PRELIMINARY Health Assessment for

INTERIM

ANODYNE, INC.

MIAMI, DADE COUNTY, FLORIDA

CERCLIS NO. FLD981014368

DECEMBER 23, 1991

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
Agency for Toxic Substances and Disease Registry

THE ATSDR HEALTH ASSESSMENT: A NOTE OF EXPLANATION

Section 104 (i)(6)(F) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, states "...the term "health assessment" shall include preliminary assessments of potential risks to human health posed by individual sites and facilities, based on such factors as the nature and extent of contamination, the existence of potential pathways of human exposure (including ground or surface water contamination, air emissions, and food chain contamination), the size and potential susceptibility of the community within the likely pathways of exposure, the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified hazardous substances and any available recommended exposure or tolerance limits for such hazardous substances, and the comparison of existing morbidity and mortality data on diseases that may be associated with the observed levels of exposure. The Administrator of ATSDR shall use appropriate data, risk assessment, risk evaluations, and studies available from the Administrator of EPA."

In accordance with the CERCLA section cited, ATSDR prepared this Interim Health Assessment using available data and information. ATSDR will re-evaluate this site and prepare an updated health assessment as warranted by the availability of additional data and information and as resources permit.

INTERIM PRELIMINARY HEALTH ASSESSMENT

ANODYNE, INC.

MIAMI, DADE COUNTY, FLORIDA

CERCLIS NO. FLD981014368

Prepared by

Florida Department of Health and Rehabilitative Services

Under Cooperative Agreement with the

Agency for Toxic Substances and Disease Registry

SUMMARY

The Anodyne, Inc., National Priorities List (NPL) site is located in North Miami Beach, Dade County, Florida. Contaminants present in on-site soil, subsurface soil and ground water include barium, mercury, chromium, nickel, lead, vanadium, polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), 4,4'-DDE, acetone, tetrachloroethene, and toluene. This site is an indeterminate public health hazard because limited available data do not indicate that humans are being or have been exposed to levels of contamination that could be expected to cause adverse health effects. Data are not available for all environmental media to which humans may be exposed. Persons working on and near the site may be exposed to contamination found on site, via inhalation of airborne dust particles if soil is excavated or removed. Potential exposure may also occur on and off site via surface water, soil, or ground water. Sampling at this site has not been extensive enough to delineate soil and ground-water contamination. Comprehensive environmental monitoring will allow for a more complete evaluation of the public health impacts of this site.

BACKGROUND

A. SITE DESCRIPTION AND HISTORY

The Anodyne, Inc., National Priorities List (NPL) site consists of a building formerly occupied by Anodyne, Inc., located at 1275 Northwest 165th Street, North Miami Beach, Florida, near the center of the Sunshine State Industrial Park (Figure 1). The structure is now divided into two sections with the southern section vacant and a furniture manufacturing and sales operation occupying the northern section (Figure 2). The building is owned by 745 Property Investments, Inc., of Boston, Massachusetts. An occupied warehouse is located 50 feet east of the site. Operating businesses/warehouses are also located across the street to the north. South of the site is a 4,000 square foot vacant grassy lot where construction of office space is planned. A bank is located southwest of the former Anodyne site.

Anodyne, Inc., operated from the early 1960s through 1975 performing silk screening and lithography to produce printed clothing, artwork, publications and stationary. The processes involved the use of organic dyes, inks and solvents. Inks may contain oils, resins, plasticizers, pigments and extenders. In addition to waste ink, lithography and silk screening processes produce caustic and other water-based washes, solvent-based washes, and washes containing heavy metals.

Pretreatment of acid and caustic wastes occurred in a series of tanks located in treatment enclosures on the southern side of the building. Occasional leaks and overflows reportedly occurred from the enclosures (Dade County Environment and Resources Management (DERM), 1974). Equipment was periodically cleaned with a naphtha-type solvent on the east side of the building.

Before connection to the Myrtle Grove sewerage system in 1973, Anodyne reportedly disposed of wastes into a 90 foot deep well located near the south side of the building. According to DERM, even after connection to the sewer, Anodyne continued to dispose of waste onto the ground (NUS, 1988).

The results of the Environmental Protection Agency (EPA) sampling investigation conducted during June and July 1985 indicated the presence of soil contamination around the building and downgradient ground water contamination. A quality assurance review found some of the data invalid, making the data unusable for the Hazard Ranking System scoring.

The NUS Corporation Region IV Field Investigation Team (FIT) conducted a site investigation for EPA in December 1986. Analyses of surface soil found barium, mercury, PAHs, phenol, PCBs, and 4,4-DDE. Analysis of subsurface soil found acetone, chromium, tetrachloroethene, toluene and PCB-1260. Analysis of ground water found barium, chromium, nickel, lead, vanadium, tetrachloroethene and PCB-1254.

B. SITE VISIT

A site visit was conducted by staff from the Florida Department of Health and Rehabilitative Services (HRS) Health Office and the Agency for Toxic Substances and Disease Registry (ATSDR), in February 1989. A follow-up site visit was conducted in April 1991 by staff from Dade County Environmental Resources Management. Site conditions have not changed appreciably over the last several years. The southern half of the L-shaped building is set back from the street. A paved parking lot covers the area east and north of the two wings of the building. A 10 cubic yard pile of dirt at the rear of the parking lot indicates that excavation has been done on the site. This dirt pile rests on plastic sheeting (over the asphalt) and is partially covered by the plastic sheeting.

The site has no visible monitoring wells, fences, visible soil sampling holes, warning signs, or 'NO TRESPASSING' signs. Site access is not restricted. The rear half of the building appears abandoned and the rear parking lot contains two abandoned delivery vans.

C. DEMOGRAPHICS, LAND USE, AND NATURAL RESOURCE USE

Anodyne, Inc., was located near the center of the Sunshine State Industrial Park, in North Miami Beach, Dade County, Florida. The nearest residences are about 2,000 feet away, and the nearest municipal well is 2.75 miles south of the site. For the locations of buildings in the same block see Figure 1. The present owners of the buildings around the site may not necessarily be those listed in the 1988 NUS report. Building owners are not readily apparent from a cursory inspection, (i.e., many warehouses had no company name signs out front).

D. HEALTH OUTCOME DATA

Based on the evaluations performed as part of this health assessment, there are no indications that humans have been exposed to sit-related contaminants. In additional, there were no community concerns identified during this evaluation. Therefore, health outcome data were not evaluated in conducting this health assessment.

COMMUNITY HEALTH CONCERNS

No community concerns were reported to the Dade County Department of Environmental Resources Management (DERM) representatives. Dade County DERM representatives are concerned metals and volatile organic compounds found at this site have contributed to the degradation of local ground water. This shallow ground water represents the upper level of the potable water for this area; however, municipal water is available. No municipal wells are located hydrogeologically downgradient from the site because of the site's close proximity to the Atlantic Ocean. Wells in the downgradient area would be prone to problems with salt water uptake.

The area has not been surveyed for downgradient, private, potable or irrigation wells; therefore, it is not known if human exposure to metals and

VOCs is occurring via dermal, inhalation or ingestion exposure to ground water. Again, problems with salt water intrusion in this area likely limit the possibility of private well use as potable or irrigation sources.

ENVIRONMENTAL CONTAMINATION AND PHYSICAL HAZARDS

To identify possible facilities that could contribute to the ground water and soil contamination near the Anodyne Inc. site, the Florida Health and Rehabilitative Services searched the 1987, 1988, and 1989 Toxic Release Inventory (TRI). TRI is developed by the U.S. EPA from the chemical release information provided by certain industries. Although TRI contained information indicating airborne releases of chemicals detected in on-site monitoring, these releases are not likely to have impacted contaminant levels detected in on-site soils or ground water. Air-borne releases of airborne chemicals may affect the overall air quality of off-site areas.

A. ON-SITE CONTAMINATION

The Expanded Site Investigation verified ground water and soil contamination at the Anodyne, Inc., site. However, the extent of soil and ground water contamination has not been delineated. No air contamination above background levels was detected during the December 1986 site investigation by the NUS Corporation FIT.

Soil samples were collected from three areas identified as potentially contaminated during a DERM inspection in 1973 (NUS, 1988): an area where two pipes discharged effluent along the east wall, the former locations of caustic and acid treatment holding tanks along the south wall, and a location along the west wall where machinery was cleaned with naphtha solvent (Figure 2). Twelve surface soil samples and nine subsurface soil samples were collected at these areas. Four ground water samples were taken on site. A fifth ground water sample was collected from the 90 foot deep well used by Anodyne, Inc., for disposal of its wastes. Sampling results are contained in Table 1.

B. OFF-SITE CONTAMINATION

Four soil and four ground water samples were taken off-site. The off-site monitor wells were too shallow to have detected contamination in the Biscayne Aquifer discharged from the on-site 90 foot well. Only chromium and PCBs were found off site. It is not currently possible to relate these contaminants to the site because of other possible contamination sources in the area. Sampling results for off-site areas are contained in Table 2.

C. QUALITY ASSURANCE/QUALITY CONTROL

QA/QC data included in the NUS report consisted of results for the analysis of duplicate samples. Other QA/QC, in the form of split samples, were not included with NUS information. Enviropact, Inc., consultants to the potentially responsible parties, requested split samples from these ground water samples (NUS, 1988). Two additional split samples, one subsurface soil and one ground water, were collected for the quality assurance program of the Environmental Sources Division of EPA. The conclusions presented in this

health assessment are based on the soil, subsurface soil, and ground water data from the NUS (1988) report. The validity of these conclusions is dependent on the quality of the data provided.

D. PHYSICAL AND OTHER HAZARDS

Physical hazards observed on this site include the dirt pile and abandoned delivery vans located near the rear of the site. Because the site is located in an industrial park, however, these types of hazards are not uncommon in the surrounding areas as well.

PATHWAYS ANALYSES

A. ENVIRONMENTAL PATHWAYS (FATE AND TRANSPORT)

The potential for migration of contaminants off site via ground water is difficult to determine because of inadequate characterization of the local hydrogeology. One NUS ground water sampling point was the 90 foot well DERM reports Anodyne used for disposal of wastes until 1973. It is likely that contaminants have migrated off site in the thirty years since Anodyne began production, because of the high transmissivity of the Biscayne Aquifer.

The Biscayne Aquifer is the environmental medium of great concern because of its importance as the sole drinking water source for South Florida, and because past Anodyne, Inc., waste management practices included direct disposal of contaminants in that aquifer.

The highly transmissive character of the surficial deposits and geologic units that underlie the site could facilitate the rapid movement of contaminated ground water into and through the Biscayne Aquifer. The surficial deposits of the site consist of a thin soil and 10 to 20 feet of white to tan, medium to course-grained quartz and oolite sand which contains limestone rubble. These surficial deposits overlie the Fort Thompson Formation which is 100 to 140 feet thick in the area.

The Fort Thompson Formation includes layers of porous and nonporous limestone and quartz sand. Ground water dissolution during rock-forming processes created extensive lateral and vertical cavities in the limestone layer. Some cavities were later filled in with quartz sand and marl but others remained open, increasing the permeability of the formation. The base of the Fort Thompson Formation is the effective limit of the Biscayne Aquifer in this area.

The Biscayne Aquifer is underlain by the Miocene-aged Tamiami and Hawthorne Formations, which both consist of sandy clay and marl with numerous limestone and quartz sand lenses. Together, these two formations comprise the aquiclude that separates the Biscayne Aquifer from the underlying Floridan Aquifer. The Floridan Aquifer consists of limestone and dolostone units of post Paleocene to Eocene ages. The Floridan Aquifer is non-potable in this area due to high levels of chloride, sulfates and dissolved solids, and is not suitable for manufacturing or irrigation use.

Contaminants in soil can serve as a reservoir for further ground water contamination. Additionally, these soil contaminants may also serve as a reservoir for air contamination through volatilization or particulate transport.

Site drainage is via a series of wet-weather ditches which convey run-off south into the Biscayne Canal. These canals mainly function as flood control in an urban environment and should not contribute to contamination of crops, livestock, game or consumable wild plants.

Air monitoring done by NUS was not adequate for the Hazard Ranking System. Adequate air monitoring data is needed to assess the possibility of contaminant migration and human exposure to on-site contaminants via airborne particles and vapors.

Environmental pathways identified on the basis of the information available to date that are of greatest potential concern are those that could allow human exposure. These include: 1) ground water movement of contaminants to nearby private wells, 2) air movement of contaminated dust or vapors, and 3) rainfall run-off which may carry contaminated sediments and soils off site.

B. HUMAN EXPOSURE PATHWAYS

Contamination of the above noted environmental media could result in the following potential human exposure pathways.

1. Ingestion, dermal absorption or inhalation of contaminants from ground water.

2. Ingestion and/or dermal absorption of contaminant-laden dust or vapors on site. Workers on and near the site, and trespassers represent a population potentially exposed with remedial workers also at special risk.

PUBLIC HEALTH IMPLICATIONS

On-site contaminants at levels of concern include barium, mercury, chromium, PAHs, PCBs, 4,4'-DDE, acetone, tetrachloroethene and toluene in surface and subsurface soil; and chromium, nickel, lead, PCBs and tetrachloroethene in the ground water. There have been no documented human exposures to these compounds, at the present time. However, human exposure to contaminated media may have occurred and may still be occurring. A private well survey and subsequent monitoring have not been done to assess human contact with contaminated ground water.

The following toxic effects statements are based on animal data and adverse health effects reported at high exposure rates in animals and humans. Extrapolation to low environmental exposure levels is difficult because dose-response may not be linear and may be related to length of exposure time in addition to exposure level and because of differences in intraspecies responses. Human toxic response variability also adds to the uncertainties associated with making toxicity predictions. Human variability factors

include genetic makeup, age, sex, the state of an individual's health, previous exposure to chemicals and psychological factors. Uncertainty in predicting toxicity is reflected in the probabilistic nature of most of the toxicity assessments that are made. Toxicity assessments are directed towards population risks, not risk to an individual. This is the best that can be done, and even this limited type of prediction is filled with uncertainties (Kamrin, 1988).

Acetone is generally regarded as having a low toxicity and has not been extensively studied. Prolonged inhalation has been known to produce respiratory tract irritation, coughing, headaches, drowsiness, and in severe cases, coma. Acetone has not been tested in a carcinogenicity bioassay and gave negative results in a skin painting test; it was not mutagenic in the Ames Assay (Clement Assoc., 1985).

Short-term exposures to barium are known to impact the heart, gastrointestinal tract and the musculature. Much of the impact is from an increased contractibility of muscle tissue. Human epidemiologic studies have shown a possible association between barium ingestion and increased incidence of cardiovascular death. Inhalation exposures have resulted in benign pneumoconiosis and pulmonary modulation (ATSDR, 1990). Animal experimentation has shown a direct relationship between barium intake and high blood pressure; however, human epidemiological studies have failed to demonstrate this relationship.

Trivalent chromium is an essential nutrient in the human diet, but hexavalent chromium is toxic and has been known to cause liver and kidney damage, internal hemorrhage, dermatitis and respiratory damage (ATSDR, 1989). Injuries related to industrial exposure include ulceration of the nasal septum and other diseases of the nose. Studies of workers in the chromate-producing industry, chromium platers and alloy workers indicate an association of inhalation exposure and increased cancer incidence. Ingestion exposures were not associated with increases in cancer risks.

DDE is a metabolite of DDT, an organochlorine pesticide. DDE is very persistent in the environment and is a known mouse carcinogen, primarily causing malignant tumors in the liver and lymph nodes. DDE is highly toxic to aquatic organisms and, together with DDD and DDT, may be responsible for the decreased reproductive success of many bird species (ATSDR, 1989).

Mercury health effects are influenced by the level of exposure, form of the mercury, and route of exposure. Organic mercury eaten via contaminated fish or grain could cause irreversible brain damage and fetotoxicity. Sufficient exposure to inorganic mercury ingested in food or water could cause irreversible kidney damage. Mercury has not been linked with cancer. The effects of mercury exposure in adults include tremors, memory loss and kidney toxicity (ATSDR, 1989).

Several nickel compounds can cause cell transformation. In humans, nickel and nickel compounds can cause sensitization dermatitis and occupational exposure has been linked to excess cancer of the lung and nasal cavity (ATSDR, 1988).

Skin absorption, inhalation, and ingestion exposures of sufficient magnitude to PCBs could lead to liver toxicity and chloracne in humans. Other possible clinical effects of chronic exposure include dark spots on the skin, slowing of nerve impulses in the extremities, blindness and swelling because of water retention, nausea, vomiting and abdominal pain (ATSDR, 1989). PCBs are readily absorbed from the gastrointestinal tract, respiratory system and skin and are stored in fat.

Like PCBs, PAHs are readily absorbed via the gastrointestinal tract, respiratory system, and the skin. PAHs initially concentrate in the kidney and liver and are stored in the fat. Animal studies have demonstrated an association between PAHs ingestion and increased cancer incidence, and some PAHs have been implicated in the induction of lung cancers in cigarette smokers and tar-roofing workers (ATSDR, 1989).

Based on animal studies, EPA has designated tetrachloroethene a potential human carcinogen. Liver and kidney toxicity can occur in humans as a result of acute exposure to tetrachloroethene (ATSDR, 1990).

Routes of exposure to toluene include inhalation, absorption through the skin and eyes, and ingestion. Toluene may irritate the eyes, respiratory tract, and skin; and liquid toluene in the eyes may cause irreversible damage. Acute exposure causes narcosis and depression of the central nervous system in humans, and basal ganglia dysfunction at less than 100 parts per million, but there is inconclusive evidence that toluene is carcinogenic or mutagenic in animals or humans (ATSDR, 1989).

Exposure to airborne vanadium can irritate the skin, eyes, and respiratory tract, and may cause bronchitis, bronchospasms and chest pains (ATSDR, 1990).

CONCLUSIONS AND RECOMMENDATIONS

Based on available information, this site is an indeterminate public health hazard. The limited available data do not indicate that humans are being or have been exposed to levels of contamination that would be expected to cause adverse health effects. Data are not available for all environmental media to which humans may be exposed.

The population at risk of exposure to soil includes remediation workers, and persons gaining access to soil on the site primarily because there are no fences, gates or warning signs on site. Because Anodyne, Inc., discharged wastes directly into a well screened in the Biscayne Aquifer, these wastes have likely contributed to the degradation of the this aquifer. The population at risk of exposure to contaminated ground water has not been identified but could include users of wells downgradient of the site.

The following steps are recommended to protect public health from potential risks resulting from exposure to hazardous substances present at the former Anodyne, Inc., site.

1. Increase off-site ground water monitoring including a downgradient well screened at a depth comparable to the on-site well that may have been used for waste disposal. Identify and sample private potable wells in the area downgradient of the site.

2. During times when the soil is disturbed for construction or remediation purposes, conduct on-site air monitoring to determine the risk to on-site workers of exposure to airborne contaminants.

3. Advise the present owner of site to restrict access to the contaminated areas of the site.

4. Establish routes of off-site surface water migration, and sample sediments to determine if there is contaminant migration via stormwater runoff.

5. Recommend that no drinking water wells be installed on site or in the path of the contamination plume, once its extent is defined.

6. Delineate the extent of soil and ground water contamination and gather information necessary to predict contaminant movement.

7. The excavated soil pile present at the south end of the parking lot should be sampled and removed if it contains contaminants at levels likely to be of health concern.

8. The Anodyne, Inc., site has been evaluated for appropriate follow-up health activities. There are no indications humans have been or are being exposed to onsite and/or offsite contaminants. Therefore, this site is not being considered for follow-up activities at this time. However, if data become available suggesting that human exposure to hazardous substances at levels of public health concern is currently occurring or has occurred in the past, ATSDR will reevaluate this site for health follow-up activities.

9. If future ATSDR evaluations indicate that a substantive completed exposure pathway exists or that the community has expressed specific health concerns, then health outcome data bases should be evaluated in future assessments for this site.

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CERTIFICATION

This Preliminary Health Assessment was prepared by the Florida Department of Health and Rehabilitative Services under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health assessment was initiated.

Technical Project Officer, SPS, RPB, DHAC

The Division of Health Assessment and Consultation, ATSDR, has reviewed this health assessment and concurs with its findings.

Director, DHAC, ATSDR

REFERENCES

Agency for Toxic Substances and Disease Registry. 1988. Health Assessment Format, Guidelines, and Methodology, U.S. Public Health Service. Atlanta, Georgia.

ATSDR, Toxicological Profile for Barium, ATSDR/Draft, October 1990.

ATSDR, Toxicological Profile for Chromium, ATSDR/TP-88/10, July 1989.

ATSDR, Toxicological Profile for p,p'-DDE, ATSDR/TP-89/08, December 1989.

ATSDR, Toxicological Profile for Mercury, ATSDR/TP-89/16, December 1989.

ATSDR, Toxicological Profile for Nickel, ATSDR/TP-88/19, December 1989.

ATSDR, Toxicological Profile for PCBs, ATSDR/TP-88/21, June 1989.

ATSDR, Toxicological Profile for PAHs, Draft, October 1989.

ATSDR, Toxicological Profile for Tetrachloroethene, ATSDR/TP-88/22, January 1990.

ATSDR, Toxicological Profile for Toluene, ATSDR/TP-89/23, December 1989.

ATSDR, Toxicological Profile for Vanadium, Draft, October 1990.

Clement Associates, 1985. Chemical Physical and Biological Properties of compounds present at hazardous waste sites, fact sheets prepared by EPA: for Acetone.

Kamrin, Michael A., 1988. Toxicology - A Primer on Toxicology Principles and Applications, Lewis Publishers, Inc. Chelsea, Michigan, 145 p.

Klein, H. and Hull, J.E., 1978. Biscayne Aquifer. Southeast Florida. U.S.G.S. Water Resource Investigation 78-107, 55 p..

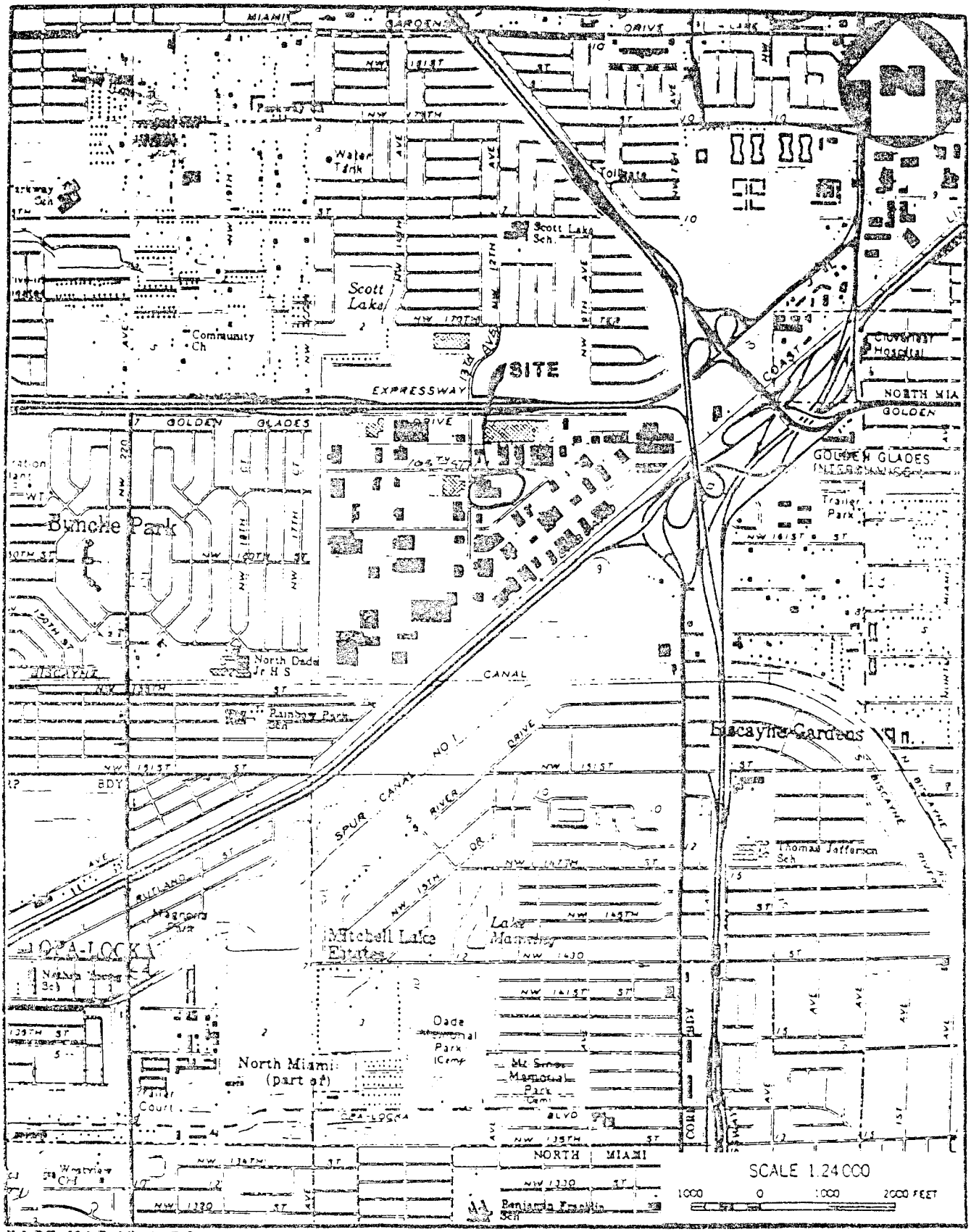
NUS, 1988. Final Site Investigation Report, Anodyne, Inc. North Miami Beach, Florida, prepared for the Waste Management Division of the U.S. Environmental Protection Agency.

U.S. Environmental Protection Agency-ESD, 1985. Site Screening Report, Anodyne Site, North Miami Beach, Florida. ESD Project #85E-100.

U.S. Geological Survey 7.5 Topographic Series; North Miami Quadrangle an Opa-locka Quadrangle, 1962. Scale = 1:24,000.

APPENDICES

Figure 1	Site Location.
Figure 2	Site Layout.
Table 1	On-Site Contamination
Table 2	Off-Site Contamination

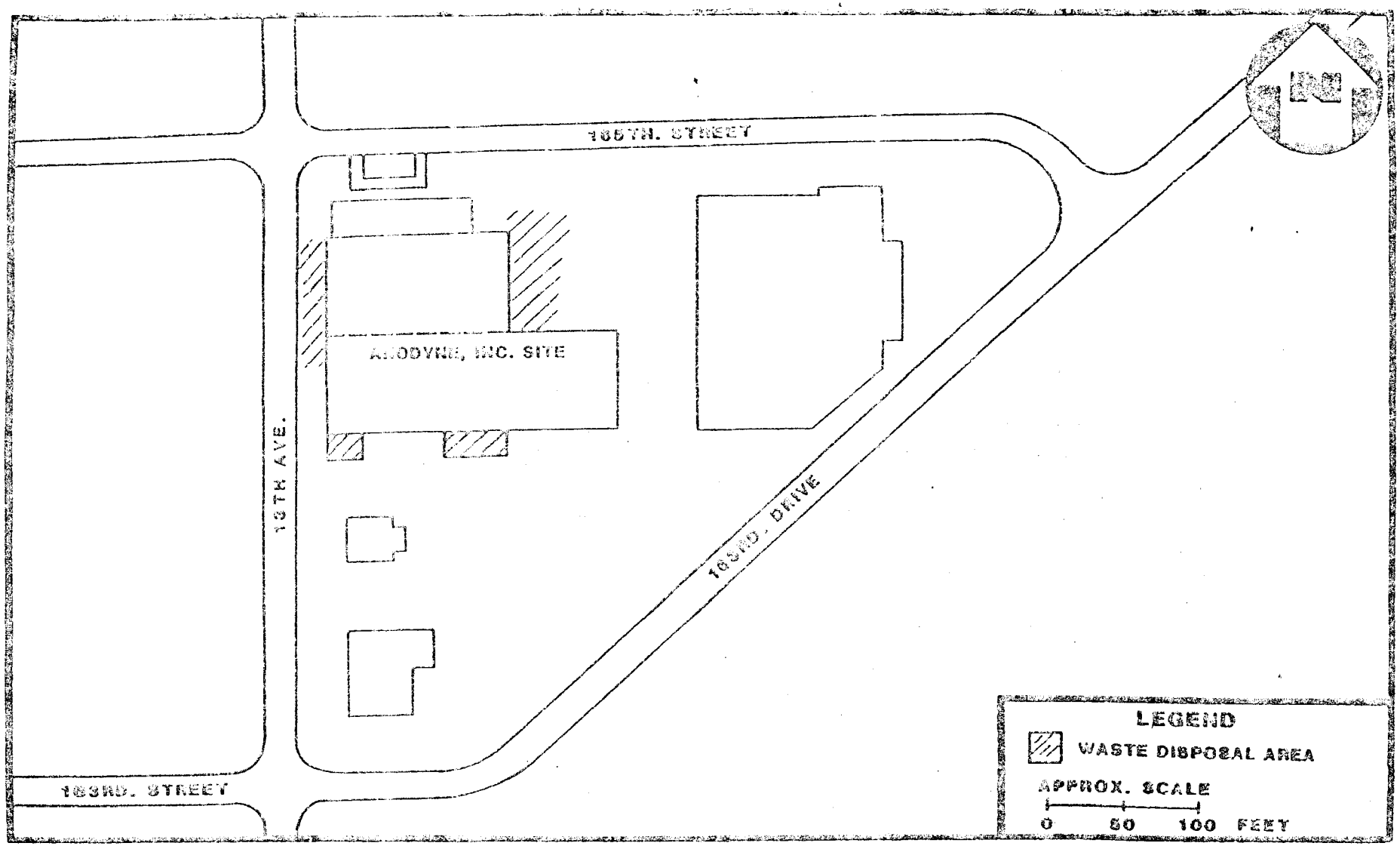


BASE MAP IS A PORTION OF THE U.S.G.S. NORTH MIAMI 7.5 MINUTE QUADRANGLE 1972).

SITE LOCATION
ANODYNE, INC. SITE
NORTH MIAMI BEACH, FLORIDA

NUS CORPORATION
A Halliburton Company

FIGURE 1



WASTE DISPOSAL AREAS
ANODYNE, INC. SITE
NORTH MIAMI BEACH, FLORIDA

FIGURE 2

NUS CORPORATION
A Halliburton Company

FIGURE 2
15

TABLE 1
ON-SITE CONTAMINATION

MEDIA	CONTAMINANT	CONCENTRATION RANGE	UNIT
Surface Soil	Barium	2.7 - 150	mg/kg
	Mercury	JN0.14 - N1.45	mg/kg
	Benzo(a)anthracene	J0.39 - 86	mg/kg
	Chrysene	J0.16 - 110	mg/kg
	Benzo(b)fluoranthene and/or Benzo(k)fluoranthene	J0.10 - 70	mg/kg
	Benzo(a)pyrene	J0.255 - 71	mg/kg
	Indeno(1,2,3-cd)pyrene	BDL - 0.90	mg/kg
	PCB-1242	BDL - 0.60	mg/kg
	PCB-1260	N0.130 - 14	mg/kg
	4,4'-DDE	0.43 - 2.9	mg/kg
Subsurface Soil 4 to 7 feet below land surface	Chromium	1.3 - 11	mg/kg
	Acetone	BDL - 840	mg/kg
	Tetrachloroethene	5.05 - 7.05	mg/kg
	Toluene	130 - 440	mg/kg
	PCB-1260	BDL - 0.460	mg/kg
Ground Water	Chromium	23 - 1,900	µg/L
	Nickel	J70 - 210	µg/L
	Lead	5.3 - 250	µg/L
	Vanadium	16 - 140	µg/L
	PCB-1254	BDL - JN0.4	µg/L
	Tetrachloroethene	BDL - 15	µg/L

J-Estimated Value.
N-Presumptive evidence of presence of material.
BDL-Below detection level.

TABLE 2
OFF-SITE CONTAMINATION

MEDIA	CONTAMINANT	CONCENTRATION RANGE	UNIT
Soil	PCB-1260	BDL - 0.16	mg/kg
Ground Water	Chromium (no valence given)	13 - 44	µg/L

BDL-Below Detection Level