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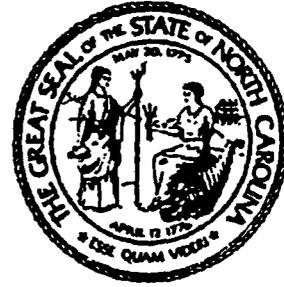
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STATE OF NORTH CAROLINA



**Department of Environment, Health,
and Natural Resources
Division of Solid Waste Management
Superfund Section**

**Stewart-Warner Corporation,
Bassick-Sack Division
NCD 024895864**

**Phase I
Screening Site Inspection**

April 1991

By:

Greenhorne & O'Mara, Inc.



**PHASE I
SCREENING SITE INSPECTION
FOR THE
STEWART-WARNER CORPORATION, BASSICK-SACK DIVISION SITE
GREENSBORO, NORTH CAROLINA**

Submitted to:

**State of North Carolina
Department of Environment, Health,
and Natural Resources
Division of Solid Waste Management
Superfund Section
Raleigh, North Carolina**

Prepared by:

**Greenhorne & O'Mara, Inc.
9001 Edmonston Road
Greenbelt, Maryland 20770**

April, 1991

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EXECUTIVE SUMMARY

The Stewart-Warner Corporation, Bassick-Sack Division site lies in the north central portion of the City of Winston-Salem in Forsyth County. The site consists of a main building, warehouse, foundry and wastewater treatment plant on 9.8 acres between the Southern Railroad and Indiana Avenue. The facility was originally a cotton mill and was purchased by Stewart-Warner in 1945 for metal finishing of furniture hardware. Processes used by Stewart-Warner include foundry work; vibratory finishing; electroplating; oxidizing; buffing; lacquering; painting and degreasing. In 1988, Ilco-Unican Corporation purchased the facility to manufacture zinc die cast locks.

No information has been available regarding the manufacturing processes, waste types or waste quantities of the cotton mill(s) operation(s). Wastes generated at the site by Stewart-Warner included: tetrachloroethene; plating bath sludges containing heavy metals and cyanide; wastewater treatment sludge containing cyanide and heavy metals; baghouse dust containing zinc; and waste paint lacquer and thinner. The paint and thinner is flammable and contains xylene, acetone, ethyl acetate, n-butyl alcohol, methanol, toluene and methyl isobutyl ketone. Information regarding Stewart Warner's waste disposal practices were not available.

Ilco-Unican has discontinued many of the processes conducted at the plant under Stewart-Warner. Wastes currently generated include: dry electroplating sludge; pretreatment plant sludge and wastewater; and nonhazardous hydraulic oils. All wastes are either treated onsite and discharged to the City of Winston-Salem municipal sewer or are disposed of offsite. Prior to the construction of the wastewater treatment plant in 1974, all wastes went untreated to either the municipal sewer system or to ditches onsite.

There have been several reported spills of hazardous wastes onsite and, in 1987, a Notice of Violation was issued to Stewart-Warner to address contamination resulting from the spills. Consequently, a remediation effort was undertaken by Stewart-Warner under the direction of the Solid and Hazardous Waste Section of the North Carolina Department of the Environment Health and Natural Resources (NCDEHNR). Several reports and sampling analyses characterizing the extent of soil contamination were developed throughout the cleanup. Additional sources of contamination were discovered when an excavation exposed buried drums containing organic wastes. The cleanup effort was expanded to include this new area. Final approval of the cleanup was given by NCDEHNR in November 1988.

Despite the remedial efforts at the site, Ilco-Unican underwent its own assessment of site contamination. Further sampling indicated that areas of the site remain contaminated. Ilco-Unican is in negotiations with Stewart-Warner for the cleanup of these additional areas.

The Stewart-Warner Bassick-Sack Division site was listed under the U.S. EPA's waste site inventory, the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). Consequently, a Preliminary Assessment (PA) of the site was conducted in December 1987 by the North Carolina Department of Human Resources, Division of Health Services. Upon completion of the PA, the State recommended a medium priority site inspection. In response to this recommendation, Greenhorne and O'Mara, Inc. (G&O) was contracted by the NCDEHNR to conduct a Phase I

Screening Site Inspection (SSI) to determine both past and present conditions.

The site is located on the western edge of the Piedmont Physiographic Province. Elevations at the site range from 970 to 990 feet above mean sea level. Drainage from the site is to the east and south to an unnamed perennial tributary of Peters Creek. Land uses within four miles of the site include: commercial, industrial, residential and institutional uses. Two schools are located within 400 feet of the site. The nearest residence is located within 800 feet of the site. There are 86,984 people estimated to reside within a 4-mile radius of the site. Approximately, 3,047 people rely on domestic wells for their potable water within a 4-mile radius of the site. There are no critical habitats or endangered species within 15 miles downstream of the site and no wetlands within one mile of the site.

Based on the available information at this time, releases of hazardous substances have apparently occurred on the site. An immediate threat may be present to the 130 employees, as well as to the surrounding population from both direct contact of contaminated soils and inhalation of contaminated airborne particulates suspected of being on the site. Due to these health risks, G&O is recommending that the site be further investigated in the next stage of the pre-remedial process.

1.0 BACKGROUND

1.1 Location and Site Layout

The Stewart-Warner Corporation, Bassick-Sack Division site lies in the north central portion of the City of Winston-Salem in Forsyth County, North Carolina (Appendix A, Figure 1). The site is located between the Southern Railroad tracks and Indiana Avenue about 1/2 mile northwest from the intersection of Indiana Avenue and the Memorial Expressway. The site is situated on 9.8 acres and consists of a main building with offices, asphalt parking lot, warehouse, foundry, foundry baghouse, and water treatment plant. The site is bordered on the north and west by the Southern Railroad and on the south and east by Indiana Avenue. A site layout map can be found in Figure 2 of Appendix A. The site is located at latitude 36° 07' 43" N and longitude 80° 14' 14" W (Appendix A, Figure 2; Ref. 1, 26 & 31).

1.2 Ownership and Site Use History

The facility was originally built and used as a cotton mill prior to the purchase of the site by the Stewart-Warner Corporation, Bassick-Sack Division in 1945 (Ref. 2). At this time, Stewart-Warner began using the facility for metal finishing of furniture hardware. Processes used by Stewart-Warner include foundry work, vibratory finishing, electroplating, oxidizing, buffing, lacquering, painting, and degreasing (Ref. 2 & 26). In 1988, Ilco-Unican Corporation purchased the site to manufacture zinc die cast locks. When Ilco-Unican purchased the facility many of the processes that were conducted under Stewart-Warner were discontinued, these include: the brass foundry (discontinued in 1990), lacquer painting (discontinued in 1990), and the buffing operation (discontinued in 1990).

1.3 Process and Waste Disposal History

From 1945 to 1988, the facility at the site was used by Stewart-Warner for metal finishing of furniture hardware (Ref. 2, 26 & 38). Manufacturing processes included foundry work, vibratory finishing, electroplating, oxidizing, buffing, lacquering, painting, and degreasing. No further information was available regarding the processes at the site during Stewart-Warner's occupancy. Wastes generated at the site by Stewart-Warner between 1945 and 1988 included (but may not be limited to): spent tetrachloroethene and sludges from a degreasing operation; plating bath sludges containing heavy metals and cyanide from the bottom of the electroplating baths; wastewater treatment sludge containing cyanide and heavy metals; baghouse dust containing zinc; and waste paint lacquer and thinner used in a painting operation (Ref. 39). The paint and thinner is a flammable waste containing xylene, acetone, ethyl acetate, n-butyl alcohol, methanol, toluene, and methyl isobutyl ketone (Ref. 39). Waste disposal practices under Stewart-Warner were not available at the time of this report.

In 1988, Ilco-Unican purchased the site from Stewart-Warner for the manufacture of zinc die-cast locks (Ref. 2 & 38). Many of the processes conducted by Stewart-Warner were discontinued by Ilco-Unican. Consequently, the wastes that are currently generated at the site include: electroplating dry sludge, pretreatment plant sludge and wastewater, and non-hazardous hydraulic oils. The electroplating sludge and waste from the

wastewater treatment plant is sent to World Resource, Inc. for recycling. The hydraulic oils are sent to Southeastern Chemical in South Carolina. The locks are painted with a dry non-hazardous paint, that generated no hazardous waste streams. No solvents or hazardous chemicals are used to clean the equipment. Cyanide is stored in a 4,500 gallon above-ground storage tank. In 1987, when Stewart-Warner occupied the site, this tank was undiked, and consequently an overflow resulted in the migration of cyanide to the environment. Ilco-Unican has constructed a dike around this tank. In addition to the cyanide tank, two 1,000-gallon plating solution tanks were formerly located on the east side of the site. These tanks were also undiked, but have since been removed and the soils contaminated from overflows have been excavated.

All wastewater from the plant is sent to the on-site wastewater treatment plant (Ref. 2). This plant discharges 30,000 gallons/day to the City of Winston Salem municipal sewer system. Prior to the construction of the wastewater treatment plant in 1974, wastes were either discharged to the city sewer or disposed of in ditches alongside of the facility (Ref. 2).

1.4 Permit and Regulatory History

Stewart-Warner originally submitted a Part A Permit Application as a hazardous waste treater, storer and disposer, based on their storage and treatment of containers, tanks and waste piles (Ref. 32). However, in 1984, when the State of North Carolina requested a Part B Permit Application, Stewart-Warner decided to withdraw its Part A application and terminate its interim status by closing its storage operations (Ref. 40). By March 1986, Stewart-Warner had officially ceased all storage operations, and had its RCRA status officially changed to a hazardous waste generator only (Ref. 41).

In addition to the RCRA classification as a hazardous waste generator, Stewart-Warner has operated under a PSD permit for air emissions (PSD No. 3460001P); a City of Winston-Salem permit for discharge to their sewer system (No. 1154); and a State of North Carolina permit for the waste treatment facility (No. 3042) (Ref. 32). Presently Ilco-Unican maintains their NPDES permit and RCRA status (Ref. 2).

1.5 Remedial Actions To Date

The Stewart-Warner Corporation, Bassick-Sack Division site has had a history of documented spills of hazardous waste and wastewater, and has consequently undergone several clean-up efforts. The first documented spill occurred on February 27, 1987, when a tank used to mix brass plating solution was overfilled with water (Ref. 42). Less than 50 gallons of a 3 percent cyanide solution ran onto the ground and along 150 feet of adjoining railroad siding. The solution was diked and approximately 570 gallons of dirt and solution was collected and treated onsite with lime and HTH. At this time, it is not known what was done with the treated soil.

On April 23, 1987, wastewater from the wastewater treatment plant overflowed when the operator failed to close a valve (Ref. 43). The wastewater flowed into the storm drain and onto the adjoining railroad siding for approximately 600 feet. The water was diked at this point and 60 gallons was collected and treated at the wastewater treatment plant.

In May 1987, the North Carolina Department of Human Resources issued a

Notice of Violation to Stewart-Warner because the contaminated soils on and beyond the site constituted an illegal disposal (Ref. 44). To comply with the Notice of Violation, Stewart-Warner needed to undertake an investigation to characterize soil contamination at and beyond the site, and identify any water supplies within the vicinity.

Less than a week after the Notice of Violation was issued, Stewart-Warner reported another spill from the wastewater treatment plant (Ref. 45). On May 27, 1987, as a result of an operator error, the thermal overloads to the pump motor caused the motor to stop and the pit to overflow into the storm drain and onto the adjoining railroad siding for 800 feet. The water was diked at this point and 660 gallons was collected for treatment onsite.

In July 1987, Stewart-Warner had completed a comprehensive site report (Ref. 12). This report identified two spill areas and found that additional sampling was needed to the north and west of spill site 1 and at increased depths at all locations in spill sites 1 and 2 to further characterize the extent of contamination (see Appendix A, Figure 2). In addition, this report outlined a remediation procedure that included excavating the contaminated soils, disposing of the contaminated soils offsite, and sampling the excavations for residual contamination before backfilling with clean soils. During further excavations to characterize the site, an additional area of contamination was discovered, when ten drums were found in a three foot excavation, adjacent to the facility (see Appendix A, Figure 2; Ref. 23). Sample analyses of the contents of the drums and the surrounding soil indicated elevated levels of zinc, copper, nickel, cyanide, ethylbenzene, toluene, trichloroethene, and xylenes. Based on the sample analyses of the drum contents, Stewart-Warner submitted an addendum to the sampling plan which outlined procedures for remediating the site through excavating and transporting all contaminated drums and soils offsite, with post excavation sampling before backfilling.

Stewart-Warner, under the supervision of the Solid and Hazardous Waste Section of NCDEHNR, implemented its remediation. In November 1988, the Solid and Hazardous Waste Section of NCDEHNR issued a letter to Stewart-Warner stating: "This office has reviewed the final report regarding site remediation and concurs with your conclusion that RCRA activities are complete. Residual levels of cyanide and heavy metals are well within the acceptable levels previously established for Spill Sites 1 and 2. However, as noted in the analyses and in your letter of 2-11-88, several secondary constituents remain above the ideal levels established in the interim primary drinking water standards. This, however, does not indicate the need for any additional remedial efforts at this time. In addition, our review of Areas A, B, and C indicate similar success..... In that this site is listed as a CERCLA site, and that minor residual constituents remain, additional site and record reviews may be undertaken by that program and it may not preclude the possibility that the Division of Environmental Management may choose to evaluate the groundwater." (Ref. 25).

In April 1988, Ilco-Unican purchased the facility from Stewart-Warner (Ref. 38). Ilco-Unican performed its own site assessment and found additional areas of concern to be remediated (Ref. 8). These additional areas of concern include: air emissions, such as zinc dust that had accumulated on the roof and may be contaminating air and runoff; soils adjacent to the foundry baghouse; areas where above-ground storage tanks

had been located; and the general characterization of the groundwater quality onsite. Consequently, Ilco-Unican, in conjunction with Stewart-Warner, conducted further sampling in October 1990 (Ref. 30). The sampling indicated that in Excavation Pit C (see Appendix A, Figure 2) significant levels of tetrachloroethene and trichloroethene, and from the roofs and baghouse elevated levels of metals, especially zinc were found. Based on a letter dated February 27, 1990, it is likely that Stewart-Warner will be responsible for remediating those areas found to have additional contamination (Ref. 22).

On October 28, 1990, a spill of approximately 400 gallons of partially pretreated wastewater overflowed from a batch tank used to batch treat electroplating waste material (Ref. 5). The waste escaped two secondary containment systems, entered a storm drain and discharged to the adjacent railroad property. The spill was contained by digging a shallow sump beyond the visibly saturated surface soil area. Top soils were shoveled onto any free standing liquid and the resulting contaminated soil drummed and transported to a waste containment area for analysis, treatment and/or disposal. Samples were taken for analysis.

1.6 Description of Earlier Reports

Due to the documented releases onsite, several reports have been compiled to describe the extent of contamination, and the surrounding environment. The "Comprehensive Site Report for the Assessment of Chemical Contamination at Spill Sites 1 and 2" was presented to the NCDEHNR in 1987 (Ref. 12). This report presented the results of preliminary sampling at spill sites 1 and 2. The results of the chemical analyses for both spill sites indicated that contamination of zinc, copper and cyanide was found to the maximum depth sampled, 9 to 12 inches, and therefore the vertical and horizontal extent of contamination for these compounds had not been fully determined. Extractable levels of zinc, copper, and cyanide exceeded maximum allowable contaminant limitations. Maximum allowable limitations for chromium were not exceeded at any depth interval sampled within spill sites 1 and 2. Extractable concentrations for nickel ranged from 0.42 mg/L to 6.0 mg/L. In addition, to the sampling results, a proposal for remediation was presented that included: excavating soils at both spill sites to a depth of 1.5 feet and disposing of the excavated soils offsite; sampling at spill sites 1 and 2 after the 1.5 foot of soil is removed, in order to determine the vertical extent of contamination; and sampling at 50 foot intervals north and south of the spill site 1 to determine the lateral extent of contamination.

In August 1987, a "Proposal For Establishing Maximum Limits for Cyanide, Copper, Chromium, Zinc and Nickel at Chemical Spill Sites 1 and 2 Stewart-Warner Corporation - Bassick Sack Division" was submitted to the NCDEHNR (Ref. 23). This proposal outlined justifications and rationale for reestablishing maximum limits for remediation, based on environmental and target factors for the site.

On December 7, 1987, the North Carolina Department of Human Resources, Division of Health Services performed a Preliminary Assessment (PA) on the Stewart-Warner Corporation, Bassick-Sack Division site (Ref. 26). The assessment addressed past waste disposal methods, and recommended a medium priority site inspection, due to previous waste disposal history,

especially of electroplating sludge, which was unclear.

In March 1988, a report entitled "Remedial Sampling and Analyses at Chemical Spill Sites 1 and 2 for Stewart-Warner Bassick-Sack Division" was submitted to the NCDEHNR (Ref. 27). This report presented the results of the post excavation sampling analyses. While the results indicated that zinc and copper remained above the maximum acceptable contaminant levels established by the State, they did not exceed the maximum limits proposed by Stewart-Warner in their August 1988 proposal. Levels of nickel ranged between 0.24 mg/L and 3.1 mg/L. Levels of chromium, lead and cyanide were below the maximum acceptable contaminant levels established by the State.

A report entitled "Progress Report Concerning the Excavation and Remedial Sampling of "Pit Area" Outside Chemical Spill Sites 1 and 2 Stewart-Warner Bassick-Sack Division" was presented in April 1988 (Ref. 28). A copy of this report was not available for review. However, results of soil analyses of the pit area are presented in A "Final Report Concerning Chemical Spill Sites 1, 2 and Areas A, B, and C Stewart-Warner Bassick-Sack Division", submitted to the NCDEHNR in August 1988 (Ref. 28).

The preceding reports were generated in response to a Notice of Violation and addressed only those areas of the site referred to in the Notice of Violation. In April 1988, when Ilco-Unican purchased the site from Stewart-Warner, Ilco-Unican contracted Groundwater Technology, Inc. to prepare a "Technical Proposal Comprehensive Site Evaluation" which was completed February 1989 and revised September 1990 (Ref. 8). This report contained a scope of work for a soil and groundwater survey; characterization of roof sediments; and an evaluation of air emissions and ventilation systems. A work plan for conducting sampling and analysis of soils and drummed materials at the Ilco-Unican site was presented in August 1990 (Ref. 30). The results of the sampling conducted as a result of the work plan, indicate that additional areas of contamination exist on the site (Ref. 30).

Most recently, Ilco-Unican submitted to the NCDEHNR a report summarizing the events and consequences of a wastewater spill that occurred in October 1990 (Ref. 5). This report includes a description of the events and remedial actions taken, a summary of environmental conditions and targets, and a summary of sampling analyses.

1.7 Summary Trip Report

On January 10, 1991, Greenhorne & O'Mara, Inc. personnel, Ms. Marie Fisher and Mr. William Dixon visited the Stewart-Warner Corporation, Bassick-Sack Division site for the purpose of conducting a Phase I SSI. G&O personnel along with Mr. Harvey Allen and Mr. Steve Phibbs of the NCDEHNR met with Messrs. Brian Wells, Nader Iskander, Edwin Smith, Royce Bowles and Anthony Wilder of Ilco-Unican. Upon completion of the interview, G&O personnel were taken on a tour of the facility. The following observations were made by G&O personnel (Ref. 2):

- o Drainage at the site is north towards the railroad tracks.
- o The outdoor 4,500-gallon above-ground cyanide storage tank appears to be adequately contained with competent diking (see Appendix A, Photo 2).

- o The ventilation duct from the foundry operation is broken. Buffer dust containing heavy metals lies on the ground (see Appendix A, Photo 4).
- o A 1,000-gallon above-ground plating bath holding tank has been removed and soils in this area have been remediated (see Appendix A, Photo 3).
- o Previously plating sludge was stored on the ground surface on the southern portion of the site, prior to offsite disposal (see Appendix A, Photo 5). Vegetation appeared to be very stressed in this area.
- o Several inches of buffer dust has accumulated on the roofs of the manufacturing building and the eastern section of the main building (see Appendix A, Photos 7 and 8).

In addition to the facility tour, a site reconnaissance was conducted to determine topography and drainage at the site, amount of vegetative cover, evidence of hazardous waste migration, and land use of the surrounding areas.

2.0 ENVIRONMENTAL SETTING

2.1 Topography

The Stewart-Warner Corporation, Bassick-Sack Division site is located in the north central portion of the City of Winston-Salem in Forsyth County, North Carolina. Elevation at the site ranges from approximately 970 to 990 feet above mean sea level and drains east and south to an unnamed tributary of Peters Creek. The slope of the intervening terrain is 2.5% (Appendix 1, Figure 2; Ref. 31).

2.2 Surface Water

Surface water drainage from the Bassick-Sack Division site flows east and south for approximately 1200 feet to a perennial tributary of Peters Creek (Ref. 1). The unnamed tributary flows in a southwesterly direction for approximately 1.3 miles until its confluence with Peters Creek. Peters Creek flows in a south to southwesterly direction to Salem Creek (Middle Fork Muddy Creek) approximately 4.6 miles downstream of the site. Salem Creek (Middle Fork Muddy Creek) flows south to southwesterly for approximately 6.9 miles until its confluence with Muddy Creek. Muddy Creek continues south in Forsyth County for a little over 2.5 miles and then into Davidson County (Appendix A: Figure 2).

Peters Creek, Salem Creek from Salem Lake to Muddy Creek and Muddy Creek are classified as Class C waters (Ref. 20). Class C waters are suitable for uses such as fish and wildlife propagation, secondary recreation, and agriculture among other low quality uses. While Peters Creek is classified as suitable for recreational uses, this creek is expected to be too shallow to support recreational activities (Ref. 21). Recreational uses of Salem Creek and Muddy Creek may occur (Ref. 16).

2.3 Geology, Soils, and Groundwater

2.3.1 Geology

The site is located on the western edge of the Piedmont Physiographic Province (Ref. 4 & 24). In general, the Piedmont bedrock consists predominantly of a variety of different types of deeply weathered igneous and metamorphic rocks forming a gently inclining surface characterized by gently rolling topography. Bedrock at the site consists chiefly of gneiss and porphyritic granite. The rocks of the gneiss unit are chiefly quartz-mica-feldspar gneiss, quartz-mica schist, and quartz-feldspar-mica schist. Also included are some feldspar-hornblende gneisses and hornblende schist. The larger part of this unit is of sedimentary origin that has undergone severe metamorphism. The bedding strikes generally northeastward and dips southeastward. The granite is intruded into the gneiss at many places. The granite is a light to medium gray coarse rock with many large feldspar phenocrysts.

2.3.2 Soils

The soils mapped beneath and in the immediate vicinity of the site are from the Pacolet series (Ref. 7). Soils of the Pacolet series are primarily well drained, gently to steeply sloping soils of uplands. These soils formed in residuum that weathered from granite mica gneiss, schist

and other acidic rocks. The surface layer of these soils is dark yellowish-brown fine sandy loam about 6 inches thick. The subsoil is dominantly red, firm clay and friable clay loam about 26 inches thick. Below these layers and extending about 76 inches, is mottled red and reddish-yellow, weathered mica gneiss that crushes to sandy loam. The soils of this series found primarily in the vicinity of the site are Pacolet-Urban land complex 2 to 25 percent slopes and Pacolet-clay loam 6 to 45 percent slopes. The permeability of these soils ranges from 0.6 to 2.0 inches per hour (4.23×10^{-4} to 1.4×10^{-3} cm/sec).

2.3.3 Groundwater

In the North Carolina Piedmont Province, groundwater is found in the saprolite and the underlying bedrock, which behave as a single unconfined aquifer. Water in the saprolite is found in the pore spaces, whereas water in the intermediate intrusive rock formations is found in fractures. Dug wells obtaining water from the saprolite range in depth from about 20 to 60 feet and yield adequate supplies for domestic uses (Ref. 4). In the vicinity of the site, the USGS has reportedly estimated the groundwater to be 35 to 40 feet below land surface (Ref. 11). Wells drilled into the gneiss unit have an average depth of 232 feet below land surface and an average yield of 20 gallons per minute (Ref. 4). Wells drilled into the granite have an average depth of 199 feet below land surface and yield an average of 7.8 gallons per minute.

2.4 Climate and Meteorology

In the Greensboro area, the mean annual precipitation is 44 to 45 inches (Ref. 6). The mean annual lake evaporation is approximately 40 inches; therefore, the net annual precipitation is 4.0 to 5.0 inches. The 1-year/24-hour rainfall in this area is approximately 3.0 to 3.5 inches (Ref. 14). The 2-year/24-hour rainfall is approximately 4.0 inches.

2.5 Land Use

Land use within a 4-mile radius of the site includes commercial, industrial, residential and institutional uses (Ref. 1 & 31). The nearest school is located on Indiana Avenue, approximately 400 feet southwest of the site. There are 18 schools located in a 4-mile radius of the site. The site is bordered on the north and east by the Southern Railroad. Across these railroad tracks is a fertilizer facility. Approximately 1/2 mile southwest are two public parks, and 1/2 mile northeast is the Smith Reynolds Airport. The nearest residence is approximately 800 feet to the east.

2.6 Population Distribution

The population within a 4-mile radius was determined by multiplying the city or county density factor by the incorporated city or county area within each radius. The city density factor used was based on the 1980 census as reported in the "North Carolina State Statistical Abstract" (Ref. 19). The county density factor was computed by subtracting the 1980 population of Winston-Salem from the Forsyth County population and this adjusted population value was divided by the area of Forsyth County outside the City of Winston-Salem. Population calculations for various radial distances from the site are summarized below (Ref. 29):

<u>Radius</u>	<u>Population/Radii</u>	<u>Cumulative Population</u>
1/4-mile	435	435
1/2-mile	1,280	1,715
1-mile	5,120	6,835
2-miles	20,481	27,316
3-miles	26,532	53,848
4-miles	33,136	86,984

The nearest resident is located 800 feet east of the site (Ref. 31).

2.7 Water Supply

There are no municipal wells within a 4-mile radius of the Stewart-Warner site, nor are there any surface water intakes for public water supply within 15 downstream miles of the site (Ref. 17). The nearest downstream water supply intake is located on the Yadkin River, which is located beyond the area of concern. This water supply intake serves the residents of Davidson County. Most of the residents within a 4-mile radius of the site receive their potable water from the Winston-Salem Municipal System. Winston-Salem obtains its water supply from a surface water intake, located on Salem Lake, approximately 3.4 miles southeast of the site (Appendix A, Figure 3). Because this intake is not located downstream of the site, it is considered to be outside of the study area. In addition, residents mainly located north and northeast of the site in Forsyth County rely on domestic wells for their potable water, except for where the city's municipal lines extend into the county. These water lines are shown in Appendix A, Figure 3. The following is a break down of the estimated population assumed to rely on domestic wells. The population was derived by counting the number of houses assumed to rely on domestic wells from the USGS topographic map and multiplying the number of persons per household for Forsyth County (Ref. 19).

<u>Radius</u>	<u># of Houses</u>	<u>Multiplier</u>	<u>Pop./Radii</u>	<u>Cumulative Pop.</u>
1/4-mile	0	2.62	0	0
1/2-mile	0	2.62	0	0
1-mile	0	2.62	0	0
2-miles	0	2.62	0	0
3-miles	415	2.62	1087	1087
4-miles	748	2.62	1960	3047

The nearest well is assumed to be located approximately 2 miles north of the site (Appendix A, Figure 3; Ref. 1).

2.8 Critical Environments

There are no known critical habitats of Federally-listed endangered or threatened species within 15 miles downstream of the site (Ref. 3). Wetlands in the western part of North Carolina have not been delineated and mapped. No hydric soils were revealed within one mile of the site; therefore, it is assumed that no freshwater or coastal wetlands are located within the vicinity of the site (Ref. 7).

3.0 WASTE TYPES AND QUANTITIES

Prior to 1945 the waste types and quantities generated at the site from the operating cotton mill are not known. However, based on the 1980 EPA Part A Permit Application and annual hazardous waste reports submitted between 1983 and 1989, the total annual types and quantities of wastes generated at the Stewart-Warner, Bassick-Sack Division site since 1980 have been documented (Ref. 32 & 33). The wastes listed below represent a waste history from 1980 to the present. Waste types and quantities generated at the site prior to 1980 are unknown.

<u>Waste Type</u>	<u>Description</u>	<u>Range of Amount in pounds</u>
D002	Waste zinc chloride	10,700
D008	Baghouse dust containing lead	1,200 - 15,410
F001/F002	Degreasing sludge, waste lacquer	800 - 1,200
F003/F005	Spent lacquer thinner and paint	2,000 - 12,000
F006	Plating wastewater sludge	41,375 - 161,280*
F007/D003	Waste cyanide solution	6,360 - 46,430
F008	Cyanide plating bath/sludge	6,000 - 50,000
F009	Cyanide salts	2,400 - 320,000
P029	Copper cyanide	22,500
P030	Cyanide salt mixtures	30,150
P098	Potassium cyanide	7,500
P106	Sodium cyanide	30,000
P121	Zinc cyanide	10,000
P076	Nitric oxide	100
U024	Bis (2-chloroethoxy) methane	480
U210	tetrachloroethene	960

* In the 1985 report, 6,568,013 pounds of plating wastewater (F006) were reported. Because plating wastewater is not usually disposed of annually, it is not represented as part of the range in amount for wastes reported annually.

It should be noted that the spent lacquer thinner and paints contains xylene, acetone, ethyl acetate, n-butyl alcohol, methanol, toluene and methyl isobutyl ketone (Ref. 39). The wastewater treatment plant sludge contains cyanide and heavy metals such as copper, zinc and nickel.

In addition to the above listed wastes, the facility has an on-site wastewater treatment facility, which discharges 30,000 gallons per day of treated wastewater to the municipal wastewater system (Ref. 2). The wastewater treatment plant was constructed in 1974. Prior to 1974, wastewater was both sent untreated to the municipal sewer system and disposed of in ditches around the site.

4.0 TOXICOLOGICAL AND CHEMICAL CHARACTERISTIC

Electroplating wastewater sludges, chromic and nitric acids, cyanide bearing wastes, lacquer thinner and paint are or have been generated at the Stewart-Warner Corporation, Bassick-Sack Division site. Because of the acidic nature of the wastes, it is expected that most of the metals found at the site (copper, chromium, lead and nickel for example) will be soluble in water. As ionized compounds, the chromic and nitric acids and the cyanide will be soluble in water. Chromium (VI) and lead have been classified as Class A carcinogens by inhalation by the U.S. Environmental Protection Agency. Chromic acid may also be considered a Class A carcinogen due to the presence therein of the Cr(VI) oxidation state. None of the other metals expected to be found in the wastes have been classified according to their carcinogenicity (Ref. 34, 35, 36 & 37).

The lacquer thinner and paint waste is a flammable liquid containing xylene, toluene, methanol, ethyl acetate, n-butyl alcohol, methyl isobutyl ketone and acetone. Toluene, methanol, ethyl acetate, n-butyl alcohol, methyl isobutyl ketone and acetone are all soluble to some degree in water. Xylene is not soluble in water (Ref. 34, 35 & 36). Based on their Henry's Law constants, toluene, xylene and ethyl acetate, are all expected to volatilize from wet soil or water surfaces. Methanol and methyl isobutyl ketone may volatilize, given their Henry's Law constants.

Toluene is mildly toxic by inhalation, but was not cited to be toxic by ingestion. Xylene is mildly toxic by inhalation and ingestion. N-Butyl alcohol is moderately toxic by ingestion and by skin contact. Methyl isobutyl ketone is moderately toxic by ingestion, mildly toxic by inhalation, and very irritating to the skin and the eyes. Methanol is poisonous by ingestion and mildly toxic by inhalation. Ethyl acetate is poisonous by inhalation, mildly toxic by ingestion, and is an eye irritant.

The degreasing operations by Stewart-Warner used tetrachloroethene (PCE). PCE is a common solvent used in dry-cleaning, vapor degreasing, drying agent for metals and certain other solids, vermifuge, heat-transfer medium and manufacturing of fluorocarbons. A colorless liquid that has an ether-like odor and extremely stable. PCE is non-flammable and is insoluble in water (Ref. 36). PCE is a narcotic in high concentrations. If skin is exposed to PCE, the defatting action of PCE on the skin can lead to dermatitis (Ref. 34).

5.0 CONCLUSIONS AND RECOMMENDATIONS

The Stewart-Warner site is located in northeastern section of the City of Winston-Salem, in Forsyth County, North Carolina. The 9.8-acre site has been used since 1945, to perform metal finishing of furniture hardware, which includes foundry work, vibratory finishing, electroplating, oxidizing, buffing, lacquering, painting, and degreasing. Presently, the site is owned and operated by the Ilco Unican Corporation (Ilco). At this time, all operations, except for electroplating, has ceased at the facility. Housekeeping practices at the facility during Stewart-Warner's occupation were very poor. Consequently, numerous spills of cyanide waste, along with onsite disposal of drums and sludges generated from the facility, occurred during the 42-year period Stewart Warner operated the facility. As a result, remedial actions such as the removal of contaminated soils have been employed at the site. Since Ilco purchased the facility, it has been conducting an on-going clean-up and renovation of the property. The clean-up operation consists of the removal and cleaning of the metal finishing lines, that are presently not in operation at the site; and the diking all the hazardous material storage areas. During the Phase I SSI, several areas on the site were observed to be potential ongoing sources of contamination. The primary waste sources on the site are roof dust generated from the foundry operation and contaminated soils, these can be found in the following areas:

- o foundry baghouse soils;
- o above-ground cyanide tank and the former location of the above-ground plating bath holding tanks;
- o the southern edge of the property, that was used to store plating bath sludges prior to offsite disposal; and
- o the area where three disposal pits were excavated and buried drums were removed.

The soils are believed to be contaminated with heavy metals and cyanide; however, it is not known how much cyanide and heavy metals were released from the facility during its 45-year period of operation.

Approximately 3,047 people who reside within a 4-mile radius of the site rely on domestic wells for their potable water. Due to the fact that the facility was observed to have poor housekeeping practices throughout its operation, given the types of chemicals that were utilized in the manufacturing process (i.e., cyanide and heavy metals, along with solvent base paints), and considering the fact that numerous spills have been documented, the likelihood that the surrounding environment is contaminated from these hazardous materials is high. Although there does not appear to be any immediate threat to the surrounding public through either contaminated drinking water wells or surface water, the threat does exist for the 130 people employed at the facility from direct contact with hazardous contaminants, as well as inhalation of hazardous particulates by both the employees and the surrounding population. Therefore, G&O is recommending that the site be further investigated in the next stage of the

pre-remedial process, which should include, but not be limited to, the reevaluation of the site under the revised Hazardous Ranking System (HRS). In addition, G&O is recommending that all remedial activities, implemented under the supervision of the State's RCRA program, be evaluated to ensure that all CERCLA requirements are also met.

**LIST OF REFERENCES FOR THE STEWART-WARNER CORPORATION, BASSICK-SACK
DIVISION SITE
EPA ID NUMBER - HCD 024895864**

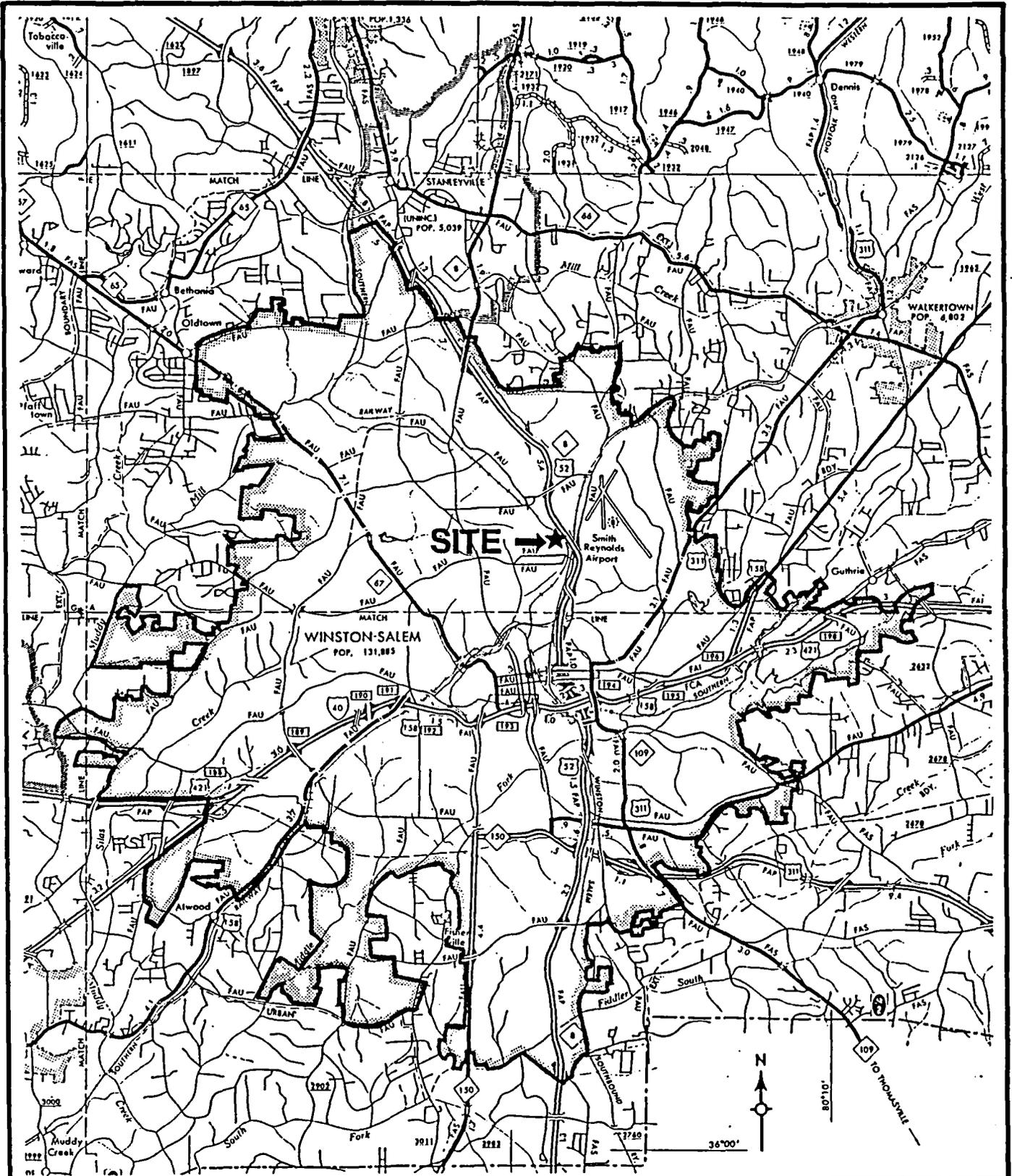
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APPENDIX A
MAPS AND PHOTOGRAPHS



STEWART-WARNER CORPORATION, BASSICK-SACK DIVISION



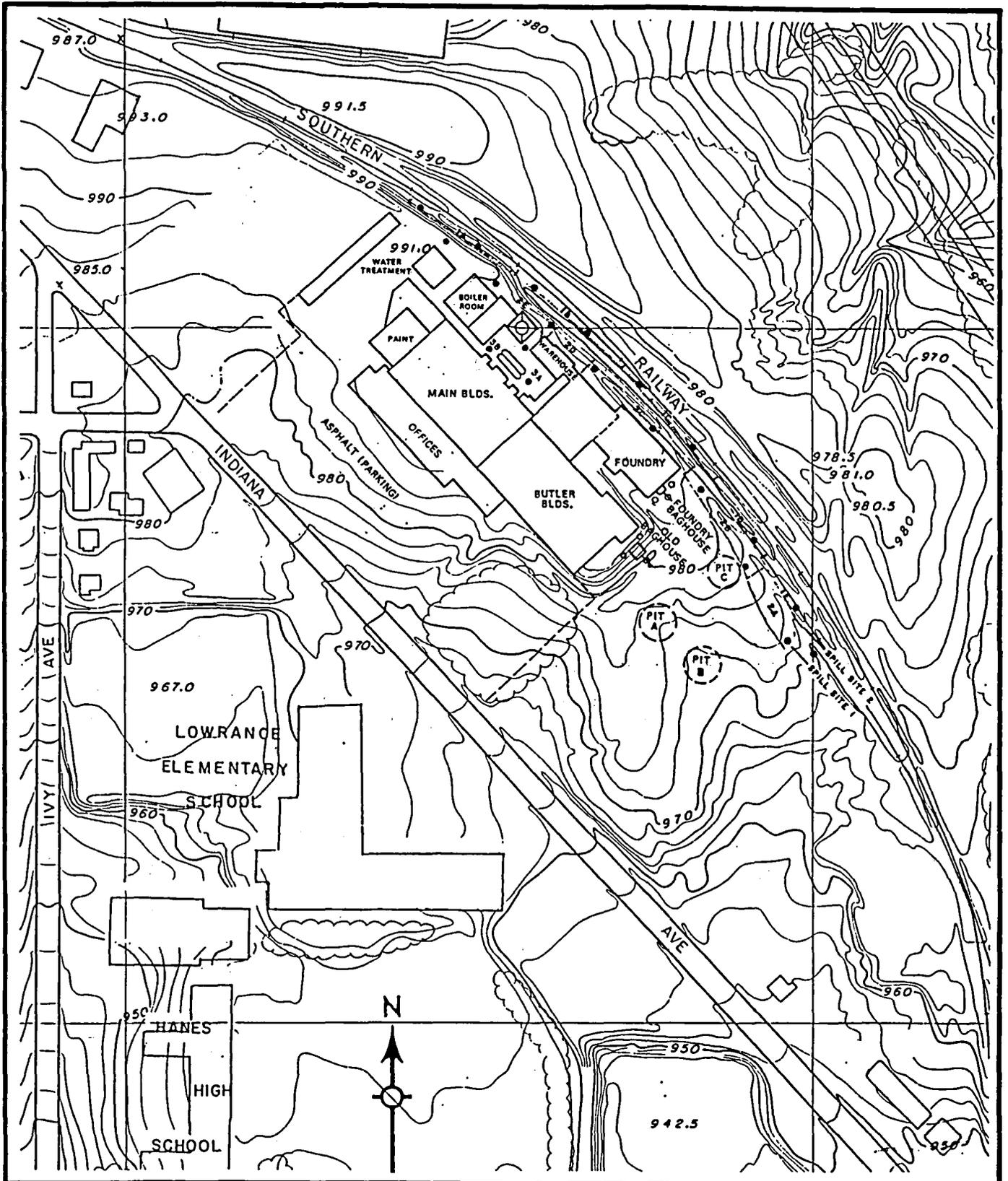
FIGURE 1



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
 9001 EDMONSTON ROAD, GREENBELT, MARYLAND 20770
 (301) 982-2800

SITE LOCATION MAP

ANNAPOLIS MD • ATLANTA GA • AURORA CO • BALTIMORE MD • CHARLOTTE VA • DALLAS TX • DENVER CO • HOUSTON TX • LOS ANGELES CA • MEMPHIS TN • MIAMI FL • MINNEAPOLIS MN • NEW YORK NY • PHOENIX AZ • RICHMOND VA • TAMPA FL • WASHINGTON DC



SPILL LOCATIONS 1, 2, & 3 ● Confirmation Soil Sample Locations (1.5-2.0 ft)
 EXCAVATION PITS A, B, & C ○ Baghouse Soil Sample Locations (0.05 & 1.5-2.0 ft)

**STEWART-WARNER CORP.,
 BASSICK-SACK DIVISION**



ENGINEERS • ARCHITECTS • PLANNERS • SCIENTISTS • SURVEYORS • PHOTOGRAMMETRISTS
GREENHORNE & O'MARA, INC.
 9001 EDMONSTON ROAD, GREENBELT, MARYLAND 20770
 (301) 962-2800
A • NAPLES MO • ATLANTA GA • AURORA CO • BALTIMORE MD • CLYDE VA • DULUTH GA
 EXPORT PA • FARMAX VA • MANASSAS VA • RALEIGH NC • ROCKVILLE MD • TAMPA FL

SITE LAYOUT MAP

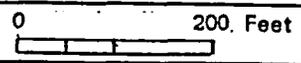


FIGURE 2

REF:

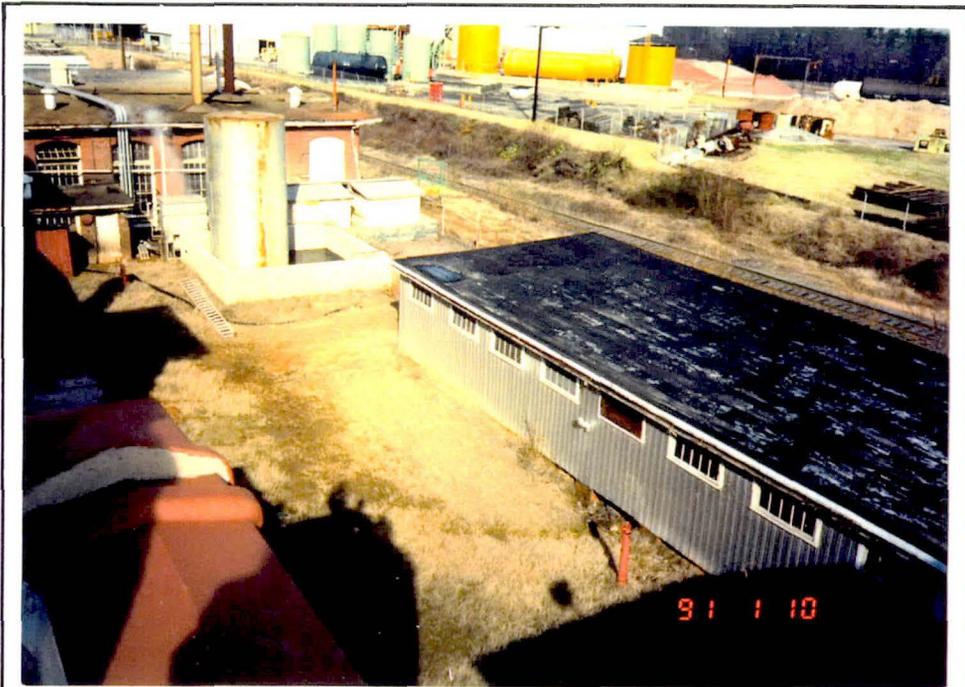


PHOTO 1 - Overview of the north side of the manufacturing building.

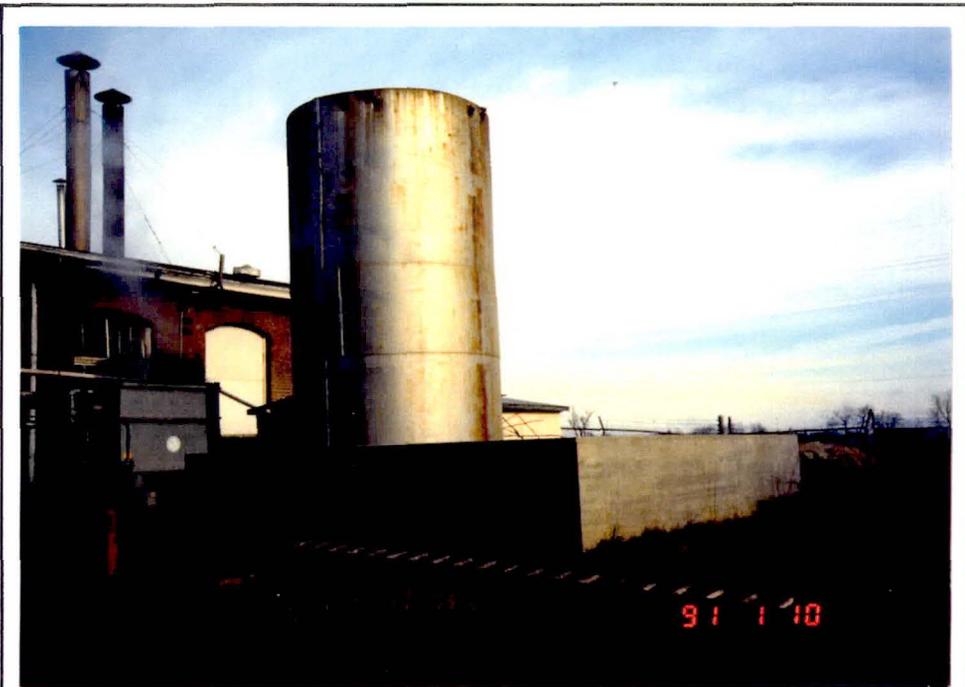


PHOTO 2 - The 4,500-gallon cyanide storage tank.



PHOTO 4 - View of the broken ventilation duct used in the Foundry operation. Buffer dust, containing heavy metals, is shown on the ground in the center of the photograph.



PHOTO 3 - The former location of the 1,000-gallon above-ground plating bath holding tank.



PHOTO 5 - View of the southern portion of the property, used to store plating sludge prior to offsite disposal.



PHOTO 6 - View of Pits A and B, located on the southern portion of the site.

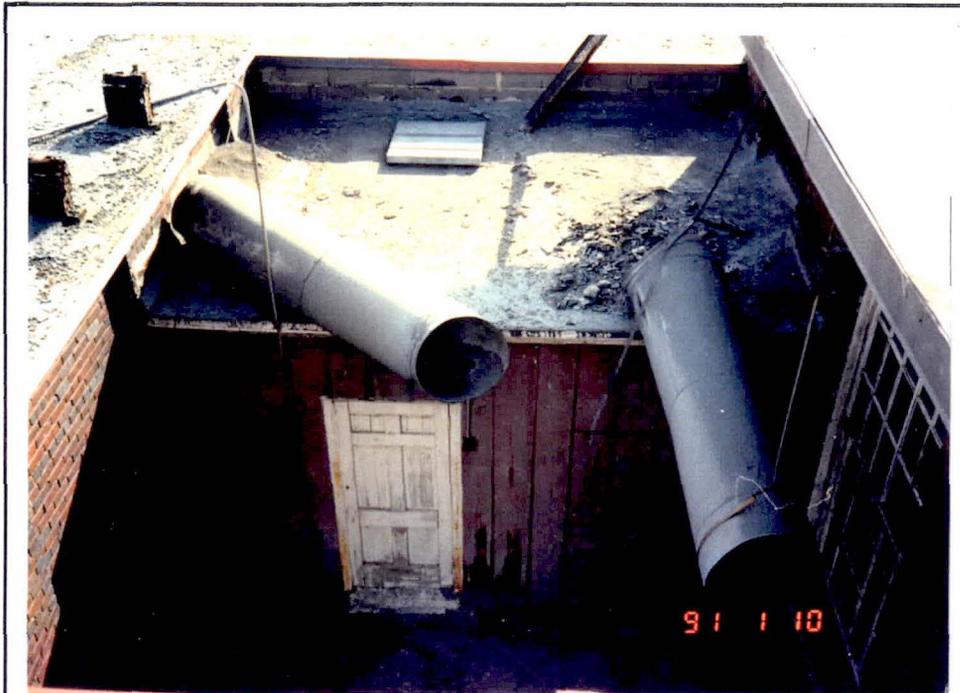


PHOTO 7 - View of the buffer dust located on the roof of the manufacturing building.

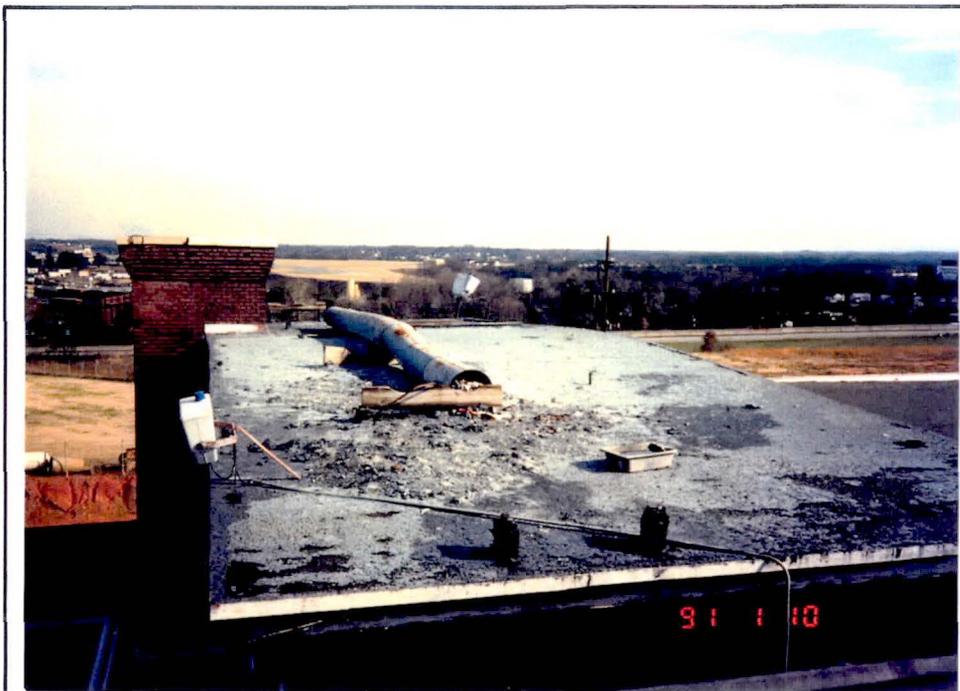


PHOTO 8 - Buffer dust located on the eastern section of the roof.

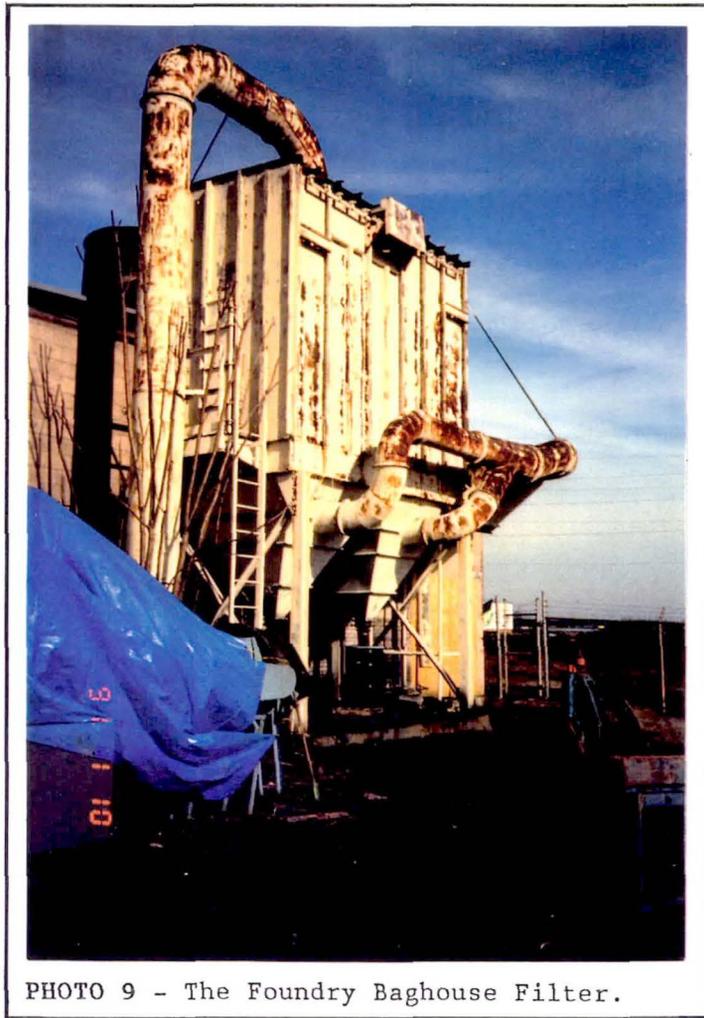


PHOTO 9 - The Foundry Baghouse Filter.

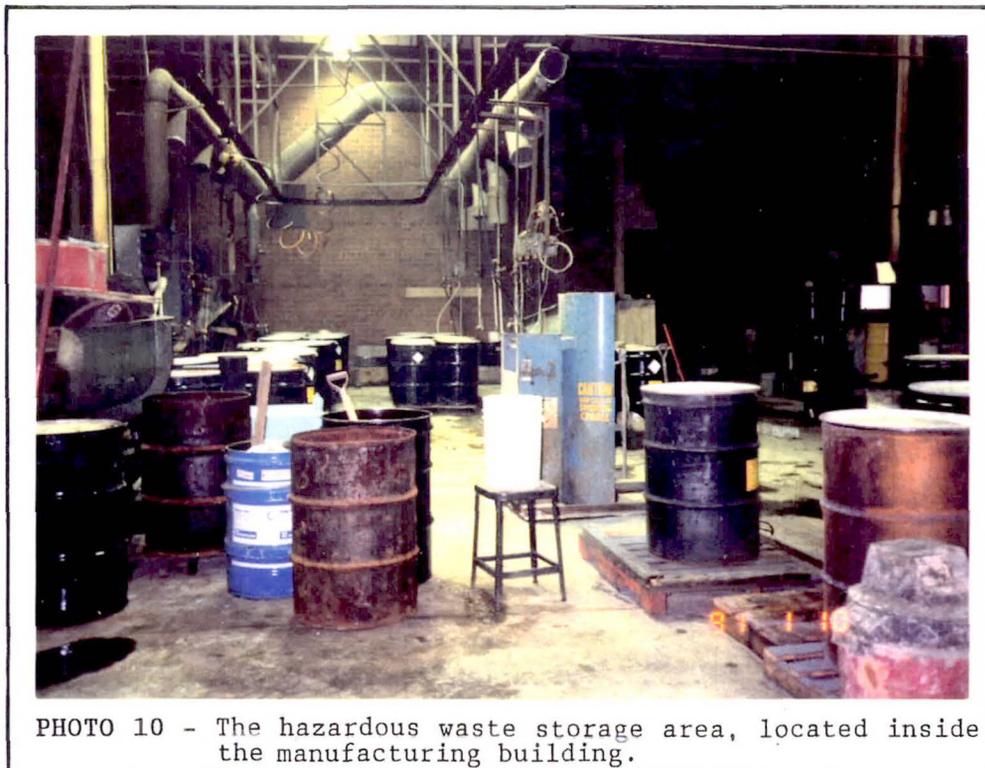
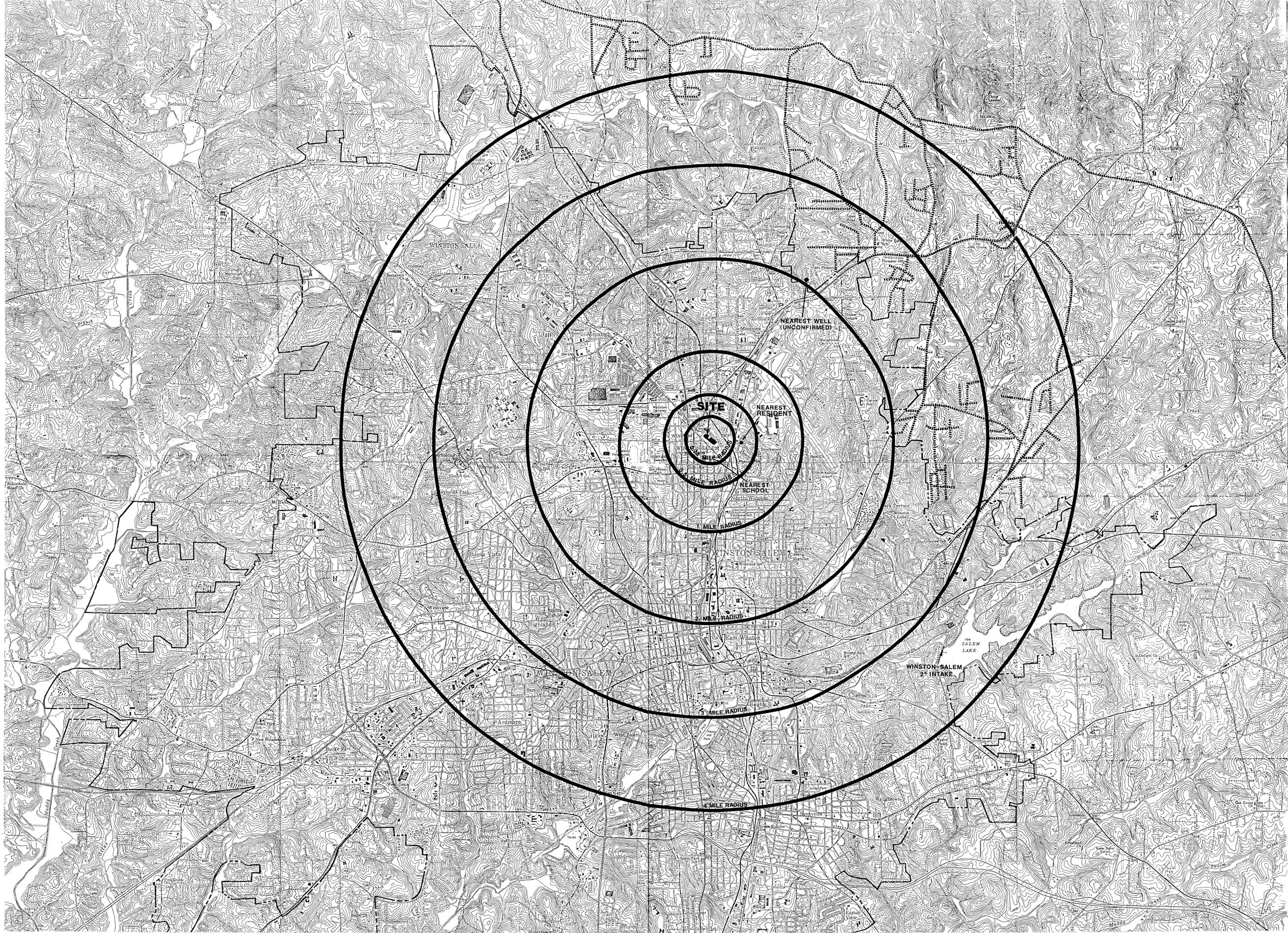


PHOTO 10 - The hazardous waste storage area, located inside the manufacturing building.



LEGEND

- WINSTON-SALEM MUNICIPAL WATERLINES
- WINSTON-SALEM CITY LIMITS

No.	REVISION	DATE	BY



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 LEESBURG, VA • MANASSAS, VA • ORLANDO, FL • RALEIGH, NC • ROCKVILLE, MD • TAMPA, FL • WALDORF, MD • WEST PALM BEACH, FL

STEWART-WARNER CORPORATION, BASSICK-SACK DIVISION

TOPOGRAPHIC MAP

DESIGN	SCALE 1" = 2000'
DRAWN	FIGURE 3
CHECKED	SHEET
DATE	JOB No. FILE No.

APPENDIX B
SITE INSPECTION FORM



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

I. IDENTIFICATION
01 STATE NC 02 SITE NUMBER D024895864

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Stewart Warner, Bassick-Sack Division		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 2941 Indiana Avenue			
03 CITY Winston-Salem		04 STATE NC	05 ZIP CODE 21705	06 COUNTY Forsyth	
09 COORDINATES LATITUDE 36° 07' 4 3".0 LONGITUDE 80° 14' 14".0		10 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER <input type="checkbox"/> G. UNKNOWN			

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 01, 10, 91 MONTH DAY YEAR	02 SITE STATUS <input checked="" type="checkbox"/> ACTIVE <input type="checkbox"/> INACTIVE	03 YEARS OF OPERATION 1945 BEGINNING YEAR ENDING YEAR	
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR <input type="checkbox"/> E. STATE <input checked="" type="checkbox"/> F. STATE CONTRACTOR <u>Greenhorne & O'Mara</u> <input type="checkbox"/> G. OTHER			

05 CHIEF INSPECTOR Marie Fisher	06 TITLE Environmental Scientist	07 ORGANIZATION G&O	08 TELEPHONE NO. (301) 982-2800
09 OTHER INSPECTORS William Dixon	10 TITLE Environmental Engineer	11 ORGANIZATION G&O	12 TELEPHONE NO. (919) 782-9088
Harvey Allen	Environmental Engineer	NCDEHNR - Superfund Sec.	(919) 733-2801
Steve Phibbs	Waste Management Specialist	NCDEHNR - Haz. Waste Mang.	(919) 761-2390
			()
			()

13 SITE REPRESENTATIVES INTERVIEWED Brian Wells	14 TITLE Corporate Env. Manager	15 ADDRESS 400 Jeffreys Road Rocky Mount, NC 27804	16 TELEPHONE NO. (919) 446-3321
Nader Iskander	Finishing and Process Mang.	2941 Indiana Ave. Winston Salem, NC 27105	(919) 725-1331
Anthony Wilder	Industrial Chemist	2941 Indiana Ave. Winston Salem, NC 27105	(919) 725-1331
Edwin Smith	Unknown	2941 Indiana Ave. Winston Salem, NC 27105	(919) 725-1331
Royce Bowles	Unknown	2941 Indiana Ave. Winston Salem, NC 27105	(919) 725-1331
			()

17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION 9:00 am	19 WEATHER CONDITIONS cold & cloudy
---	----------------------------------	--

IV. INFORMATION AVAILABLE FROM

01 CONTACT Harvey Allen	02 OF (Agency/Organization) NCDEHNR - Superfund Section		03 TELEPHONE NO. (919) 733-2801
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Helene Kasser	05 AGENCY G&O	06 ORGANIZATION	07 TELEPHONE NO. (301) 982-2800
			08 DATE 03, 26, 91 MONTH DAY YEAR



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

1. IDENTIFICATION
01 STATE: NC 02 SITE NUMBER: D024895864

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply) <input type="checkbox"/> A SOLID <input type="checkbox"/> B POWDER/FINES <input checked="" type="checkbox"/> C SLUDGE <input checked="" type="checkbox"/> D OTHER <input type="checkbox"/> E SLURRY <input checked="" type="checkbox"/> F LIQUID <input type="checkbox"/> G GAS <input type="checkbox"/> H OTHER dust Section: _____	02 WASTE QUANTITY AT SITE (Measure of waste quantities must be in metric units) TONS: <u>86.3</u> CUBIC YARDS: _____ NO. OF DRUMS: _____	03 WASTE CHARACTERISTICS (Check all that apply) <input checked="" type="checkbox"/> A TOXIC <input type="checkbox"/> B CORROSIVE <input type="checkbox"/> C RADIOACTIVE <input type="checkbox"/> D PERSISTENT <input type="checkbox"/> E SOLUBLE <input type="checkbox"/> F INFECTIOUS <input checked="" type="checkbox"/> G FLAMMABLE <input type="checkbox"/> H IGNITABLE <input checked="" type="checkbox"/> I HIGHLY VOLATILE <input checked="" type="checkbox"/> J EXPLOSIVE <input checked="" type="checkbox"/> K REACTIVE <input type="checkbox"/> L INCOMPATIBLE <input type="checkbox"/> M NOT APPLICABLE
--	--	---

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	38,175	pounds	
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	3,440	pounds	
IOC	INORGANIC CHEMICALS	119,710	pounds	
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	1,200	pounds	

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
OCC	Tetrachloroethene	127-18-4			
OCC	Bis(2-Chloroethoxy)	unknown			
	Methane				
IOC	Nitric Oxide	unknown			
IOC	Zinc Oxide	557-21-1			
IOC	Sodium Cyanide	143-33-9			
IOC	Potassium Cyanide	151-50-8			
IOC	Copper Cyanide	544-92-3			
IOC	Cyanide	57-12-5			
IOC	Zinc Chloride	7646-85-7			

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)

- RCRA Part A Application
- Annual Hazardous Waste Reports



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

I. IDENTIFICATION
01 STATE NC 02 SITE NUMBER D024895864

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 A GROUNDWATER CONTAMINATION 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED 3047 04 NARRATIVE DESCRIPTION
(4-mile radius)

Residents residing in Forsyth County who are not supplied water by the City of Winston-Salem rely on domestic wells for their potable water.

01 B SURFACE WATER CONTAMINATION 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED N/A 04 NARRATIVE DESCRIPTION

There are no surface water intakes along the surface water pathway

01 C CONTAMINATION OF AIR 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED 53,848 04 NARRATIVE DESCRIPTION

Air could possibly be contaminated with heavy metals due to roof dust generated from the foundry operation and contaminated soils around the foundry baghouse, the above-ground cyanide tank, and the three burial pits.

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

There have been no documented fires on the site.

01 E DIRECT CONTACT 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED 130 04 NARRATIVE DESCRIPTION

Several of the hazardous waste storage areas are not adequately contained. As a result, numerous spills of hazardous materials has contaminated the soils onsite.

01 F CONTAMINATION OF SOIL 02 OBSERVED (DATE 1987) POTENTIAL ALLEGED
03 AREA POTENTIALLY AFFECTED 9.8 04 NARRATIVE DESCRIPTION

Numerous spills, along with onsite disposal of drums and sludges generated from the facility, occurred during the 42-year period Stewart-Warner operated the facility. Since Ilco Unican Corp. purchased the property in 1987, they have been conducting an on-going clean-up and renovation of the property.

01 G DRINKING WATER CONTAMINATION 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED 3047 04 NARRATIVE DESCRIPTION
(4-mile radius)

Same as groundwater contamination.

01 H WORKER EXPOSURE/INJURY 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
03 WORKERS POTENTIALLY AFFECTED 130 04 NARRATIVE DESCRIPTION

There are numerous areas of soil contamination including the foundry baghouse, the above-ground cyanide tank, the southern edge of the property that was used to store plating bath sludges, and the area where three pits were excavated and burial drums were removed. The soils are believed to be contaminated with heavy metals and cyanide

01 I POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 6,835 04 NARRATIVE DESCRIPTION

See Above



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

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER
NC | D024895864

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

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

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

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

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

01 F CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED _____
02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

(cont. from previous page) Despite these clean-up efforts, several areas on the site were observed to be ongoing sources of contamination during the Phase I SSI.

01 G DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED _____
02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

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

01 I POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED _____
02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE NC 02 SITE NUMBER D024895864

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 J DAMAGE TO FLORA 02 OBSERVED (DATE 1991) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

Site is devoid of vegetation.

01 K DAMAGE TO FAUNA 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION (include names of species)

Unknown

01 L CONTAMINATION OF FOOD CHAIN 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

Unknown

01 M UNSTABLE CONTAINMENT OF WASTES 02 OBSERVED (DATE 1987 & 91) POTENTIAL ALLEGED
(See #, soil standing rounds, leaking drums)

03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

Ventilation duct from the foundry operation is broken. As a result, buffer dust containing heavy metals was observed on the ground. Several inches of buffer dust has also accumulated on the roofs of manufacturing building and the eastern section

01 N DAMAGE TO OFFSITE PROPERTY 02 OBSERVED (DATE 1987) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

There have been several reported spills of hazardous wastes onsite, and in 1987 a notice of violation was issued to Stewart-Warner to address onsite and offsite migration of contaminants.

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

Prior to the construction of the wastewater treatment plant in 1974, all wastes went untreated to either the municipal sewer system or to ditches onsite.

01 P ILLEGAL/UNAUTHORIZED DUMPING 02 OBSERVED (DATE _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

N/A

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

N/A

III. TOTAL POPULATION POTENTIALLY AFFECTED: 3,047

IV. COMMENTS

V. SOURCES OF INFORMATION (cite specific references to state files, sample analysis reports)

1. NCDEHNR Site Files
2. Field Notes From Phase I SSI Site Visit.



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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NC D024895864

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

(cont. from previous page) of the main building. Plating sludge waiting for disposal offsite was stored on the ground on the southern portion of the site.

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

01 02 03 04

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Can specify references e.g. state test sample analysis reports)



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

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER
NC | D024895864

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED <small>(Check all that apply)</small>	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> NPDES				
<input type="checkbox"/> UIC				
<input type="checkbox"/> AIR	3460001P			
<input type="checkbox"/> RCRA				
<input type="checkbox"/> RCRA INTERIM STATUS	NCD024895864	11/19/80	1984	Withdrew part A application when status was changed from storage to generator only.
<input type="checkbox"/> SPCC PLAN				Permit for waste treatment facility.
<input type="checkbox"/> STATE <small>(Specify)</small>	3042			Permit to discharge to city's sewer system.
<input type="checkbox"/> LOCAL <small>(Specify)</small>	1154			
<input type="checkbox"/> OTHER <small>(Specify)</small>				
<input type="checkbox"/> NONE				

III. SITE DESCRIPTION

01 STORAGE/ DISPOSAL <small>(Check all that apply)</small>	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT <small>(Check all that apply)</small>	05 OTHER
<input type="checkbox"/> A SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCENERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE Manufacturing Bldg. & Main Bldg.
<input type="checkbox"/> B PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input checked="" type="checkbox"/> C DRUMS, ABOVE GROUND <small>(buried)</small>	10		<input type="checkbox"/> C. CHEMICAL/PHYSICAL	06 AREA OF SITE 9.8 (Acres)
<input checked="" type="checkbox"/> D TANK, ABOVE GROUND	4,500 &	gallons	<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E TANK, BELOW GROUND	two, 1,000		<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H OPEN DUMP			<input checked="" type="checkbox"/> H OTHER <u>Waste water</u> <small>(Specify)</small>	
<input type="checkbox"/> I OTHER <small>(Specify)</small>				

07 COMMENTS

Cyanide was stored in a 4,500 gallon above-ground storage tank, which was undiked and overflowed. In addition to the cyanide tank, two 1,000 gallon plating solution tanks were formerly located on the east side of the site. On February 27, 1987, this tank was overfilled with water and overflowed.

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.

In July 1987, Stewart-Warner had completed a comprehensive site report that identified two spill areas and proposed additional sampling near the spill areas. During further excavations to characterize the site, an additional area of contamination was discovered when ten drums were found in a three foot excavation adjacent to the facility. Sample

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: YES NO
02 COMMENTS

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

1. NCDEHNR Site Files
2. Field Notes From Phase I SSI Site Visit
3. RCRA Part A Application



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

I. IDENTIFICATION
 01 STATE: NC 02 SITE NUMBER: D024895864

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED <small>(Check all that apply)</small>	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A NPDES				
<input type="checkbox"/> B UIC				
<input type="checkbox"/> C AIR				
<input type="checkbox"/> D RCRA				
<input type="checkbox"/> E RCRA INTERIM STATUS				
<input type="checkbox"/> F SPCC PLAN				
<input type="checkbox"/> G STATE <small>(Specify)</small>				
<input type="checkbox"/> H LOCAL <small>(Specify)</small>				
<input type="checkbox"/> I OTHER <small>(Specify)</small>				
<input type="checkbox"/> J NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL <small>(Check all that apply)</small>	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT <small>(Check all that apply)</small>	05 OTHER
<input type="checkbox"/> A SURFACE IMPOUNDMENT	_____	_____	<input type="checkbox"/> A. INCINERATION	<input type="checkbox"/> A. BUILDINGS ON SITE
<input type="checkbox"/> B PILES	_____	_____	<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input type="checkbox"/> C DRUMS, ABOVE GROUND	_____	_____	<input type="checkbox"/> C. CHEMICAL/PHYSICAL	06 AREA OF SITE _____ <small>(Acres)</small>
<input type="checkbox"/> D TANK, ABOVE GROUND	_____	_____	<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E TANK, BELOW GROUND	_____	_____	<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F LANDFILL	_____	_____	<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G LANDFARM	_____	_____	<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H OPEN DUMP	_____	_____	<input type="checkbox"/> H OTHER <small>(Specify)</small>	
<input type="checkbox"/> I OTHER <small>(Specify)</small>	_____	_____		

07 COMMENTS

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.

(cont. from previous page) analysis of the contents of the drums and the surrounding soil indicated elevated levels of zinc, copper, nickel, trichloroethene, and xylenes.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: YES NO

02 COMMENTS

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



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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NC D024895864

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY <small>(Check as applicable)</small>		02 STATUS			03 DISTANCE TO SITE	
COMMUNITY	SURFACE A <input type="checkbox"/>	WELL B <input type="checkbox"/>	ENDANGERED A <input type="checkbox"/>	AFFECTED B <input type="checkbox"/>	MONITORED C <input type="checkbox"/>	A <u>2</u> (mi)
NON-COMMUNITY	C <input type="checkbox"/>	D <input checked="" type="checkbox"/>	D <input type="checkbox"/>	E <input type="checkbox"/>	F <input type="checkbox"/>	B _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER <u>3047</u>		03 DISTANCE TO NEAREST DRINKING WATER WELL <u>2</u> (mi)	
04 DEPTH TO GROUNDWATER <u>20</u> (ft)	05 DIRECTION OF GROUNDWATER FLOW <u>unknown</u>	06 DEPTH TO AQUIFER OF CONCERN <u>35</u> (ft)	07 POTENTIAL YIELD OF AQUIFER <u>20gpm</u> (gpd)
08 SOLE SOURCE AQUIFER <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			

09 DESCRIPTION OF WELLS (including use, type, and location relative to population and buildings)

10 RECHARGE AREA		11 DISCHARGE AREA	
<input type="checkbox"/> YES	COMMENTS <u>unknown</u>	<input type="checkbox"/> YES	COMMENTS <u>unknown</u>
<input type="checkbox"/> NO		<input type="checkbox"/> NO	

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
<u>Tributary of Peters Creek</u>	<input type="checkbox"/>	<u>1,200 ft.</u> (mi)
<u>Peters Creek</u>	<input type="checkbox"/>	<u>1.3</u> (mi)
<u>Salem Creek</u>	<input type="checkbox"/>	<u>4.6</u> (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN			02 DISTANCE TO NEAREST POPULATION	
ONE (1) MILE OF SITE A <u>5,120</u> NO OF PERSONS	TWO (2) MILES OF SITE B <u>20,481</u> NO OF PERSONS	THREE (3) MILES OF SITE C <u>26,532</u> NO OF PERSONS	<u>800 ft.</u> (mi)	
03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE <u>unknown</u>			04 DISTANCE TO NEAREST OFF-SITE BUILDING <u>800 ft.</u> (mi)	

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., "high" vs. "low" density, densely populated urban area)



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

I. IDENTIFICATION
01 STATE NC 02 SITE NUMBER D024895864

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

A 10^{-8} - 10^{-6} cm/sec B 10^{-6} - 10^{-4} cm/sec C 10^{-4} - 10^{-2} cm/sec D GREATER THAN 10^{-2} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

A IMPERMEABLE (Less than 10^{-9} cm/sec) B RELATIVELY IMPERMEABLE (10^{-6} - 10^{-5} cm/sec) C RELATIVELY PERMEABLE (10^{-2} - 10^{-4} cm/sec) D VERY PERMEABLE (Greater than 10^{-2} cm/sec)

unknown

03 DEPTH TO BEDROCK

04 DEPTH OF CONTAMINATED SOIL ZONE

05 SOIL pH

unknown (ft)

3 (ft)

unknown

06 NET PRECIPITATION

07 ONE YEAR 24 HOUR RAINFALL

08 SLOPE

DIRECTION OF SITE SLOPE

TERRAIN AVERAGE SLOPE

4.0 (in)

3.0 (in)

1 %

east & south

2.5 %

09 FLOOD POTENTIAL

10

SITE IS IN N/A YEAR FLOODPLAIN

SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY
N/A

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

OTHER

A N/A (mi)

B N/A (mi)

12 DISTANCE TO CRITICAL HABITAT (for endangered species)

N/A (mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS, NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS
PRIME AG LAND AG LAND

A 0 ft. (mi)

B 100 ft (mi)

none

C (mi) D (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The Stewart-Warner site is located in the north central portion of the City of Winston Salem in Forsyth County, North Carolina. Elevation at the site ranges from approximately 970 to 990 feet above mean sea level and drains east and south to an unnamed tributary of Peters Creek.

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

- USGS 7.5' Quadrangle Maps
- Climatic Atlas of the U.S.
- Rainfall Frequency Atlas of the U.S.
- Soil Survey of Forsyth County, NC
- Listed Endangered Species in North Carolina
- Geology and Groundwater in the Greensboro Area, North Carolina.



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

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NC D024895864

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	0		
SURFACE WATER	0		
WASTE	N/A		
AIR	0		
RUNOFF	0		
SPILL	0		
SOIL	0		
VEGETATION	0		
OTHER	0		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

TYPE GROUND AERIAL

02 IN CUSTODY OF Greenhorne & O'Mara, Inc.
(Name of organization or individual)

03 MAPS YES NO

04 LOCATION OF MAPS NCDEHNR - Superfund Section

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references e.g., State or local sample analysis reports)



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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NC D024895864

II. CURRENT OWNER(S)				PARENT COMPANY (If applicable)			
01 NAME	02 D+B NUMBER		08 NAME	09 D+B NUMBER			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)			04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)			11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE		
Ilco- Unican Corp.							
400 Jeffreys Road							
Rocky Mount	NC	27804					

III. PREVIOUS OWNER(S) (List most recent first)				IV. REALTY OWNER(S) (If applicable, list most recent first)			
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		
Stewart-Warner Bassick-Sack Division							
2941 Indiana Avenue							
Winston-Salem	NC	27105					

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

1. Field Notes From Phase I SSI Site Visit



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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NC D024895864

II. CURRENT OPERATOR (Provide if different from owner) OPERATOR'S PARENT COMPANY (if applicable)

01 NAME Ilco-Unican Corp.	02 D+B NUMBER	03 NAME	04 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD, etc.) 2941 Indiana Avenue	04 SIC CODE	05 STREET ADDRESS (P.O. Box, RFD, etc.)	06 SIC CODE		
07 CITY Winston-Salem	08 STATE NC	09 ZIP CODE 27105	10 CITY	11 STATE	12 ZIP CODE
13 YEARS OF OPERATION 3	14 NAME OF OWNER				

III. PREVIOUS OPERATOR(S) (List most recent last, provide only if different from owner) PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)

01 NAME Stewart-Warner, Bassick-Sack	02 D+B NUMBER	03 NAME	04 D+B NUMBER		
05 STREET ADDRESS (P.O. Box, RFD, etc.) Same as above	06 SIC CODE	07 STREET ADDRESS (P.O. Box, RFD, etc.)	08 SIC CODE		
09 CITY	10 STATE	11 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
15 YEARS OF OPERATION 43	16 NAME OF OWNER DURING THIS PERIOD				

01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER		
05 STREET ADDRESS (P.O. Box, RFD, etc.)	06 SIC CODE	07 STREET ADDRESS (P.O. Box, RFD, etc.)	08 SIC CODE		
09 CITY	10 STATE	11 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
15 YEARS OF OPERATION	16 NAME OF OWNER DURING THIS PERIOD				
01 NAME	02 D+B NUMBER	03 NAME	04 D+B NUMBER		
05 STREET ADDRESS (P.O. Box, RFD, etc.)	06 SIC CODE	07 STREET ADDRESS (P.O. Box, RFD, etc.)	08 SIC CODE		
09 CITY	10 STATE	11 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
15 YEARS OF OPERATION	16 NAME OF OWNER DURING THIS PERIOD				

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

- 1. NCDEHNR Site Files.
- 2. Field Notes from Phase I SSI Site Visit



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

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER
NC | D024895864

II. ON-SITE GENERATOR

01 NAME Ilco-Unican Corp	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD # etc.) 2941 Indiana Avenue	04 SIC CODE
05 CITY Winston-Salem	06 STATE 07 ZIP CODE NC 27105

III. OFF-SITE GENERATOR(S)

01 NAME Unknown	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. TRANSPORTER(S)

01 NAME Unknown	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)

1. NCDEHNR Site Files
2. Field Notes from Phase I SSI Site Visit



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

I. IDENTIFICATION
01 STATE NC 02 SITE NUMBER D024895864

II. PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> B TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> C PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input checked="" type="checkbox"/> D SPILLED MATERIAL REMOVED 04 DESCRIPTION Tank used to mix brass plating solution overflowed, wastewater overflowed from treatment plant on two occasions.	02 DATE 2/27/87, 4/23/87 5/27/87	03 AGENCY _____
01 <input checked="" type="checkbox"/> E CONTAMINATED SOIL REMOVED 04 DESCRIPTION Due to the fact that there were several spills and buried drums, Stewart-Warner removed contaminated soils.	02 DATE July 1981	03 AGENCY NCDHR
01 <input type="checkbox"/> F WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input checked="" type="checkbox"/> G WASTE DISPOSED ELSEWHERE 04 DESCRIPTION Electroplating sludge and waste from the wastewater treatment plant is sent to World Resource, Inc. for recycling. The hydraulic oils are sent to Southeastern Chemical in SC.	02 DATE _____	03 AGENCY _____
01 <input checked="" type="checkbox"/> H ON SITE BURIAL 04 DESCRIPTION During the soil excavation, to characterize the site, ten drums were found buried in a three foot excavation.	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> I IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> J IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> K IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> L ENCAPSULATION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> M EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> N CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input checked="" type="checkbox"/> O EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION Spills from the brass plating tank and the wastewater treatment plant were diked to prevent further migration.	02 DATE 2/27/87, 4/23/87	03 AGENCY _____
01 <input type="checkbox"/> P CUTOFF TRENCHES/SUMP 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Q SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____



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

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER
NC | D024895864

II PAST RESPONSE ACTIVITIES (continued)

01 <input type="checkbox"/> R BARRIER WALLS CONSTRUCTED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> S CAPPING/COVERING 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> T BULK TANKAGE REPAIRED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> U GROUT CURTAIN CONSTRUCTED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> V BOTTOM SEALED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> W GAS CONTROL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> X FIRE CONTROL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Y LEACHATE TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Z AREA EVACUATED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> 1 ACCESS TO SITE RESTRICTED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> 2 POPULATION RELOCATED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input checked="" type="checkbox"/> 3 OTHER REMEDIAL ACTIVITIES 04 DESCRIPTION	02 DATE <u>5/87</u>	03 AGENCY <u>NCDHR</u>

The NC Department of Human Resources issued a notice of violation (NOV) to Stewart-Warner because the contaminated soil on an off the property constituted an illegal disposal. To comply with the NOV, Stewart-Warner conducted an investigation to characterize soil contamination at and beyond the site. The contaminated soils and drums were disposed of offsite.

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

1. NCDEHNR Site Files.



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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024895864

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION YES NO see previous page

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

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