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## **Vineland Chemical Company**

### **Vineland City, Cumberland County**

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Winter 1996 / Environmental Health Fact Sheet

#### ***You Should Know:***

◆ ***Elevated levels of arsenic have been found near the Vineland Chemical Company site.***

◆ ***At this time, bathing at nearby Maurice River and Union Lake beaches is not considered to be a public health threat.***

◆ ***The NJ Department of Health will be evaluating new EPA beach sampling information each Spring and will inform the community.***

◆ ***A fishing advisory exists. Eating fish from Union Lake or the Maurice River is not recommended due to elevated levels of metals.***

◆ ***Residents with health concerns or problems should consult with their physician.***

#### **Arsenic Contamination Found**

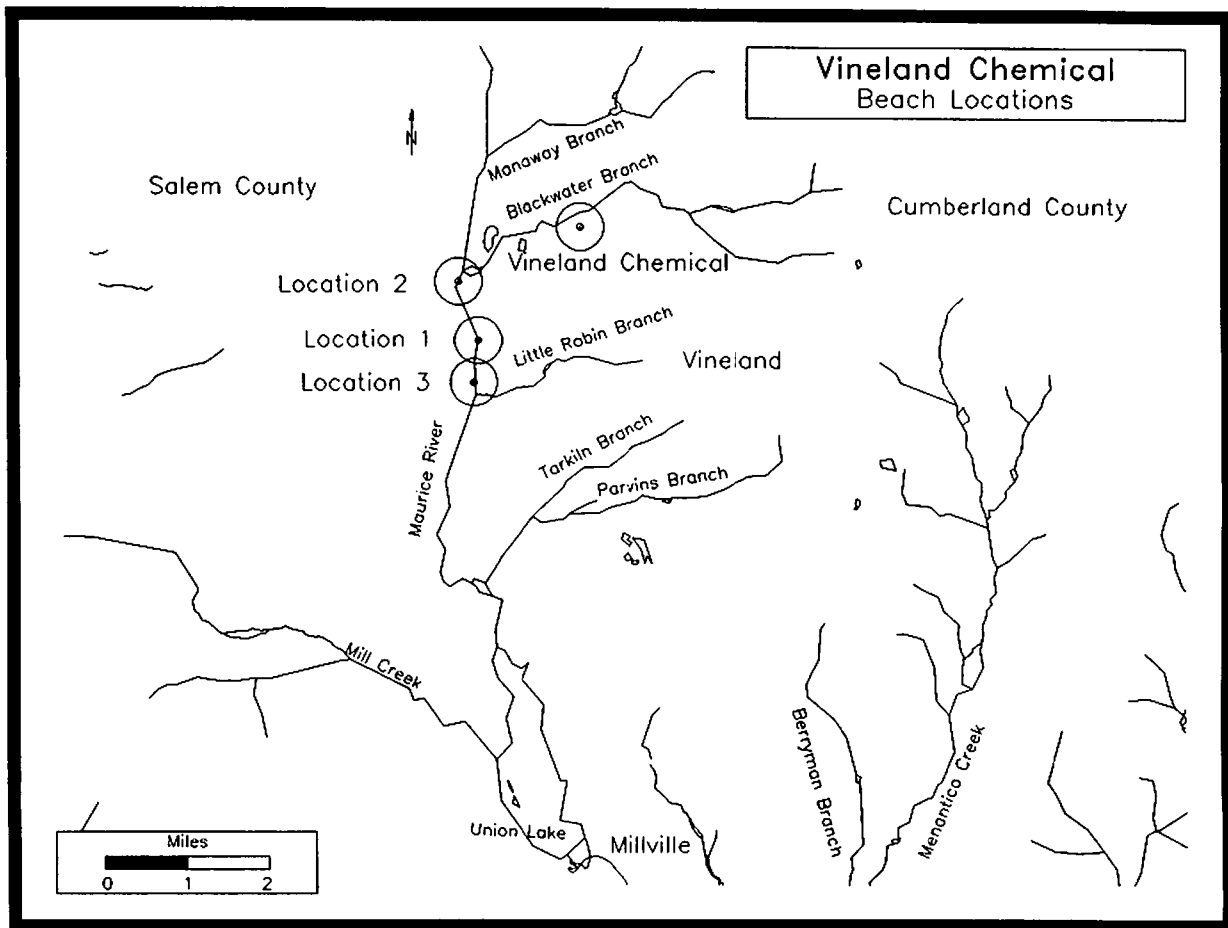
Chemical production, storage, and waste disposal at the Vineland Chemical Company resulted in large amounts of onsite and offsite arsenic contamination. Elevated levels of arsenic have been found at the site and at several locations downstream (see map on next page). Downstream areas include the Blackwater Branch of the Maurice River and to a lesser extent, the Maurice River below the Blackwater Branch and Union Lake.

#### **Site Description**

Between 1947 and late in the 1980's, the Vineland Chemical Company manufactured agricultural chemicals (herbicides, pesticides, fungicides). Untreated waste waters were discharged into unlined lagoons and waste salts containing 2% arsenic were stored in open piles, in an open concrete pit with cracked walls, and in empty chicken coops. Groundwater underlying the site became contaminated via leaching of the arsenic laden wastes which overflowed onto the soil.

Over time, the arsenic contamination moved off the Vineland Chemical site in surface water runoff and groundwater until nearby surface water bodies were contaminated.

The wetlands of the Blackwater Branch adjacent to the site are highly contaminated with arsenic. Lower levels of contamination are found downstream in the sediments of the Maurice River, as well as Union Lake. Three areas of the Maurice River are used by residents for swimming and boating. Location 1 is known locally as Almond Beach, location 2 as Alliance Beach, and location 3 as "BA" Beach. Union Lake is also used for swimming and boating.



**Note: Location 1 is known locally as Almond Beach, location 2 as Alliance Beach, and location 3 as "BA" Beach.**

The U.S. Environmental Protection Agency (USEPA) is responsible for the cleanup of the Vineland Chemical site. It has been divided into four phases:

- (1) cleaning up the soils at the former Vineland Chemical plant;
- (2) cleaning up the groundwater;
- (3) cleaning up sediments of the Maurice River and stream channels such as the Blackwater Branch; and
- (4) cleaning up sediments of Union Lake.

The New Jersey Department of Health (NJDOH) prepared a *Health Assessment* of the Vineland Chemical site in May 1989, a *Site Review and Update* in May 1995, and a *Health Consultation* in January 1996. The NJDOH will continue to review USEPA's sampling results and will inform residents and

the Local Health Officer if the risk from swimming or consuming fish from this area changes.

### Health Hazards

The community has expressed concerns about health effects from long-term exposure to arsenic. Because arsenic may bind to soil and sediments, some beaches of the Maurice River and Union Lake are contaminated with low levels of arsenic.

Everyone is exposed to low levels of arsenic from normal diets. Certain foods, such as seafood, meats and grains, contain naturally occurring arsenic. The type of arsenic found in foods (organic arsenic) is different from the type of arsenic found at this site (inorganic arsenic). Inorganic arsenic has the potential to be harmful to health.

Residents living near certain Superfund sites, such as Vineland Chemical, or near metal smelters or power stations, may have increased exposure to arsenic. For arsenic to cause health effects, you must come in contact with the arsenic. Health effects from contaminants depend on many factors. These include how long you have been exposed to a contaminant, how it enters your body and how sensitive your body is to it.

At the levels detected at the beach areas used for recreational purposes downstream from the Vineland Chemical site, health problems resulting from exposure to arsenic are not generally expected. NJDOH has evaluated the potential for health effects among adults and children who were assumed to be exposed to maximum concentrations of arsenic in surface waters, beach soils and sediments of the Maurice River and Union Lake. Estimates regarding the potential for adverse health effects were made by estimating the amount (or dose) of arsenic that a person might come in contact with on a daily basis. This estimated exposure dose was compared to established health guidelines. Bathing in the Maurice River and Union Lake Sailing Club beaches is not considered to be a public health threat.

### **Public Health Concerns**

In an effort to respond to community concerns, the NJDOH has examined arsenic data collected by the USEPA at the Vineland Chemical site, and will continue to evaluate any new water, sediment and fish data from the Maurice River and Union Lake. A January 1996 *Health Consultation* on these issues is available from the NJDOH. Other evaluation reports will be made available as they are completed.

The NJDOH has also assessed risks from past contact with arsenic on the Vineland Chemical site. Concerns were related to NJDOH by residents who recalled playing on the site as children years ago. NJDOH has been in contact with residents and has discussed these past exposures and potential effects.

A fishing advisory exists for Union Lake. Eating fish caught in Union Lake or the

Blackwater Branch of the Maurice River is not recommended at this time. Elevated amounts of mercury have been found in these fish. Although mercury is not known to have come from the Vineland Chemical site, it has been found in this area. The Local Health Department can provide you with specific information regarding these precautions.

Based on the most recent information, it is not likely that swimming at the Maurice River beaches or in Union Lake would result in higher risk of health effects for most people. However, the NJDOH will continue to monitor sampling data to evaluate if concern exists for sensitive people from the arsenic in the affected areas.

### **How Do I Know If My Health Has Been Affected?**

There are few medical tests which determine low levels of arsenic exposure. When exposure is at low levels, even for a long time, routine medical tests will not detect the exposure. Arsenic can be measured in urine, hair and nails. Laboratory tests on hair and nails measures arsenic exposure within the past 6 months. Blood arsenic is not a reliable measure of low level or past exposure. The test most often used to detect recent arsenic exposure is a urine test. However, the organic arsenic in food you may have eaten recently will also show up in this test. It is important that laboratory results differentiate between any organic and inorganic arsenic identified in the urine in order for your doctor to determine if the arsenic detected is of concern.

Tests for low level exposure do not foretell whether you will have any harmful effects later. Effects of exposure are difficult to assess because some individuals may be more sensitive to the exposure than others, and, some effects may take years to develop. Where the potential for exposure exists, it is best to identify the exposure and eliminate it through cleanup. Residents with health concerns or problems should seek medical evaluation and consultation from their physician. NJDOH can provide information to physicians regarding arsenic exposure.

## Plans To Address Environmental Concerns and Protect Public Health

Cleanup activities are eliminating exposure to arsenic both on the Vineland Chemical site and the surrounding areas. Public health is being protected where this cleanup has been done. The NJDOH plans to continue evaluating the public health impact of the arsenic contamination through public health consultations on swimming locations and fish consumption. NJDOH will provide information for physicians and health care providers about the health effects of arsenic and other contaminants.

## What Can I Do to Protect My Family's Health?

**\* Avoid contact with arsenic. Please follow any posted precautions indicating locations with elevated levels of arsenic.**

**\*Do not eat fish caught at Union Lake or Blackwater Branch of the Maurice River.** Contact your Local Health Department for information regarding these precautions at specific locations.

**\*If you think you may have been exposed to arsenic contamination, see your doctor and explain your concerns.** NJDOH has information available for your physician on request.

## For More Information:

City of Vineland  
Health Department (609) 794-4131

Cumberland County  
Health Department (609) 453-2150

New Jersey Department of Health,  
Environmental Health Services  
(609) 984-2193

Agency for Toxic Substances and  
Disease Registry  
Regional Office (212) 637-4305  
Atlanta Headquarters (404) 639-6300

U.S. Environmental Protection Agency,  
Regional Office  
Matt Westgate, RPM (212) 637-4422

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