agency enclosed in the draft version of this SSIR. It is your agencies responsibility to see that these photographs are mounted in the photo logs enclosed in the final version of this SSIR. At this point the final version of the SSIR supersedes the draft version and the draft version of this SSIR should be removed from your agency files to ensure that the confidential draft version of this SSIR is not inadvertently released by your staff.

If you have any comments or questions, please contact Bill Messenger at (312) 353-1057.

Sincerely yours,

Thomas F. Geishecker

Thomas F. Geishecker
Technical Support Section
Enclosure
cc: Bill Messenger
MDNR District Office