Site Review And Update

COLEMAN-EVANS WOOD PRESERVING COMPANY

JACKSONVILLE, DUVAL COUNTY, FLORIDA

CERCLIS NO. FLD991279894

SEPTEMBER 29, 1993

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Site Review and Update: A Note of Explanation

The purpose of the Site Review and Update is to discuss the current status of a hazardous waste site and to identify future ATSDR activities planned for the site. The SRU is generally reserved to update activities for those sites for which public health assessments have been previously prepared (it is not intended to be an addendum to a public health assessment). The SRU, in conjunction with the ATSDR Site Ranking Scheme, will be used to determine relative priorities for future ATSDR public health actions.

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PREPARED BY:

Office of Toxicology and Hazard Assessment
Florida Department of Health and Rehabilitative Services
Under Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

SUMMARY OF BACKGROUND AND HISTORY

Coleman-Evans Wood Preserving Company (Coleman-Evans) is an 11 acre site in the community of Whitehouse, Duval County, Florida. It is about 8 miles west of downtown Jacksonville and about 1 mile north of Interstate 10 (Figure 1). From 1954 until the late 1980s Coleman-Evans operated a wood preserving business using pentachlorophenol (PCP) in No. 2 diesel fuel. Since that time, the site has been used to store and cut wood products (cross ties). Until 1970, wood was treated on the western portion of the site, waste water discharged into the drainage ditch, and sludge was placed in two unlined sludge pits on the southern portion of the site. The eastern portion of the site was used as a waste disposal landfill (Figure 2). After 1970, Coleman-Evans improved their treatment technology and reduced the concentration of PCP in their waste water. In 1981 Coleman-Evans installed a closed loop system with zero discharge.

EPA found that soil, sediment, and groundwater were contaminated with PCP above health concern levels. EPA also detected polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) in one of five samples. In July 1985, EPA removed some of the sediments in the two unlined sludge pits.

In August 1989, the Agency for Toxic Substances and Disease Registry (ATSDR) completed a health assessment report. This report concluded that the site is of potential health concern. Unless appropriate protective measures were taken, site workers and remediation workers could be exposed to potential hazardous levels of PCP, through contaminated waste, soil, and groundwater. Until remediation was complete, nearby residents could also be exposed to potentially hazardous levels of PCP in the soil, sediment, and surface water in the drainage system from the site. The health assessment recommended that 1) access to the site be restricted, 2) current workers and remediation workers receive proper safety training and protective equipment, and 3) nearby residents not garden or come into contact with the contaminated soil or use groundwater from the shallow aquifer for any purpose.

In the original Record of Decision (ROD), EPA planned to incinerate the contaminated soil. In 1990, after EPA discovered the volume of contaminated soil was much greater than originally estimated, they amended the ROD to require soil washing, bioremediation of the wash water/ground water, and stabilization/solidification of the soil. EPA determined these techniques would address both PCDDs and PCDFs, as well as PCP.

CURRENT SITE CONDITIONS

In October 1992, Joe Sekerke of the Florida Department of Health and Rehabilitative Services (HRS) visited the site. He observed the site was being used to cut and store wood, was enclosed by a chain link fence, and the gates were open during business hours. On August 25, 1993 Randy Merchant of Florida HRS visited the site and observed that EPA had removed some old on-site structures and erected a chain link fence on either side of the drainage ditch culvert under General Avenue.

In March 1991, EPA collected and analyzed on-site soil, groundwater, and waste samples for PCDDs and PCDFs using analytical techniques more sensitive than those used in the 1980s. EPA found contamination in soil (expressed as toxicity equivalents of 2,3,7,8-tetrachlorodibenzodioxin or TEQs) from 3.7 to 24 part per billion (ppb), in groundwater from 0.00032 to 0.039 ppb, and in on-site waste from 25 to 120 ppb. Most of this contamination was in octa-, hepta-, and hexa- forms. In June 1992, EPA collected and analyzed additional on- and off-site soil samples for PCDDs and PCDFs. The concentration of PCDDs (expressed as TEQs) exceeded the EPA acceptable concentrations of 20 ppb for on-site soils and 1 ppb for off-site soils. In October 1992, EPA collected additional off-site soil and sediment samples to determine the extent of contamination. The concentrations of PCDDs and PCDFs in the drainage systems south of the site exceeded the EPA acceptable off-site soil concentration of 1 ppb (TEQ). In June 1993, EPA removed contaminated soil and sediment from this drainage system, from the backyard of the residence adjacent to this ditch, and from the ditch just north of General Avenue. Post-excavation sampling showed a reduction in PCDD and PCDF contamination, but still at levels above 1 ppb. EPA found additional contamination in the eastern drainage ditch. In September 1993, EPA removed sediment from this ditch and collected additional samples. Results of this analysis should be available by November 1993.

CURRENT ISSUES

PCDDs and PCDFs in the on-site waste and in both on- and off-site soil and sediment, are a long-term health hazard to site workers, remediation workers, and nearby residents. Site workers and nearby residents may have been, and may continue to be, exposed to PCDDs, PCDFs, and PCP by dermal contact with contaminated waste and soil, by incidental ingestion of contaminated soil, and by inhalation of contaminated dust. Nearby residents may also have been exposed by ingestion of vegetables grown in contaminated soil. Future exposure by the above routes will continue until the contaminated soil and sediment are remediated. Nearby residents may be exposed to PCP in the future if contaminated ground water reaches nearby private wells.

The community has not expressed many health concerns. This may be because they do not think expressing their concerns will make a difference rather than not having any health concerns. There was little community comment on the 1990 EPA amended ROD and little attendance at the August 23, 1990 public meeting. At this meeting local governmental agency representatives asked technical questions about the remediation process, monitoring the process, and final outcome of the remediation.

EPA held two public availability meetings in conjunction with the October 1992 sampling. The first was held the day before sampling began to notify the residence of the results of previous sampling and to inform them of the upcoming sampling. About 20 residents attended this meeting and asked about the sampling and the health risk of the contamination. At the second meeting in January 1993, EPA discussed the results of the October 1992 sampling. One person attended this meeting but did not have any health concerns.

CONCLUSIONS

We can not assess the risk to site workers and nearby residents until removal activities are complete. Currently, EPA is removing off-site soil and sediment contaminated with PCDDs and PCDFs. Exposure may continue to occur until remediation of the on-site waste and on-and off-site contaminated soil and sediments is complete. Until the contaminated groundwater is remediated, exposure through contaminated drinking water is also possible.

RECOMMENDATIONS

1. The recommendations in the 1989 ATSDR Health Assessment are still valid. Training and safety measures should be updated to included PCDDs and PCDFs.

2. A full public health assessment at this site is needed to address the threat from exposures to PCP, PCDDs, and PCDFs. Exposures to PCDDs and PCDFs were not addressed in the 1989 ATSDR health assessment. This full public health assessment should be done after EPA completes its evaluation of the potential human health risk from environmental exposure to PCDDs and PCDFs, EPA completes its current sampling program, and as resources permit.

3. Nearby drinking water wells should be monitored on a regular basis for PCP, PCDDs, and PCDFs. Since the PCP will likely migrate more rapidly than the PCDDS and PCDFs, PCP may be used as a marker for contaminate migration.

The data and information developed in this Site Review and Update have been evaluated to determine if follow-up actions may be

indicated. Further site evaluation is needed to determine appropriate public health actions.

DOCUMENTS REVIEWED

The Florida HRS reviewed the following documents for this Site Review and Update report:

1. Health Assessment for Coleman-Evans Wood Preserving Site, Whitehouse, Florida, CERCLIS No. FLD991279894, August 21, 1989.

2. Draft Amended Record of Decision for Coleman-Evans Wood Preserving Site. October 1990.

3. REM VI. Remedial Response Activities at Uncontrolled Hazardous Water Facilities. Technical Memorandum - Dioxins at the Coleman-Evans Wood Preserving Site. Treatment, Regulation and Mobility in the Surficial Aquifer. PEER Consultants P.C., December 20, 1991.

4. Field Investigation Report - Coleman-Evans NPL Site. Private Well Sampling. Whitehouse, Duval County, Florida. FDL991279894. April 1992.

5. Results of dioxin sample analysis for soil and sediment samples collected on and near the Coleman-Evans site. June 1992.

6. Results of dioxin sample analysis for soil and sediment samples collected on and near the Coleman-Evans site. October 1992.

Preparer of the Site Review and Update Report

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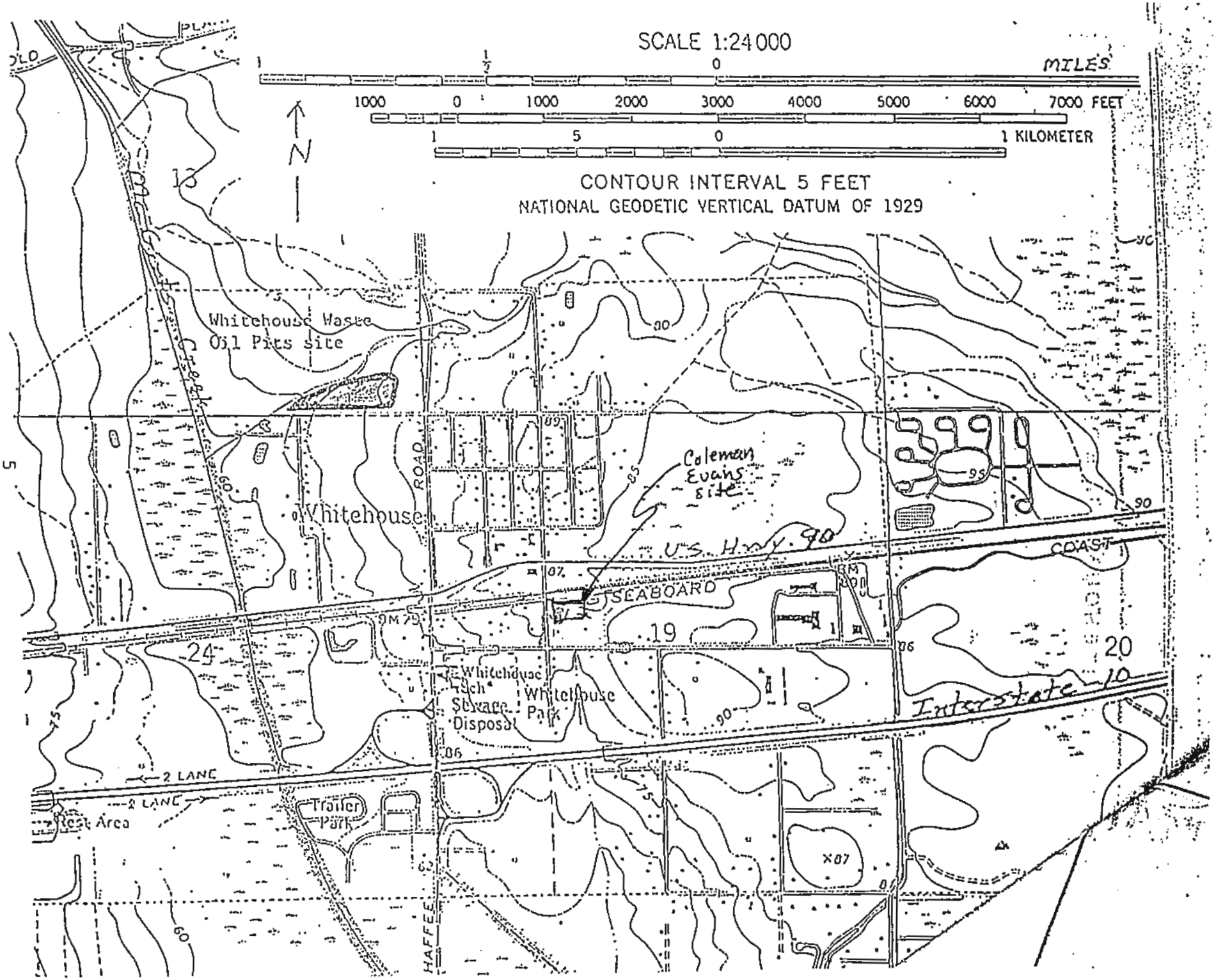
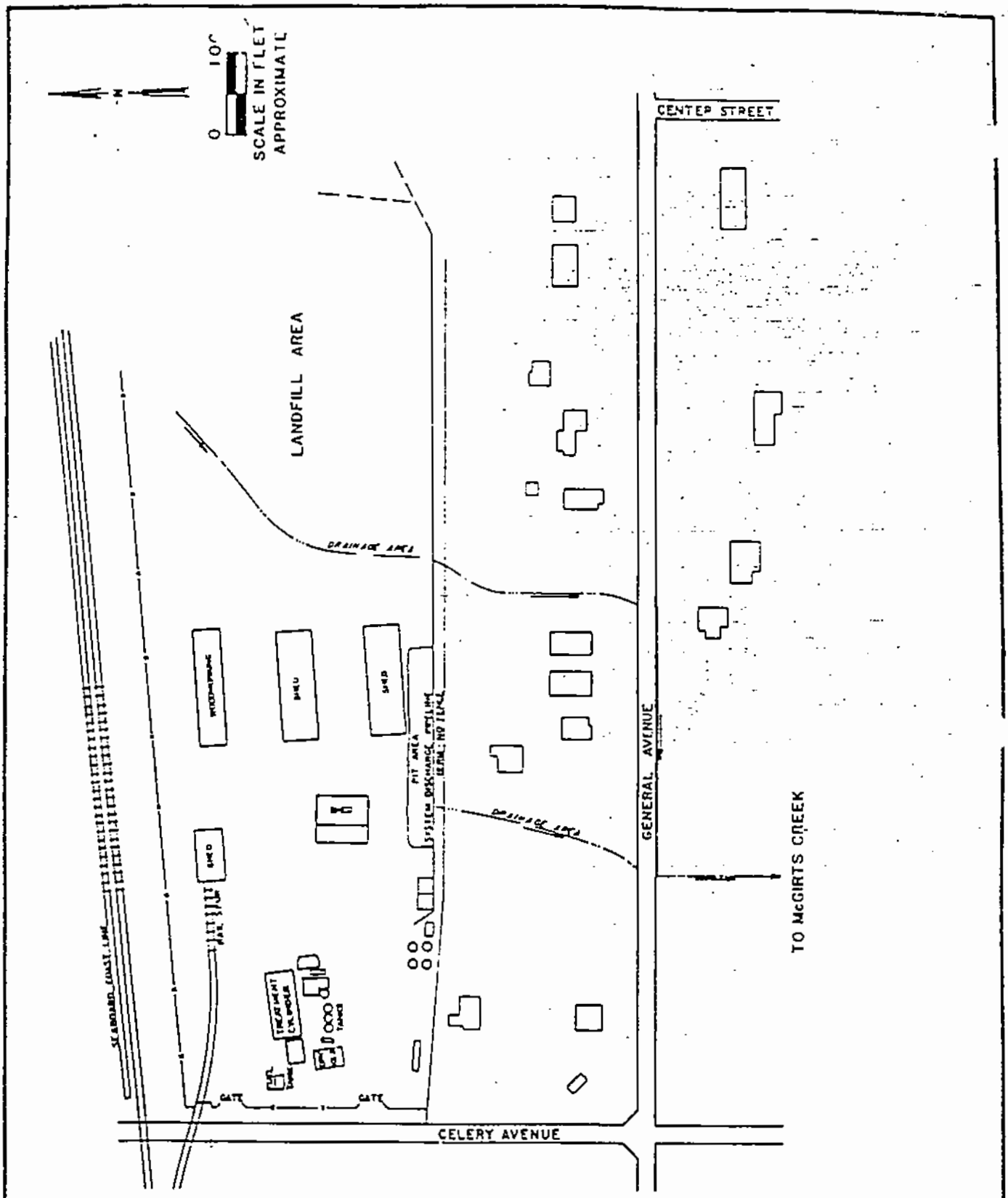


FIG. 1 - COLEMAN EVANS SITE AREA MAP



REM II

DETAILED SITE MAP

COLEMAN EVANS WOOD PRESERVING COMPANY

WHITEHOUSE, FLORIDA

FIGURE NO.

FIG. 2