

RCRA FACILITY ASSESSMENT

for

SAFETY KLEEN CORPORATION
East of NW 89th Avenue & 95th Street
Medley, Florida 33166

FLD 984 171 694

Prepared by: Florida Department of Environmental Regulation

Site Visit: John E. Griffin

Report Date

March 1991

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I. INTRODUCTION

The 1984 Hazardous and Solid Waste Amendments (HSWA) expanded the regulatory authority under the Resource Conservation and Recovery Act (RCRA) to allow for a RCRA corrective action program to clean up releases of hazardous waste or hazardous constituents from Solid Waste Management Units (SWMUs) or Areas of Concern (AOCs). This corrective action program applies to all facilities that have obtained a RCRA Part B Permit or are in the process of obtaining a RCRA Part B permit.

The RCRA corrective action program consists of three phases. The first phase involves the RCRA Facility Assessment (RFA) to identify releases or potential releases requiring further investigation. During the second phase, the extent of releases, if any, are fully characterized under the RCRA Facility Investigation (RFI). The Corrective Measure Study (CMS) is the final phase to determine the need for and extent of remedial measures. This step includes the selection and implementation of appropriate remedies for all releases identified. This report covers only the RFA portion of the corrective action program.

The RFA is subdivided into three stages and this includes a Preliminary Review (PR) which focuses primarily on evaluating any existing information about a facility. Based on this existing information a preliminary list of SWMUs and AOCs is determined. Following this review is a Visual Site Inspection (VSI) which entails a site visit to collect visual information and to obtain any additional evidences of releases from SWMUs or AOCs. If necessary, a Sampling Visit (SV) will be performed by obtaining sampling and field data to further evaluate any releases of hazardous waste or hazardous constituents to the environment. To summarize, the purpose of these three stages of this report is identify to SWMUs and AOCs and to assess the release potential of any hazardous constituent from these units.

This report summarizes information found during the PR of material from the State of Florida Department of Environmental Regulation (FDER) files and the VSI conducted by FDER staff at the proposed site of the Safety Kleen facility on February 19, 1991. According to the Construction Permit Application, Safety Kleen plans to operate a hazardous waste storage facility at the site. Waste materials would be stored in either tanks or containers for transport to off-site recycling or disposal facilities. There is no planned on-site disposal. There were two Solid Waste Management Units identified at the site during the PR and VSI. The two Solid Waste Management Units listed in this document are for the proposed RCRA storage units. No previous releases were reported in the file data or observed during the VSI.

A. Background

The Florida Department of Environmental Regulation (FDER) was directed under an agreement with the United States Environmental Protection Agency (EPA) to conduct a RCRA Facility Assessment (RFA) at the proposed Safety Kleen Facility in Medley, Florida. The purpose of an RFA is to:

- (1) Identify and gather information on Solid Waste Management Units (SWMUs) or Areas of Concern at RCRA facilities;
- (2) Evaluate SWMUs and AOCs for releases of hazardous waste or hazardous constituents; and
- (3) Make determinations regarding releases of concern and further actions or screen from further investigation those SWMUs or AOCs which do not pose a threat to human health or the environment.

B. Facility History

The proposed site is located in the town of Medley, Florida, east of N.W. 89th Avenue and on 96th Street. Route 826 is the major access to the facility. Florida East Coast Railroad borders the northeast portion of property. The property is undeveloped land and is currently zoned M-1 (light manufacturing/industry).

On January 17, 1990, Safety Kleen submitted an application to FDER for a Hazardous Waste Construction Permit. The FDER issued a first notice of deficiency on March 26, 1990 and July 5, 1990 followed by a compliance schedule submitted September 17, 1990. Safety Kleen again responded on November 8, 1990 with a revised construction permit application. The FDER gave notice of its Intent to Issue the construction permit on December 7, 1990 subsequently issuing the permit on March 1, 1991.

C. File Search and VSI

The file search was performed at the FDER during the first week of February. The file search consisted of a desk top study of the RCRA files and a review of the files prepared by the Florida State Board of Conservation, Division of Geology. The purpose of the file search was to compile a list of SWMUs and AOCs including additional information about the proposed facility and a geology of the site.

The VSI was conducted on February 19, 1991 by John Griffin of the FDER. Two other representatives of the FDER who participated in the VSI were Bob Kukleski and Knox McKee. There were no EPA or facility representatives present. The purpose of the VSI was to verify the findings of the file review, evaluate any releases of hazardous waste or hazardous constituents at SWMUs or AOCs and to collect any information necessary to complete this report.

D. Waste Generation

According to the Construction Permit Application, Safety Kleen plans to operate a hazardous waste storage facility at the proposed site. A site plan of the proposed facility is provided in Figure 1. The facility will have a capacity to store wastes in containers and tanks.

1. Container Storage Facility:

Safety Kleen would operate the storage facility within a building specifically designed for hazardous waste management. The proposed container storage building would have a drum storage capacity of 6,912 gallons. The dimensions of the building will be 80 feet wide by 50 feet long. All waste materials would be stored and subsequently sent to a reclaimer. The wastes that can not effectively reclaimed will be sent to a licensed facility for disposal. All drummed waste materials will be stored in Department of Transportation (DOT) acceptable containers in such a manner that detrimental co-mingling will be prevented. The containers will store mineral spirit dumpster sediments (D001/D006/D008), immersion cleaner (F002/F004), dry cleaning waste (F002), and paint waste (F003/F005/D001/D006/D007/D008) in various size drums.

2. Tank Storage Facility:

Safety Kleen proposes to build two tank farms each containing six aboveground tanks. These tank farms will include six 20,000 gallon aboveground steel tanks. One tank is designated to store used mineral spirits (D001/D006/D008), another tank will be used to store mineral spirit product, three tanks will store non-hazardous waste oil, and one tank will be storing perchloroethylene product. All tanks are vented at the top to prevent pressure buildup. All tanks are underlain by a 55 feet wide by 39 feet long, six-inch concrete slab surrounded by a 2 foot concrete dike. The dike will be sealed with a chemical resistant coating.

E. Demographics and Environmental Setting

1. Population:

The proposed Safety Kleen site is located in Medley, Florida which is in Dade County. It is east of N.W. 89th Avenue and on 96th Street. Route 826 is the major access road to the facility. The population in 1980 for Dade County was 1,625,000. The largest populated city in Dade County is Miami with a population in 1980 of 346,931. Medley has a population in 1980 of 587. (Reference 4).

2. Climate:

The climate in Dade County is subtropical. Average daily temperatures range from about 82° F in the summer to about 68 °F in the winter. The average precipitation in Southeastern Florida is 59 inches. About 70 percent of the precipitation falls during the months of June through October. (Reference 5).

3. Physiography:

The town of Medley lies on the sandy flatlands situated between the Everglades and the Atlantic Coastal Ridge. Altitudes are around six feet above sea level. The site is located in Flood Zone AH designated by the Federal Emergency Management Agency. Zone AH is a special flood hazard area subject to inundation by the 100-year shallow flooding. The lowest finished floor elevation will be 6.7 feet above sea level which is the cities flood criteria for building in this flood zone. (References 3 and 5).

4. Geology:

A generalized geologic cross-section is shown in Figure 4. The geology of the region is summarized in Reference 5 as follows:

The uppermost portion of the geologic deposits consist of recent organic soils and marls from the Pleistocene and Recent Age. The organic soils consist of peat and muck while the marl consist of white to grey calcereous mud rich with shells.

Underlying these deposits are the Miami Oolite from the Pleistocene Age. The Miami Oolite is typically a white to yellowish massive crossbedded oolitic limestone containing varying amounts of sand, usually in solution holes. Lying below the Miami Oolite is the Fort Thompson formation of the same Pleistocene Age. This formation ranges from sea level to 50 feet below sea level. The Fort Thompson formation is predominantly light grey to cream, fossiliferous, marine, sandy limestone and calcareous sandstone, with a few thin beds of grey and tan fresh water limestone. The entire section has been subjected to solution by groundwater, and the result is a cavity-riddled mass of permeable rock. Below the Fort Thompson formation lies the Tamiami formation from the Miocene age. The Tamiami formation in this area consists of permeable sandstone.

5. Groundwater:

The hydrology of the region is summarized in Reference 5 as follows:

Groundwater in Dade County occurs in the Biscayne aquifer. All the water that recharges the Biscayne aquifers is derived from local rainfall. The Biscayne aquifer is generally unconfined and generally conforms to the topography, being at higher elevations under hills and lower elevations under valleys. Discharge from the Biscayne aquifer occurs by groundwater flow into the canals, Atlantic Ocean, Biscayne Bay, by evapotranspiration or by pumping. Major fluctuations of the water table are caused by recharge and natural or artificial discharge. The magnitude of water-level fluctuation during any one year can vary from 2 to 8 feet, depending upon the amount and distribution of rainfall in the area.

One of the most troublesome mineral constituents in water from the Biscayne aquifer is iron. There is no apparent consistency in the amount of iron present in the groundwater so therefore predictions can not be made as to the localities at which water will have a high content of dissolved iron.

F. Exposure Potential

1. Target Populations: Since this area is currently unpopulated and is planned to be used for industrial purposes, the threat to human health is very low. The health risk on animal populations is unknown, but is also expected to be low.
2. Receptor Information: Since there are no waste operations at this facility, the release potential is nonexistent at this time.

III. **SWMU AND AOC DESCRIPTIONS**

See Figure 3 for the Solid Waste Management Unit Summary. Appendix II consists of the VSI photo log.

IV. **SUMMARY AND RECOMMENDATIONS**

Two Solid Waste Management Units exist at this site and these units are the proposed container and tank storage units. No further action should be taken at this time.

V. LIST OF REFERENCES

1. Safety Kleen Corporation - Construction Permit Application dated January 17, 1990.
2. FDER First Notice of Deficiency dated March 26, 1990.
3. Safety Kleen Corporation - Revised Construction Permit Application dated November 8, 1990.
4. 1990 - 1991 Florida Almanac.
5. Florida Geological Survey, Report of Investigations NO. 17 by U.S. Geological Survey.

VI. FIGURES

QUADRANGLE LOCATION

SCALE 1:24 000

1 MILE

1 KILOMETER

CONTOUR INTERVAL 5 FEET
DATUM IS MEAN SEA LEVEL

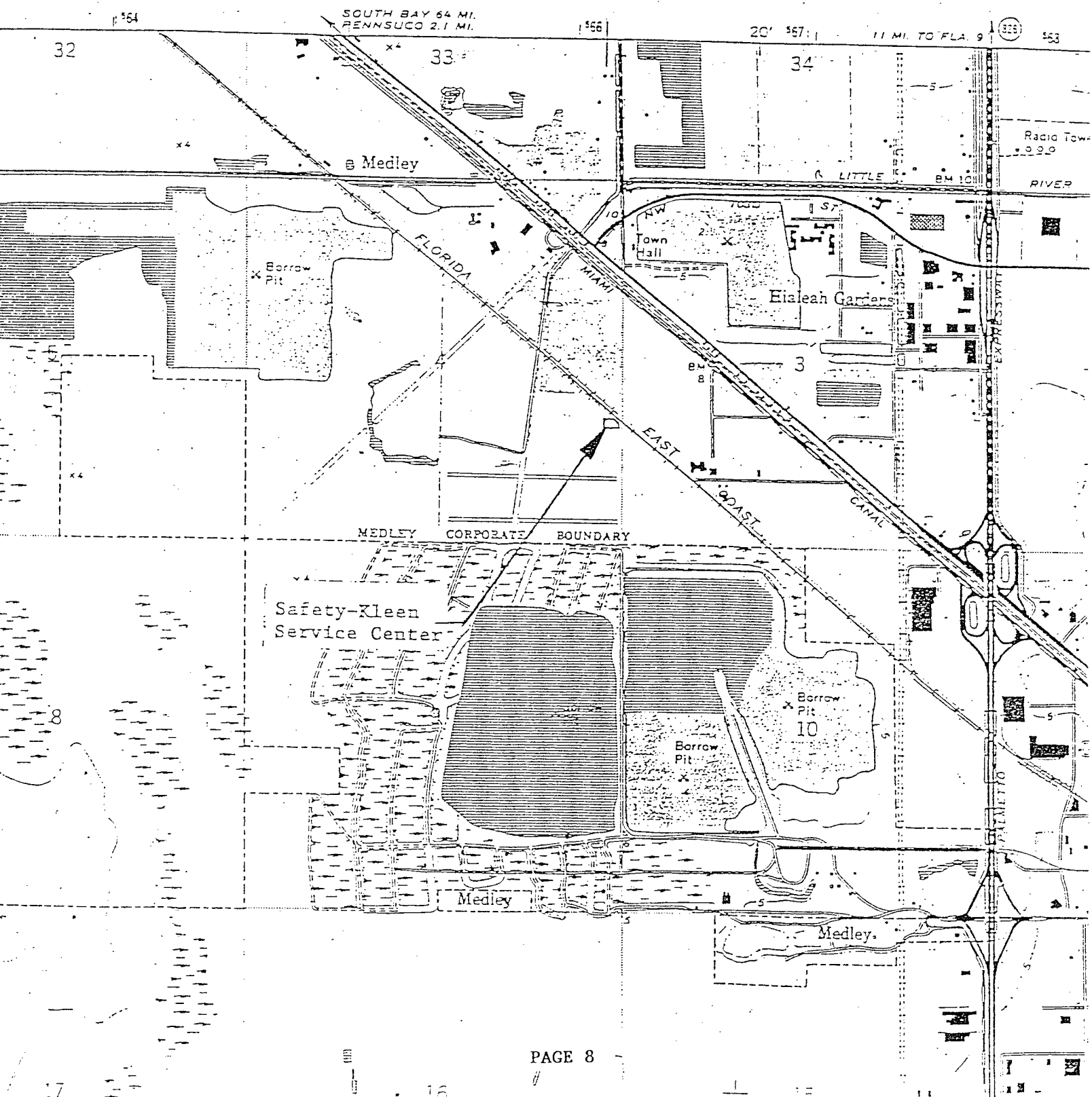
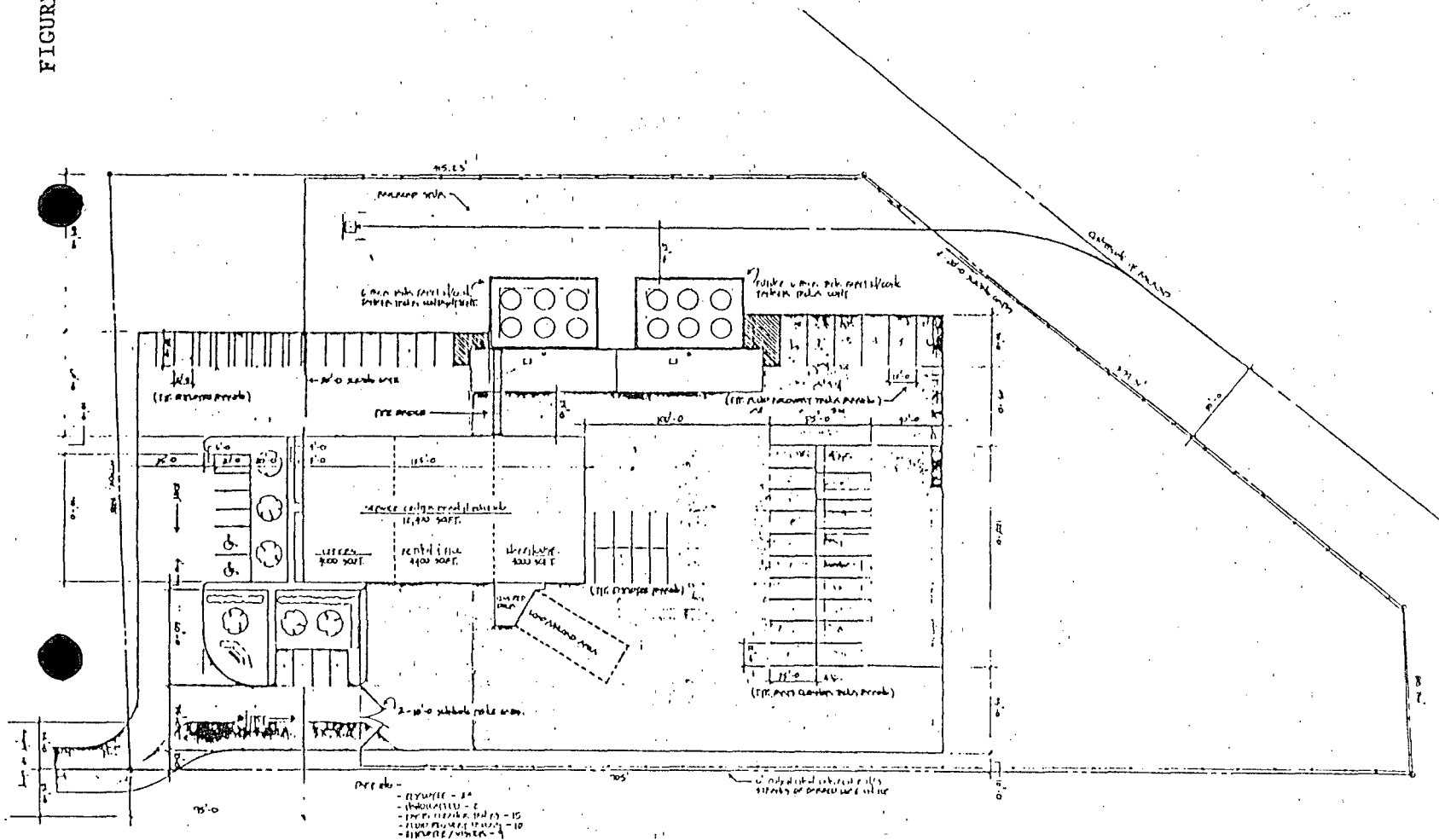


FIGURE 2



SITE PLAN

ITEM NO.		ITEM NAME		ITEM QTY		ITEM PRICE		ITEM TOTAL	
1		RENTAL AREA		1		100.00		100.00	
2		STORAGE		1		100.00		100.00	
3		PARKING		1		100.00		100.00	
4		WATER MAIN		1		100.00		100.00	
5		MAINLINE		1		100.00		100.00	
6		TANKS		1		100.00		100.00	
7		EQUIPMENT		1		100.00		100.00	
8		STRUCTURE		1		100.00		100.00	
9		LANDSCAPING		1		100.00		100.00	
10		TOTAL		10		1000.00		1000.00	

SITE PLAN (SP1)

SAFETY-KLEEN CORP.

13428/L (10-01-04) 13428

SWMU IDENTIFICATION SUMMARY

SWMU No.	Type of Unit	Years Op.	Waste Managed	Pollutant Migration Pathways	Evidence of Release	Exposure Potential	Interim Measures Needed	Recommendation		Further Assessment
								RFI	NFA	
*1	Containers Tank	NONE	NONE	NONE	NONE	NONE			X	
*2		NONE	NONE	NONE	NONE	NONE			X	
* -	RCRA UNITS									

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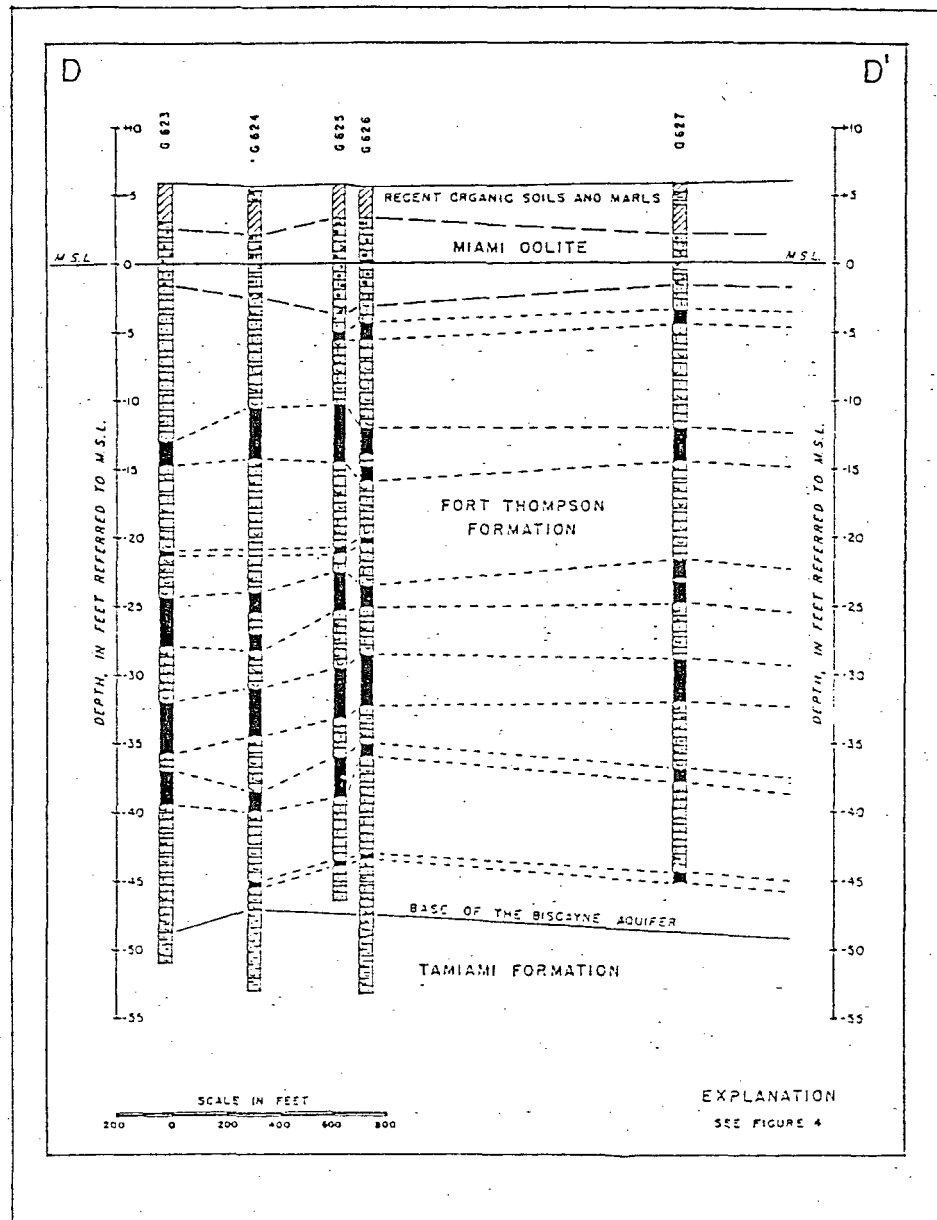


Figure 8. West-east geologic cross section near Krome Avenue at Tamiami Trail. limestones, at slightly lower elevations, which are probably a continuation of this zone. A similar situation may be true of the wells south of G 653, although these limestones are generally at slightly higher elevations.

REPORT OF INVESTIGATIONS No. 17

9

LATE CENOZOIC FORMATIONS OF DADE AND BROWARD COUNTIES

Age	Formation	Characteristics	Thickness (feet)
Recent and Pleistocene	Soils	Peat and muck; laterite.	0-12
	Lake Flirt marl	White to gray calcareous mud, rich with shells of <i>Helisoma</i> sp., a fresh-water gastropod. In some places casehardened to a dense limestone. Relatively impermeable.	0-6
Pleistocene (Formations are contemporaneous in part)	Pamlico sand	Quartz sand, white to black or red, depending upon nature of staining materials, very fine to coarse, average medium. Mantles large areas underlain by Miami oolite and Anastasia formation.	0-40
	Miami oolite	Limestone, oolitic, soft, white to yellowish, containing streaks or thin layers of calcite, massive to crossbedded and stratified; generally perforated with vertical solution holes. Fair to good aquifer.	0-40
	Anastasia formation	Coquina, sand, calcareous sandstone, sandy limestone, and shell marl. Probably composed of deposits equivalent in age to marine members of Fort Thompson formation. Fair to good aquifer.	0-120
	Key Largo limestone	Coralline reef rock, ranging from hard and dense to soft and cavernous. Probably interfingers with the marine members of the Fort Thompson formation. Crops out along southeastern coast line of Florida from Soldier Key in Biscayne Bay to Bahia Honda. Excellent aquifer.	0-60
	Fort Thompson formation	Alternating marine, brackish-water and fresh-water marls, limestones, and sandstone. A major component of the highly permeable Biscayne aquifer of coastal Dade and Broward counties, which yields copious supplies of ground water.	0-150
Pliocene	Caloosahatchee marl	Sandy marl, clay, silt, sand, and shell beds. Yields ground water less abundantly than most other parts of the Biscayne aquifer.	0-25
Miocene	Tamiami formation	Cream, white, and greenish-gray clayey marl, silty and shelly sands, and shell marl, locally hardened to limestone. Upper part, where permeability is high, forms the lower part of the Biscayne aquifer. Lower and major part of formation is of low permeability and forms the upper beds of the aquiclude that confines water in the Floridan aquifer (Ocala and associated limestones) below.	0-100

VII. APPENDICIES

APPENDIX I

SWMU DATA SHEET

Page 1 of 2

SWMU NUMBER: 1

PHOTO NUMBER:

NAME: Container Storage Area Inside Service Center

TYPE OF UNIT: Containers

PERIOD OF OPERATION: None

PHYSICAL DESCRIPTION AND CONDITION:

Will hold 6,912 gallons of waste inside of the main building (i.e. - service center).

WASTES AND/OR HAZARDOUS CONSTITUENTS MANAGED:

- D001, D006, D007, D008, F002, F003, F004, F005.

RELEASE PATHWAYS: Air () Surface Water () Soil ()

*NONE Groundwater () Subsurface Gas ()

HISTORY AND/OR EVIDENCE OF RELEASES(S): NONE

RECOMMENDATIONS: No Further Action (X)
RFA Phase II Sampling ()
RFI Necessary ()

REFERENCES: See Figures 1 and 3.

COMMENTS: *When fully constructed, this unit will be totally enclosed in a building and surrounded by a berm. Therefore, no release pathways are evident.

Project Name: Safety Kleen

Date: February, 1991

SWMU DATA SHEET

Page 2 of 2

SWMU NUMBER: 2

PHOTO NUMBER:

NAME: Tank Storage Area Inside Tank Farm Building

TYPE OF UNIT: Tank

PERIOD OF OPERATION: None - Area under construction during the VSI.

PHYSICAL DESCRIPTION AND CONDITION:

Six - 20,000 gallons steel tanks: Two product tanks, one waste tank and three waste oil tanks within an enclosed bermed area.

WASTES AND/OR HAZARDOUS CONSTITUENTS MANAGED:

- D001/D006/D008

RELEASE PATHWAYS: Air () Surface Water () Soil ()

*NONE Groundwater () Subsurface Gas ()

HISTORY AND/OR EVIDENCE OF RELEASES(S): NONE

RECOMMENDATIONS: No Further Action (X)
RFA Phase II Sampling ()
RFI Necessary ()

REFERENCES: See Figures 1 and 3.

COMMENTS: *When fully constructed, this unit will have secondary containment. Therefore, no release pathways are evident.

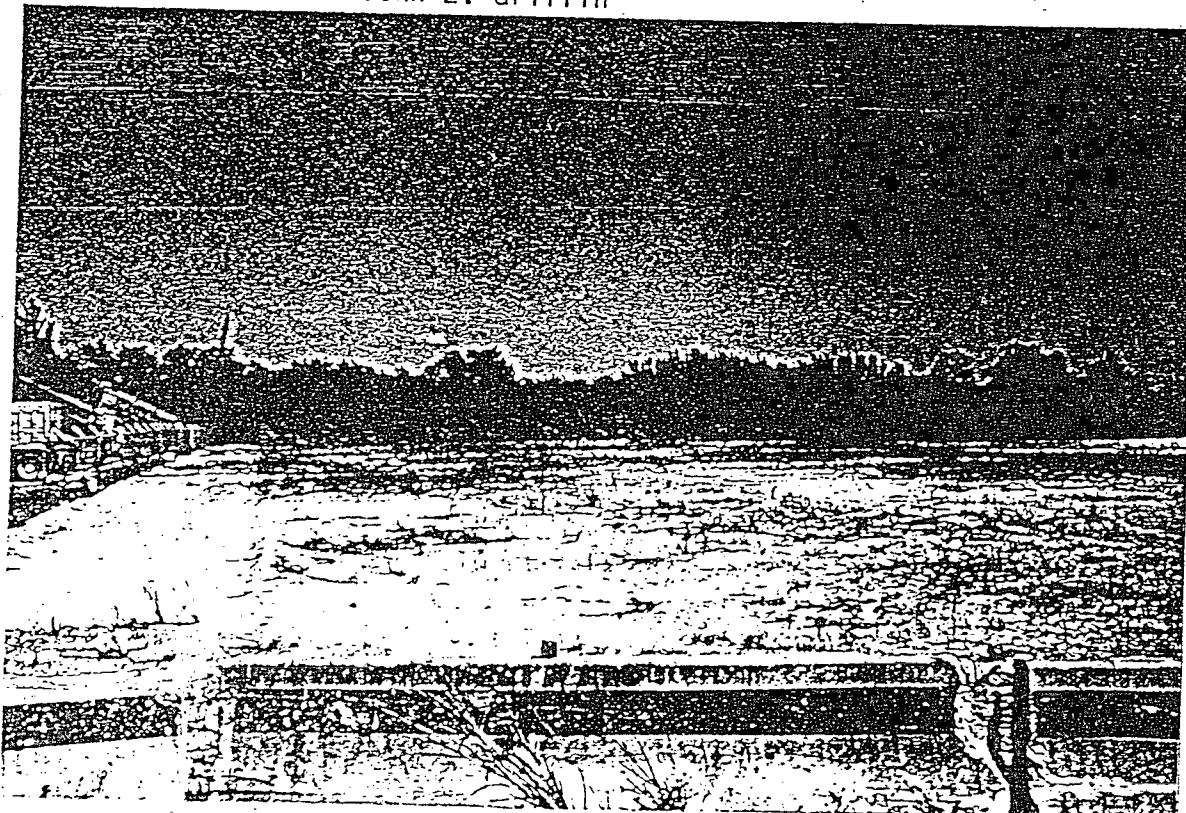
Project Name: Safety Kleen

Date: February, 1991

APPENDIX II



1. Facility Site
 looking east from the southwest corner
 2-19-91
 John E. Griffin



2. Facility Site
 looking west from the northeast corner
 2-19-91
 John E. Griffin



3. Facility Site
looking north from the southwest corner
2-19-91
John E. Griffin