

# **Site Review and Update**

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**RENORA, INCORPORATED**

**EDISON TOWNSHIP (BONHAMTOWN), MIDDLESEX COUNTY, NEW JERSEY**

**CERCLIS NO. NJD070415005**

**NOVEMBER 28, 1995**

**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**

## **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:

The New Jersey Department of Health  
Environmental Health Service

Under a Cooperative Agreement with  
The Agency for Toxic Substances and Disease Registry

## SUMMARY OF BACKGROUND AND HISTORY

Renora, Incorporated is located at 83 South Main Street, Edison (Bonhamtown) Township, Middlesex County, New Jersey (Figure 1). The site is a one acre tract of level land built above the 100-year flood-plain with up to 12 feet of demolition debris. The northern boundary is Mill Brook. The original meandering path of the stream was straightened to enable more of the site to be usable. Adjacent to the site is a commercial area. On the western boundary is the Conrail Railroad. To the south of Renora is the New Jersey Turnpike (Figure 2). The site is located within a heavily populated area adjacent to a large condominium complex. The Bonhamtown section of Edison Township has a population of approximately 2,200.

Drinking water for the area is supplied by the Edison Township Water Department. No well fields are located within one-half mile of the site. The Water Department is not aware of the presence of any private or industrial wells in the area. (4)

Renora, Inc. was a New Jersey Department of Environmental Protection (NJDEP) licensed collector and hauler of waste oil. The property was leased from Clementi Brothers Inc. Other waste disposal and hauling services were conducted on-site under the names Mid-Atlantic Tank Cleaning, Inc. and R&A Waste Oil. However, the site was primarily used as a storage facility. Renora, Inc. started operations in 1978 and operated until 1982.

Starting in 1978, The NJDEP noted a continuous lack of site security, poor housekeeping, and leaking drums and tankers. In March 1980, the NJDEP ordered Renora Inc. to cease all operations and to clean the site. The NJDEP revoked their license in November 1980, which effectively closed the business. Clean-up activities sponsored by Renora, Inc. ceased in December 1980, due to a lack of funds and the site was abandoned in June 1982.

The site was placed on the National Priority List in December 1982. The United States Environmental Protection Agency (USEPA) began removal actions in October 1984. The Primary Responsible Parties (PRP's) assumed responsibility for the removal action. Approximately 85,000 gallons of waste oil and 1,100 cubic yards of contaminated soils were removed. In addition, the removal action included 1,000 drums and 25 tankers and truck trailers and their contents. Approximately half of the contaminated materials were contaminated with polychlorinated biphenyls (PCB's). On March 21, 1989, a Consent Decree was signed by the PRP's to remove an additional 2,046 cubic yards of PCB contaminated soil.

After the initial removal activities were completed, a Remedial Investigation and Feasibility Study (RI/FS) was conducted and released in May 1987. It was determined that additional on-site surface soils were contaminated with PCB's, polyaromatic hydrocarbons (PAH's), volatile organic compounds (VOC's), and/or metals. The surficial aquifer was found to be contaminated with chloroethane and metals. Samples taken at the periphery of the site indicated that the surface water and sediments were contaminated with metals, pesticides, phenolics, and VOC's. Most of the contamination was found to be at the northern and southeast

corners of the site. Air monitoring results indicated that there were no VOC's detected in the ambient air.

A Record of Decision (ROD) was signed on September 29, 1987. The ROD recommended the excavation and removal of PCB contaminated soil and the bioremediation of PAH contaminated soil. Two EPA contractors were selected to undertake a bioremediation treatability study for the removal of PAH's in contaminated soils. They determined that there was no reduction in PAH concentrations. This was primarily because of the high clay content of the soil which bound the PAH's, the presence of other preferential biodegradable substrates, and the relative difficulty of biodegrading the PAH molecule. (4)

The USEPA subsequently released a Phase II Feasibility study (3) to reevaluate the remedial alternatives, on March 18, 1991. PAH's were found in surface and subsurface soil samples. The highest concentrations of contamination were found to be at a depth of eight to ten feet. Phenanthrene was the PAH with the highest concentration in surface soil samples. Arsenic and lead were found in both surface and subsurface soils. The USEPA concluded that no remediation is required for the groundwater, subsurface soil, surface water and sediments because exposures to these media do not pose an unacceptable risk to human health and the environment. However, contaminated surface soil poses a potential threat to human health if not remediated. Remediation of the contaminated surface soil is expected to begin in late spring 1995, and will consist of excavation and off-site disposal of the contaminated soil, backfilling with clean fill, and then placing a cap on the site. (5)

The Renora Inc. health assessment (1) was released on April 10, 1989. The health assessment stated that the primary environmental pathway of contaminant migration was the soil on-site. The contaminants of concern were PCB's, PAH's, and to a lesser degree metals. Human exposure to contaminated soil could occur through ingestion, inhalation, and dermal contact. The health assessment also identified the superficial aquifer as being contaminated primarily with chloroethane, cadmium, and zinc. However, since all of the residents use municipal water supplies, ingestion of groundwater was considered to be of minimal concern.

Community concerns were not addressed in the health assessment. The health assessment indicated that the only public health concern was focused on the danger from skin contact and ingestion of PCB's and PAH's by trespassers.

The health assessment concluded the following:

- 1) The site is of potential health concern because of the risk to human health resulting from possible exposure to hazardous substances at concentrations that may result in adverse health effects;
- 2) There is no current significant human exposure evident;

- 3) The remedial worker is of most concern for exposure to hazardous substances;
- 4) The ROD adequately addressed the public health concerns of the site as it exists inside the site fence and concerning the contaminants present, with the exception of the metals;
- 5) The concentrations of metals reported in the two sets of sampling data are significantly different;
- 6) The ROD selected remedy does not address the metals contamination or their removal;
- 7) There are concerns with the sediments, groundwater, and the surficial soil contamination off-site because of the limited data; and,
- 8) Should land use plans and/or zoning change for the site, further review by ATSDR may be warranted.

In addition the health assessment recommended the following;

- 1) Remedial workers should be provided proper safety training and protective equipment;
- 2) Institutional controls should be implemented to prevent future land use from increasing exposure to remaining contamination;
- 3) Analyze off-site samples of surficial soil, downstream sediment, and groundwater to better characterize the extent of contamination. Amend remedial actions as necessary to protect public health;
- 4) Collect and conduct metals analyses on samples collected from all media off-site and amend the ROD to incorporate any additional procedures necessary to protect public health; and,
- 5) ATSDR will reevaluate this site if data become available suggesting that human exposure to significant levels of hazardous substances are currently occurring or have previously occurred.

### CURRENT SITE CONDITIONS

On November 15, 1994, a site visit was conducted by Arthur Block, Senior Regional Representative for the ATSDR, Jim Pasqualo and Howard Rubin of the NJDOH, the USEPA Remedial Project Manager, and representatives from the Middlesex County Health Department. The site consisted of a small fenced area overgrown with vegetation. There were no buildings or other structures on the site except for an 8 ft by 14 ft aluminum trailer in the southwest corner of the lot. The USEPA had left approximately twelve 55 gallon drums containing used

investigative materials on-site when the 1989 remedial activities terminated. There were no observable physical hazards found on-site. Trespassing is not expected since the site is on private property and is surrounded by a fence.

Within one hundred yards of the site is a large condominium complex, a commercial area, the Conrail railroad tracks, and the New Jersey Turnpike. The residences use municipal water and sewage lines.

Signs indicating the presence of a Superfund site are no longer present. A fence provides adequate site security. There were no indications of trespassing.

There were no changes in site conditions subsequent to the 1989 health assessment. The conclusions made in the 1989 health assessment were correct and complete and remain valid under the present site conditions.

On March 18, 1991, The USEPA conducted a Phase II Feasibility study at the Renora site (3). Sampling was conducted between March 9 and April 1, 1992 (2). PAH's were found in on-site surface and subsurface soil samples. The highest level of PAH's were found to be in the top two feet of soil at 180 ppm. The PAH with the highest concentration was phenanthrene at 34 ppm. Arsenic and lead were found in surface soils at 10 and 210 ppm, respectively. Arsenic and lead were detected in subsurface soils at higher concentrations than in the surface soils. Chromium was found in downstream Mill Brook samples. PAH's were detected in all of the on-site and downstream sediment samples. Arsenic at 0.093 ppm, was the only compound present in groundwater samples that was above its health-based comparison value.

No completed human exposure pathways are probable as a result of this site. All of the residents use city water, so groundwater contamination is not of public health concern. Any off-site surface waters, sediments, and soils that are contaminated contain concentrations of contaminants that are below their respective health comparison values. The USEPA is going to remove contaminated on-site surface soils. Therefore, the only possible source of exposure would be via excavation of contaminated sub-surface on-site soils. This could occur if there is no mechanism, such as a property deed restriction, for future notification of the public, that contaminated sub-surface soils exist. No documented human exposures to contaminated media have occurred in the past.

## CURRENT ISSUES

Since the site is secured by a fence and there are no indications of trespassing, human health risks from exposure to contaminated surface soils are not expected to occur. Subsequently, there are no completed human exposure pathways that exist for the Renora, Incorporated site.

There are no new community health concerns identified by the ATSDR/NJDOH. Also, the Middlesex County Health Officer stated that there are no new community health concerns. The only past community health concern which still exists regards the future development of the site for recreational or other uses without the developers being aware that contaminated sub-surface soils are present. The Health Officer and the community want a deed restriction placed on the property.

## CONCLUSIONS

1. ATSDR and the NJDOH consider the site to currently present no apparent public health hazard because:
  - A. The only potential past and present human exposure pathway is via ingestion and dermal contact with on-site surface soils contaminated with PAH's, arsenic, and lead. Human exposures are not expected to occur in the future because access to the site has been adequately prevented by a security fence.
  - B. Airborne contamination with VOC's have not been detected via airborne sampling.
  - C. Groundwater is not utilized as a potable source of drinking water in the community.
  - D. Off-site surface waters, sediments, and soils do not have sufficient concentrations of contaminants to cause adverse health effects.
2. No physical hazards remain at the Renora, Incorporated site.
3. The conclusions made in the 1989 health assessment regarding the site being of potential health concern were valid. The recommendations for additional off-site sampling were followed.
4. At this time, there is no need for further evaluation of the site. However, additional sampling may be necessary if site conditions change.
5. The USEPA plans to remove contaminated on-site surface soils.
6. The remedial activities specified in the ROD Amendment, when implemented, are sufficient to address the concerns of the ATSDR, the NJDOH, and the community regarding the site and are consistent with protection of the public health with the above exception.

7. The data and information developed in this SRU have been evaluated to determine whether HARP follow-up actions may be indicated. No HARP evaluation is indicated at this time.

### RECOMMENDATIONS

1. After a review of the most recent documents for the Renora, Incorporated site, the ATSDR and the NJDOH have determined that, based on the current site conditions, the site should be remediated according to the procedure stated in the Record of Decision Addendum.
2. As recommended in the original health assessment, institutional controls should be implemented to prevent future land use from increasing exposure to the remaining contamination. Also, remedial workers should be provided proper safety training and protective equipment.
3. New environmental, toxicological, health outcome data, or changes in conditions as a result of implementing the proposed remedial plan, may determine the need for other additional actions at this site. The ATSDR and/or the NJDOH shall evaluate any new data for its public health significance.

## DOCUMENTS REVIEWED

1. Agency for Toxic Substances and Disease Registry. Health Assessment for Renora Incorporated, Edison Township (Bonhampton), Middlesex County, New Jersey, April 10, 1989.
2. BCM. Report of Sampling Results for Renora Site Remediation. Renora, Inc., Edison Township, Middlesex County, New Jersey. June, 1992.
3. United States Environmental Protection Agency. Phase II Feasibility Study Report for Renora, Inc., Edison Township, Middlesex County, New Jersey. May 11, 1994.
4. United States Environmental Protection Agency. Superfund Proposed Plan for Renora, Inc., Edison Township, Middlesex County, New Jersey. July 1994.
5. United States Environmental Protection Agency. Record of Decision Amendment, Renora, Inc., Edison Township, Middlesex County, New Jersey. October 6, 1994.

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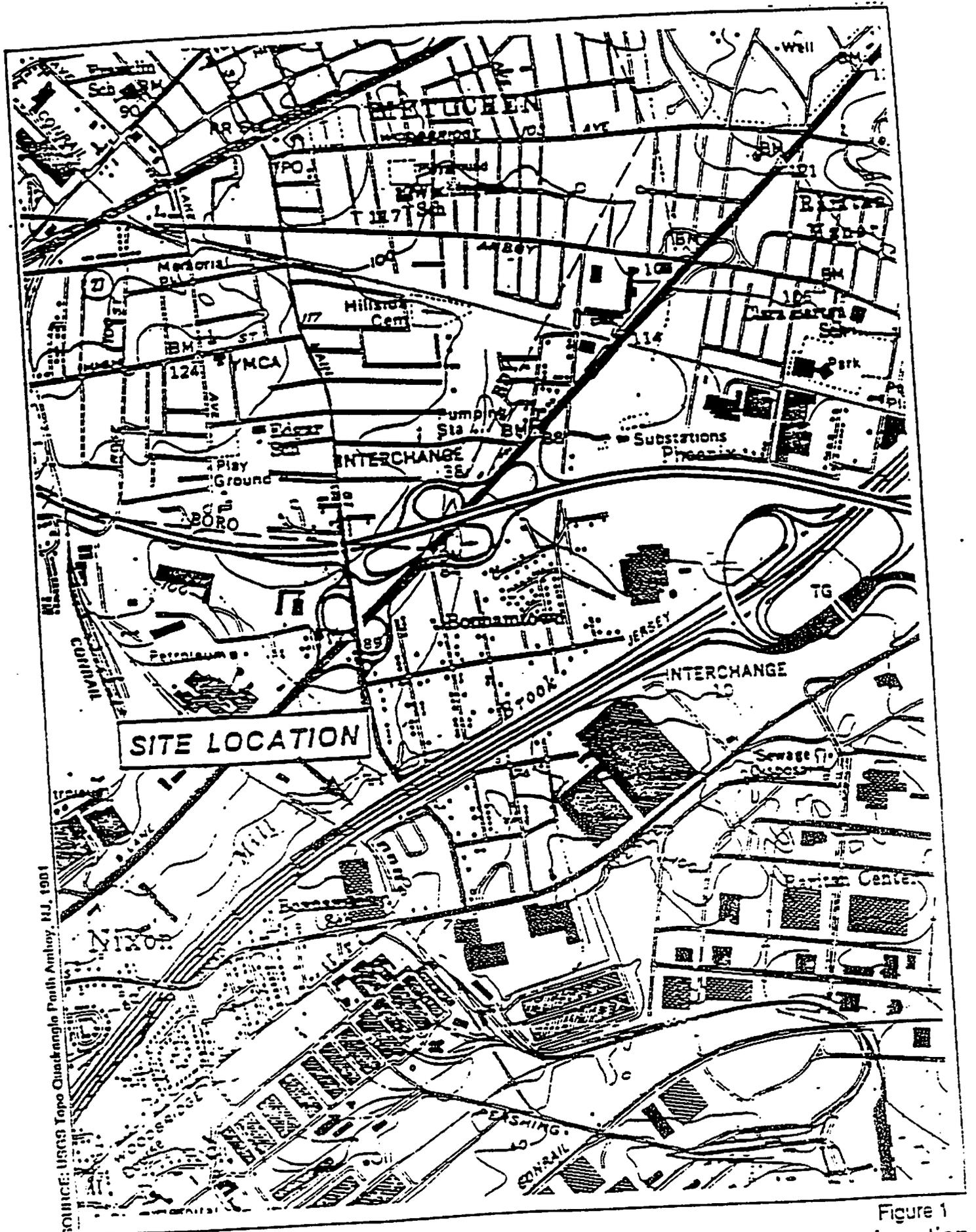
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**APPENDICES**



SOURCE: USGS Topo Quadrangle Faith Anthony, NJ, 1901

BCM Project No. 00-4376-10

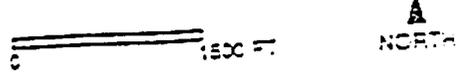
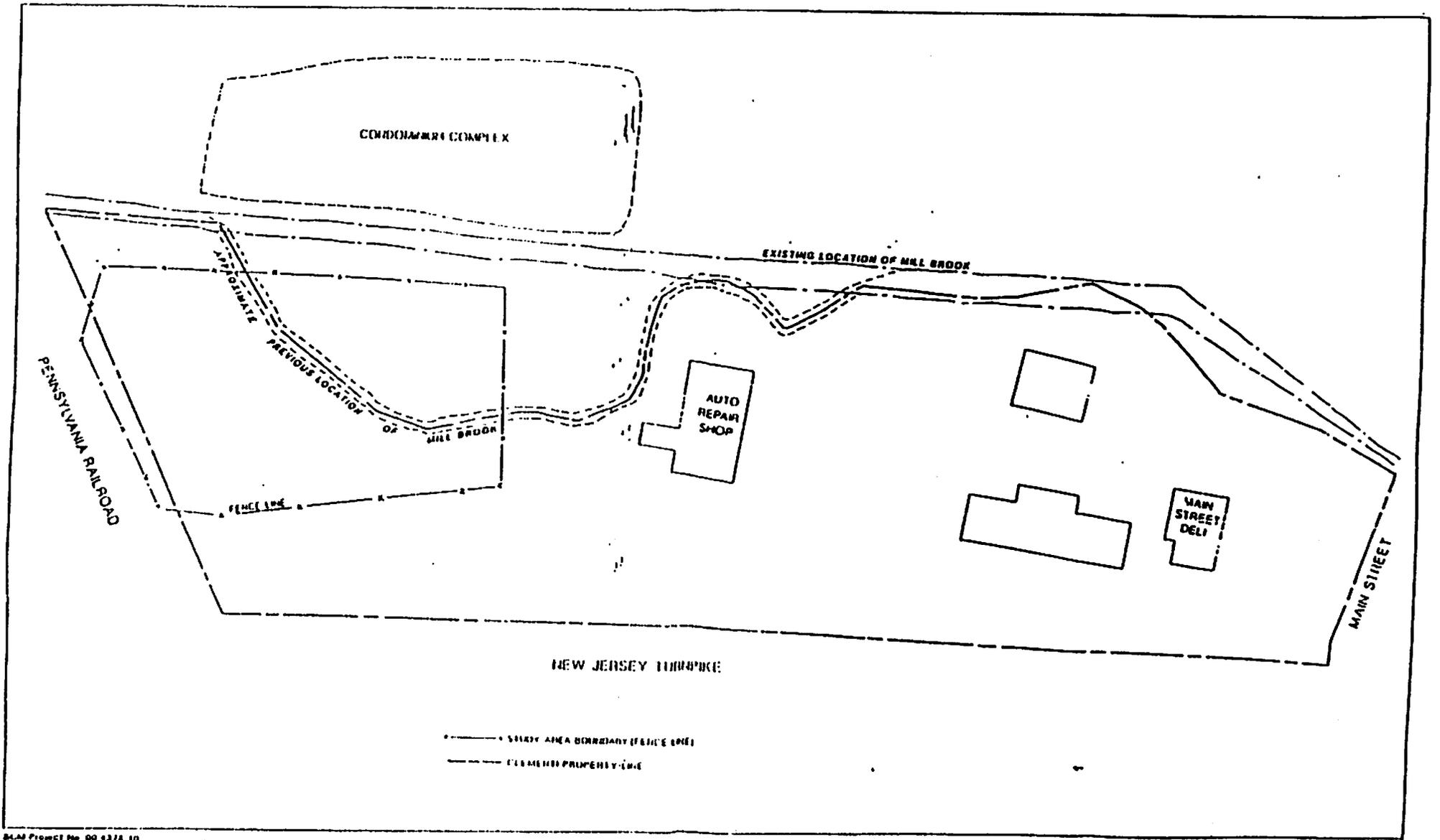


Figure 1  
Site Location



BLM Project No 00 4374 10

SCALE  
0 50 FEET



FIGURE 2 Property Layout