

# **Site Review and Update**

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**AIRCO PLATING COMPANY, INCORPORATED**

**MIAMI, DADE COUNTY, FLORIDA**

**CERCLIS NO. FLD004145140**

**SEPTEMBER 30, 1997**

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

## **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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SITE REVIEW AND UPDATE

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MIAMI, DADE COUNTY, FLORIDA

CERCLIS NO. FLD004145140

Prepared by:

The Bureau of Environmental Toxicology  
Florida Department of Health  
Under a Cooperative Agreement with the  
Agency for Toxic Substances and Disease Registry

## Background and History

The purpose of this report is to determine whether public health issues and recommendations from our 1992 Interim Public Health Assessment have been addressed and to recommend follow-up activities, if necessary.

The Airco Plating Company, Inc. (Airco) occupies 1.5 acres in Dade County, Florida. The site is at 3650 N.W. 46th Street, 4 miles northwest of downtown Miami, Florida (Figures 1-3). The area around the site includes industry, warehouses, retail operations, and residences. Buildings cover half of the site and asphalt covers most of the remainder. Airco plates mostly with zinc, but also plates with brass, cadmium, chromium, copper, nickel, and tin. Cyanide, caustic compounds, and acids are also used in the plating process. Two 45 feet deep industrial wells on site pump approximately 15,000 gallons per day (gpd), 5 days a week. There are 150 mobile homes and several dozen single family homes located within 1/4 mile of the site. There are no agricultural areas within 3 miles of the site (MPB&A 1992).

In 1957, Airco constructed an on-site waste disposal plant. Their permit required them to segregate and treat their waste separately before discharging into percolation ponds. In January 1971, the Environmental Protection Agency (EPA) found evidence of illegal discharges into the percolation ponds. In 1973, EPA ordered Airco to pump the sludge out of the ponds. Airco began releasing the sludges into the Miami sewer system. Since 1982, Airco has separated pretreatment sludges from the waste water and has transported them to an EPA approved hazardous waste facility. In December 1986 and January 1987, EPA performed an expanded site investigation. EPA sampled surface soil, subsurface soil, and shallow and deep groundwater. EPA found metals and solvents associated with the plating in all sampled media. Release of particulates into the air is unlikely since the ground is vegetated, covered by buildings, or covered by parking lots. Due to the urban nature of the area, there is little chance that contaminants will come into contact with biota (ATSDR 1992).

In a July 1988 report, EPA described soil contaminated with metals and an organic solvent, perchloroethylene (PCE), also known as tetrachloroethylene. EPA also found PCE in groundwater, along with small amounts of metals. According to the December 1988 County Comprehensive Development Master Plan, future land uses at the site and the surrounding properties will remain industrial, light manufacturing. In February 1990, EPA added Airco to the Superfund National Priorities List (NPL) (MPB&A 1992).

In November 1990, Airco, through M.P. Brown & Associates, agreed to determine the extent of site contamination. The remedial investigation/feasibility study (RI/FS) began in 1991 (EPA 1993a). In April 1991, the Dade County Health Department visited the site. There was no evidence of ponds on the site. There was a 6-ft chain link fence surrounding the site (ATSDR 1992).

In our February 1992 Interim Public Health Assessment, we concluded the site was a potential public health concern (ATSDR 1992). We recommended:

1. A survey for private wells should be conducted in the area hydrogeologically downgradient from the site because tetrachloroethene, trans-1,2-dichloroethene, trichloroethene and vinyl chloride are present in the deeper monitoring wells, and some of the residences in the area date back to an era when city water was not available.
2. The location of downgradient high capacity industrial wells should be determined and their effects on the flow rate and the direction of the area groundwater should be assessed.
3. Conduct indoor air monitoring at the Airco facility to determine if VOC's are being released from groundwater used for industrial operations.

In February 1993, Airco completed the remedial investigation (RI). Airco found various metals, cyanide, and PCE in soils in the areas of the former percolation ponds. Airco also found elevated levels of PCE and metals in soils adjacent to the main building. They found PCE in excessive levels in the groundwater and they found cadmium to exceed groundwater standards. Since asphalt, concrete, or buildings cover most of the soils, human exposure is unlikely (EPA 1993a). Airco also conducted water level measurements and slug/pump tests to determine groundwater flow patterns. Airco found that the two on-site industrial wells control the direction and rate of groundwater movement in the shallow zone of the Biscayne aquifer. These two wells cause groundwater to flow towards the site. The groundwater flow in the intermediate and deep zones of the Biscayne aquifer is to the southeast and southwest, respectively (MPB&A 1992).

In October 1993, EPA signed their Record of Decision (ROD). The proposed remedy included soil vapor extraction, capping of highly contaminated soils, groundwater pump-and-treat, and institutional controls. In September 1994, the Florida Department of Environmental Protection (DEP) recommended that the soils not meeting clean up goals be excavated and disposed of at an appropriate off-site facility. In December 1996, Airco submitted a proposal to DEP. DEP agreed with the areas chosen for excavation, but did not agree with the proposed depths. Currently, DEP is waiting for Airco's response to the request for modification (DEP 1997).

## Current Site Conditions

On February 25, 1997, Julie Smith of the Department of Health, Bureau of Environmental Toxicology and Gary Miller of the Dade County Health Department visited the site. Airco is an active facility. Buildings or pavement cover the majority of the site. A 6-foot chain link fence topped with barbed wire restricted site access. No trespassing and guard dog signs were posted on the fence at two locations. The back of the facility, where the percolation ponds used to be, was covered with asphalt and stores debris (wood, drums, etc.). The area in front of the building on 46th Street was paved.

## Current Issues

There are no new documented community health concerns. There appear to be no other public health issues at this site. Except for indoor air monitoring, EPA has implemented the recommendations in our 1992 Interim Public Health Assessment. The recommendation for air monitoring is no longer needed due to the fact that over time, the volatilization of any organic solvents from the groundwater inside the facility is likely to be minimal when compared to the solvents being used in the actual plating process. The solvents generally used in the plating process do not represent a health concern to workers. Other recommendations addressed as follows:

- 1. A survey for private wells should be conducted in the area hydrogeologically downgradient from the site because tetrachloroethene, trans-1,2-dichloroethene, trichloroethene and vinyl chloride are present in the deeper monitoring wells, and some of the residences in the area date back to an era when city water was not available.**

In the 1993 remedial investigation, Airco determined the direction of groundwater flow and the effect of the two on-site industrial wells. In 1997, the Dade County Health Department determined that there are no residential wells within a half mile radius of the site (Miller 1997).

- 2. The location of downgradient high capacity industrial wells should be determined and their effects on the flow rate and the direction of the area groundwater should be assessed.**

The two on-site industrial wells cause the shallow groundwater to flow toward the site. There are two industrial wells in the trailer park south of the site. The intermediate and deep groundwater flow is in the direction of the southeast and southwest, respectively.

## Conclusions

Currently, no identifiable public health hazard exists at this site. Airco has implemented the recommendations in our February 1992 Interim Public Health Assessment. Therefore, no further public health assessment activity is necessary at this time.

The conclusions of this report are based on our analysis of the information listed in the Documents Reviewed section. We will evaluate new information as it becomes available to decide if further assessment is necessary.

## Recommendations

1. No further public health assessment activity is necessary at this time.
2. The Florida Department of Health will evaluate new information as it becomes available to decide if any additional public health activities are necessary.

## Documents Reviewed

ATSDR 1992. Agency for Toxic Substances and Disease Registry, Preliminary Health Assessment for Airco Plating Company Inc., Dade County, Miami, Florida. Prepared by the Florida Department of Health. April 1992.

Clark 1994. Edward E. Clark Engineers-Scientists, Inc.. Remedial Design Work Plan, Sampling & Analysis Plan, Health & Safety Plan, and Preliminary Design. October 1994.

DEP 1997. Department of Environmental Protection. Site Summary for Airco Plating. April 1997.

EPA 1993a. Environmental Protection Agency. Superfund Proposed Plan Fact Sheet. Airco Plating Site. July 1993.

EPA 1993b. Environmental Protection Agency. Record of Decision. October 1993.

Miller 1997. Gary Miller, Environmental Health Specialist, Dade County Health Department. Personal Communication. July 31, 1997.

MPB&A 1992. M.P. Brown & Associates, Inc.. Remedial Investigation. December 1992.

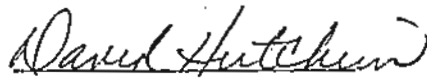
Preparer of Report

Michele Mitchell  
Environmental Specialist  
Bureau of Environmental Toxicology  
Florida Department of Health



## CERTIFICATION

This Site Review and Update was prepared by the Department of Health 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 Site Review and Update was begun.



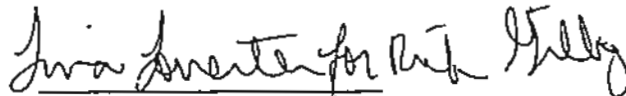
Technical Project Officer

Superfund Site Assessment Branch (SSAB)

Division of Health Assessment and Consultation (DHAC)

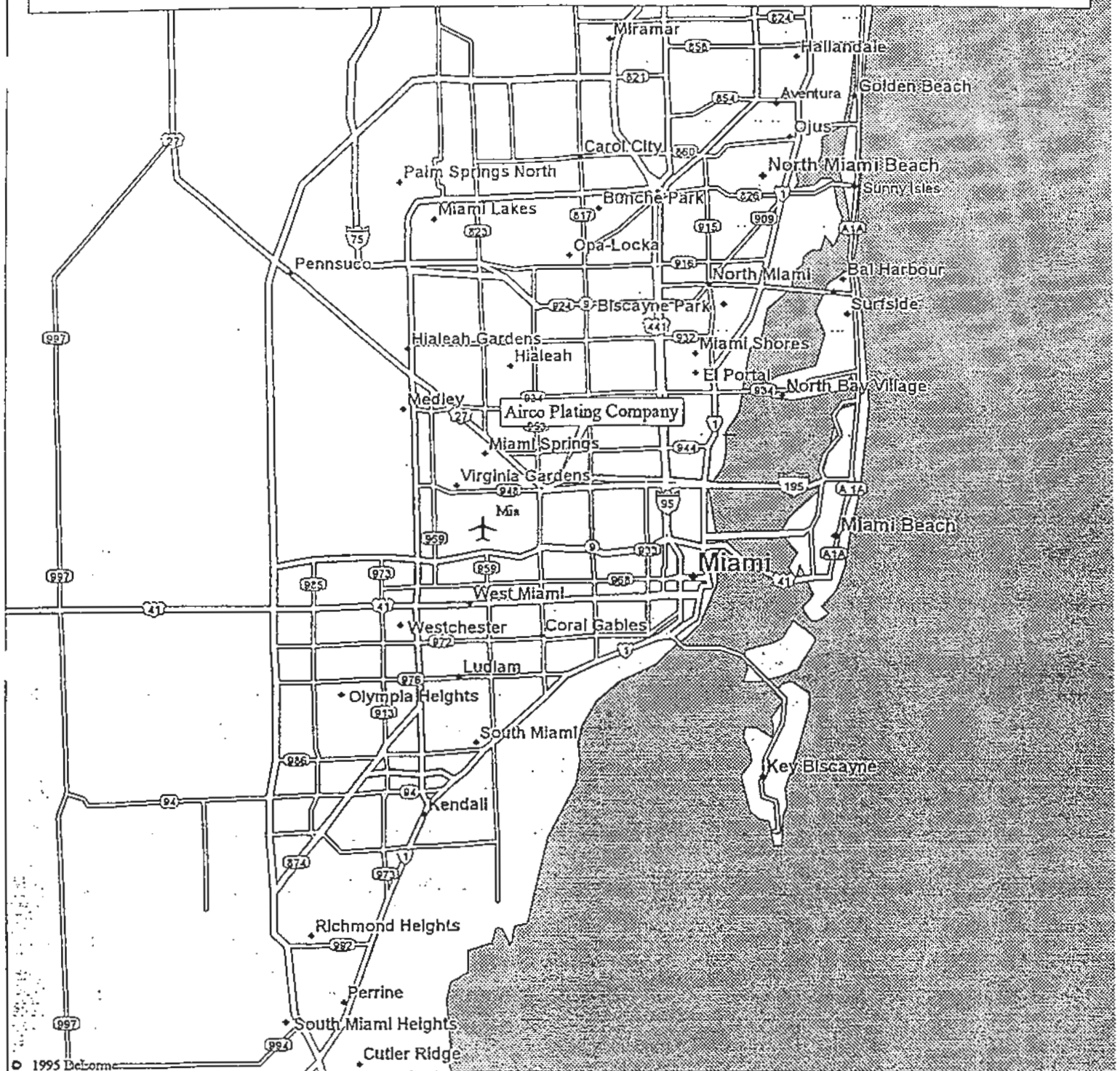
ATSDR

The Division of Health Assessment and Consultation, ATSDR, has reviewed this Site Review and Update and concurs with its findings.



Chief, SPS, SSAB, DHAC, ATSDR

# Figure 1. Regional Map



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Mon Jul 28 10:12 1997

Scale 1:250,000 (at center)

5 Miles

5 KM

Major Connector

State Route

Primary State Route

US Highway

Interstate/Limited Access

Toll Highway

Town, Small City

Large City



Sched Service Airport

Mega City

Locale

City

Land

Lake, Ocean, Large River



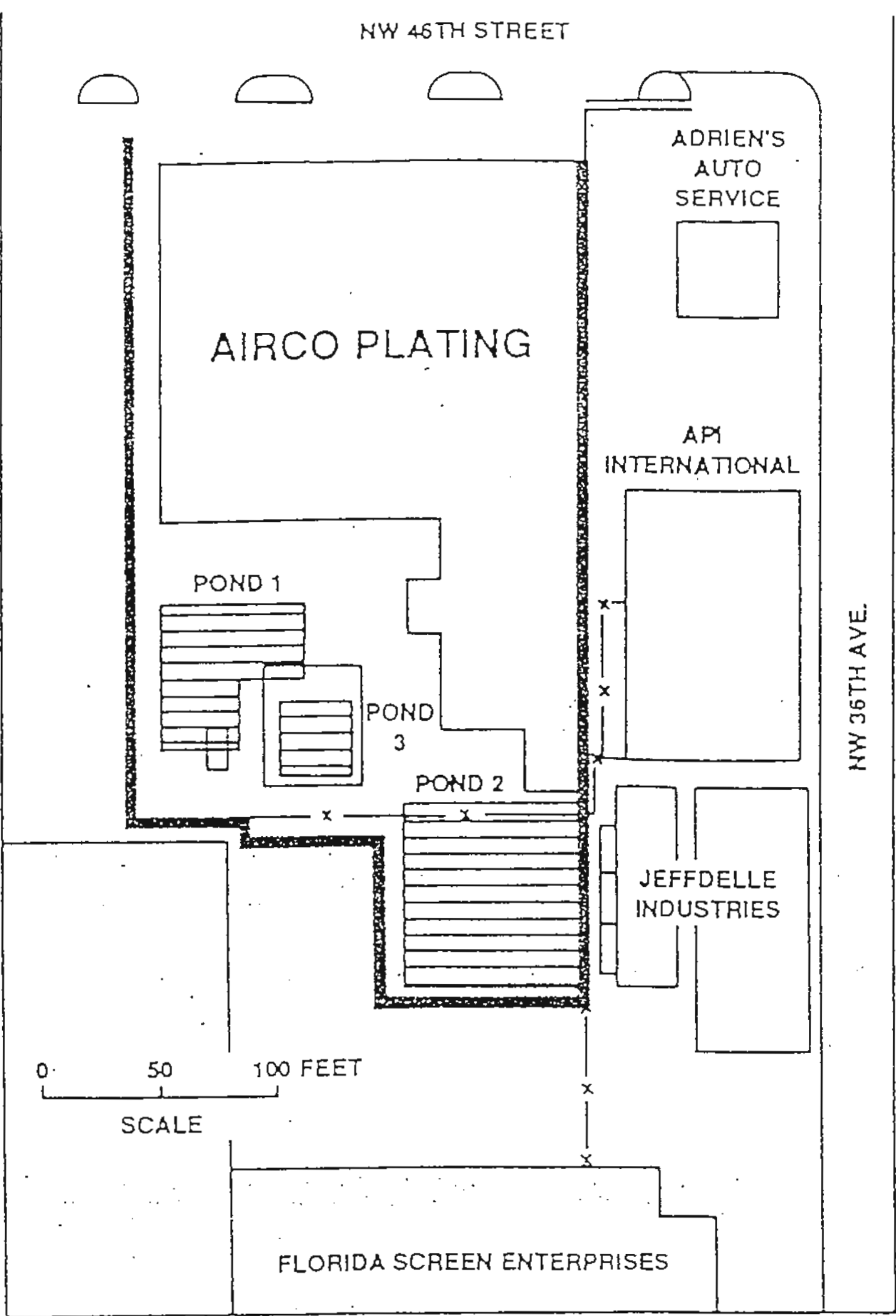


Figure 3 : Site Layout and Location of Former Seepage Ponds