



Department of Energy
Washington, DC 20545

NY. 22
Aerospace

JUN 16 1986

Mr. John Scaramella
1434E Richmond Road
Staten Island, New York 10304

Dear Mr. Scaramella:

The Department of Energy is implementing a program to evaluate the radiological condition of sites that were utilized under the Manhattan Engineer District and/or the Atomic Energy Commission in the development of nuclear energy and weapons. The property listed as Block 1105, Lot 26 in Staten Island (1940's address 2393 Richmond Terrace, Port Richmond, New York) known as the former Staten Island Warehouse site, was identified as such a site. It was used in the early 1940's, by African Metals Corporation, to store pitchblende ore which contained natural uranium that was eventually purchased by the Federal Government to be used in the first atomic bomb. The enclosed material, which represents the results of the Department's review of the site, is being provided to you, for your information, as owner of record for the property.

As indicated in the enclosed summary and preliminary radiological survey report, the survey data collected in 1980 for the Department at the subject property did identify concentrations of residual radioactivity in excess of normal background concentrations. The results of the preliminary survey were provided by letter dated November 19, 1980, to the property owner representative, who was at the time RHS Realty, and to the State of New York. While the levels of residual radioactivity did not present any significant risk to the general public, based on site use at the time of the survey, they appear to exceed residual radioactivity soil concentration guidelines used by the Department of Energy for properties which have no restrictions on their use. However, on the basis of a review of historical information, the Department has determined that it does not have authority under the Atomic Energy Act of 1954, as amended, to conduct remedial action at the site because the Government did not have custody of the ore at the time it was stored in the warehouse at the site. Therefore, the site is being eliminated from consideration under the Formerly Utilized Sites Remedial Action Program.

By copy of this letter, we are notifying the Environmental Protection Agency and the State of New York of these actions and findings.


Documentation supporting this decision is available for public review at the Department's Public Reading Room located in Room 1E-190 of the Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C.

If you have any questions regarding this decision or the availability of the material at the reading room, please contact me at 301-353-4716.

Sincerely,



Edward G. DeLaney, Director
Division of Facility and Site
Decommissioning Projects
Office of Nuclear Energy

NE-23

DeLaney

6/13/86

Enclosure

cc:

J. Spath, New York State
R. Borri, New York State
T. DeBore, New York State
B. Librizzi, EPA
H. Snyder, EPA

bcc:

S. Ahrends, OR
V. DeCarlo, EH- 23
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NE-20 RF
DeLaney RF
NEG (4)

NE-23: EDeLaney:ph:353-4716:6/13/86:IBM:163/78:3.32.9

STATEN ISLAND WAREHOUSE SITE
(The Former Archer-Daniels
Midland Company)
2393 Richmond Terrace
Port Richmond, New York

Site Function

A warehouse located at Richmond Terrace was used for uranium ore storage from 1939 to 1942. In 1942, 2007 drums containing 1072 long tons of Belgian Congo uranium ore were stored here. The ore contained about 660 tons of U_3O_8 and 170 grams of radium. From the warehouse, the ore was transported to various Manhattan Engineer District sites for long-term storage and/or processing.

Site Description

No permanent buildings currently exist. The lot is vacant with a ground cover of gravel and weeds. Figure 1 shows the location of the site.

Owner History

At the time of use for uranium ore storage, the warehouse was owned by Archer-Daniels Midland Company. Since 1942, ownership has changed several times. The current owner of the property is the John Scaramella.

The ore was the property of the African Metals Corporation. The Manhattan Engineer District contractor purchased only a recoverable portion of the uranium ore.

Radiological History and Status

A visual inspection was performed by Department of Energy (DOE) (then the Energy Research and Development Administration) Oak Ridge Operations Office personnel on August 18, 1976. All buildings have been destroyed, and at that time, the site was being used as a truck/trailer parking lot. The DOE Environmental and Safety Engineering Division determined that additional data were needed, instituted an owner search, and scheduled a site visit. Oak Ridge National Laboratory (ORNL) personnel conducted the scheduled screening survey in July 1980. The survey indicated that a 20-meter x 40-meter area in the northwest corner of the lot was contaminated, probably with Belgian Congo ore. ORNL recommended that a formal survey be conducted.

After reviewing the preliminary survey data and other relevant information including data on the storage of the ore at the site and sale of the uranium portion of the ore to the Government by African Metals Corporation, DOE has determined that it does not have authority under the Atomic Energy Act of 1954 to conduct remedial action at the Staten Island Warehouse site. African Metals retained custody of the ore in the warehouse on the site. Custody was transferred to the Government after the ore was loaded on the barge. Payment was made based on sampling and weighing of the ore shipped the Government facilities and on the calculated amount of recoverable uranium in the ore.

As a result of the no authority determination, the Staten Island Warehouse site has been eliminated from further consideration under the Formerly Utilized Sites Remedial Action Program. The Environmental Protection Agency and the State have been notified of the DOE determination.

PRELIMINARY RADIOLOGICAL SURVEY REPORT OF THE
FORMER STATEN ISLAND WAREHOUSE SITE
(ARCHER-DANIELS MIDLAND COMPANY) AT
PORT RICHMOND, NEW YORK

Work performed
by the
Health and Safety Research Division
Oak Ridge National Laboratory
Oak Ridge, Tennessee 37830

October 1980

OAK RIDGE NATIONAL LABORATORY
operated by
UNION CARBIDE CORPORATION
for the
DEPARTMENT OF ENERGY
as part of the
Formerly Utilized Sites--
Remedial Action Program

PRELIMINARY RADIOLOGICAL SURVEY REPORT OF THE
FORMER STATEN ISLAND WAREHOUSE SITE
(ARCHER-DANIELS MIDLAND COMPANY) AT
PORT RICHMOND, NEW YORK

B. A. Berven and C. Clark

Introduction

A number of buildings located at the site of the former Staten Island Warehouse in Port Richmond, New York, were used by Union Miniere du Haut-Katanga Company to store high-grade Belgian Congo uranium ore (owned by that company) from 1939 to 1942. In 1942, 2007 drums of uranium ore were stored at the Staten Island Warehouse (owned by Archer-Daniels Midland Company) containing 1089 metric tons of ore. The ore contained approximately 600 metric tons of U_3O_8 and 170 grams (Ci) of radium. Following purchase of this material by the U.S. Government, the uranium ore was shipped to various Manhattan Engineer District (MED) sites for storage and processing. There is no record of any previous radiological survey of this site.

At the request of the Department of Energy (DOE), a preliminary radiological survey of this site was conducted on July 10, 1980, by members of the Health and Safety Research Division at Oak Ridge National Laboratory (ORNL). The site survey was intended to provide information on the present radiological condition and to determine the need for a more extensive radiological survey.

Site Description

The site is located at the base of the Bayonne Bridge on Richmond Terrace Avenue in Staten Island, New York (Fig. 1). The original property owned by Archer-Daniels Midland Company was divided into three parcels (Fig. 2). Since 1942, these parcels have changed ownership numerous times. Parcels 1 and 2 are currently owned by R. H. S. Realty Corporation (New York, New York); the boundary dimensions have been accurately defined in present county property records. Ownership of Parcel 3 was separated from Parcels 1 and 2 in the 1950's, and the location of Parcel 3 is known, but not the boundary dimensions.

After discussions with several local residents who had lived in the vicinity of the site for longer than 30 years, several conclusions were drawn:

1. The warehouses were believed to be located on Parcel 1, exclusively;
2. Parcel 2 had always been a vacant lot; however, at one time there had been an aborted attempt at building a two-car garage on that lot;
3. Parcel 3 has had a number of buildings on it that have been located there for over 30 years.

Currently, Parcel 1 is a vacant lot with no buildings present and ground cover of gravel and low weeds (Fig. 3). Parcel 2 is a vacant lot with no buildings present, but has remnants of a short retaining wall facing Richmond Terrace, a two-car garage foundation, and a ground cover of soil, rocks, high weeds, and small trees (Fig. 4). Parcel 3 is occupied by commercial and residential structures.

Survey Methods

The preliminary radiological survey of the former Staten Island Warehouse site consisted of the following measurements for Parcel 1: (1) a gamma-ray scan of the ground surface; (2) several random on-site surface soil samples; (3) bias soil samples of locations where external gamma radiation levels are significantly above background. For parcels 2 and 3, a ground-level gamma-ray scan was made along the perimeters of these properties. The high weeds on Parcel 2 and the lack of owner permission on Parcel 3 prohibited more extensive radiological surveys of these parcels.

The instrumentation used in this radiological survey included a gamma-ray scintillation (NaI) survey meter and a beta-gamma Geiger-Mueller (G-M) survey meter.

Survey Results

Parcel 1

External gamma-ray exposure rate levels were generally 20 to 50% lower than most background values observed in New Jersey (Fig. 5). However, in the northwest corner of the parcel, gamma radiation levels were found to be significantly above background, indicating the presence

of contamination. Although the contamination was low-level throughout this area, there were localized spots with gamma exposure rates up to 0.2 mR/h (20 times background) on the ground surface (increasing to 0.4 mR/h at 15-cm depth). The contamination appeared to be in a 6-cm layer at a depth of approximately 35 to 40 cm (Fig. 6).

Three soil samples were taken for radionuclide analyses. The location of these samples are identified in Fig. 5 and the results of the analyses are listed below.

Sample	Depth From Ground Surface (cm)	Concentration of Radionuclides (pCi/g) ^a		
		²³⁸ U	²²⁶ Ra	²³² Th
ST 1	35 - 40	660 ± 3%	590 ± 0.2%	<i>b</i>
ST 2	0 - 10	1.1 ± 3%	1.2 ± 2%	1.4 ± 3%
ST 3	0 - 5	0.62 ± 3%	0.62 ± 3%	0.45 ± 2%

^aUncertainties are listed as 2 σ (95% confidence intervals).

^bBelow minimum detectable concentration (MDC).

Parcels 2 and 3

The gamma scan of the perimeter of these parcels indicated there were no radiation levels significantly above background. Higher than normal gamma radiation levels were observed from a short stone retaining wall facing Richmond Terrace on Parcel 2. This was not considered unusual since the type of stone encountered has typically higher concentrations of ²²⁶Ra than the surrounding soil. It should be noted that the gamma scan was very limited and yielded information only about a 2 to 3 m strip around the perimeter of these parcels.

Recommendations

Based on the results of this preliminary survey at the former Staten Island Warehouse Site, it is recommended that a formal detailed radiological survey of Parcel 1 be conducted. There is evidence that a 20 m x 40 m area may have been contaminated with high-grade Belgian Congo uranium ore; preliminary results cannot rule out the existence of other such areas on this or other parcels.

A detailed historical and property search is needed to determine whether the uranium ore was ever stored on Parcels 2 and 3. Aerial photographs taken during the early 1940's might provide information as to the specific location of the ore storage warehouses. If enough evidence cannot be gathered to adequately determine the locations of uranium ore storage, then it is also recommended that Parcels 2 and 3 of the former Staten Island Warehouse site receive a formal radiological survey.

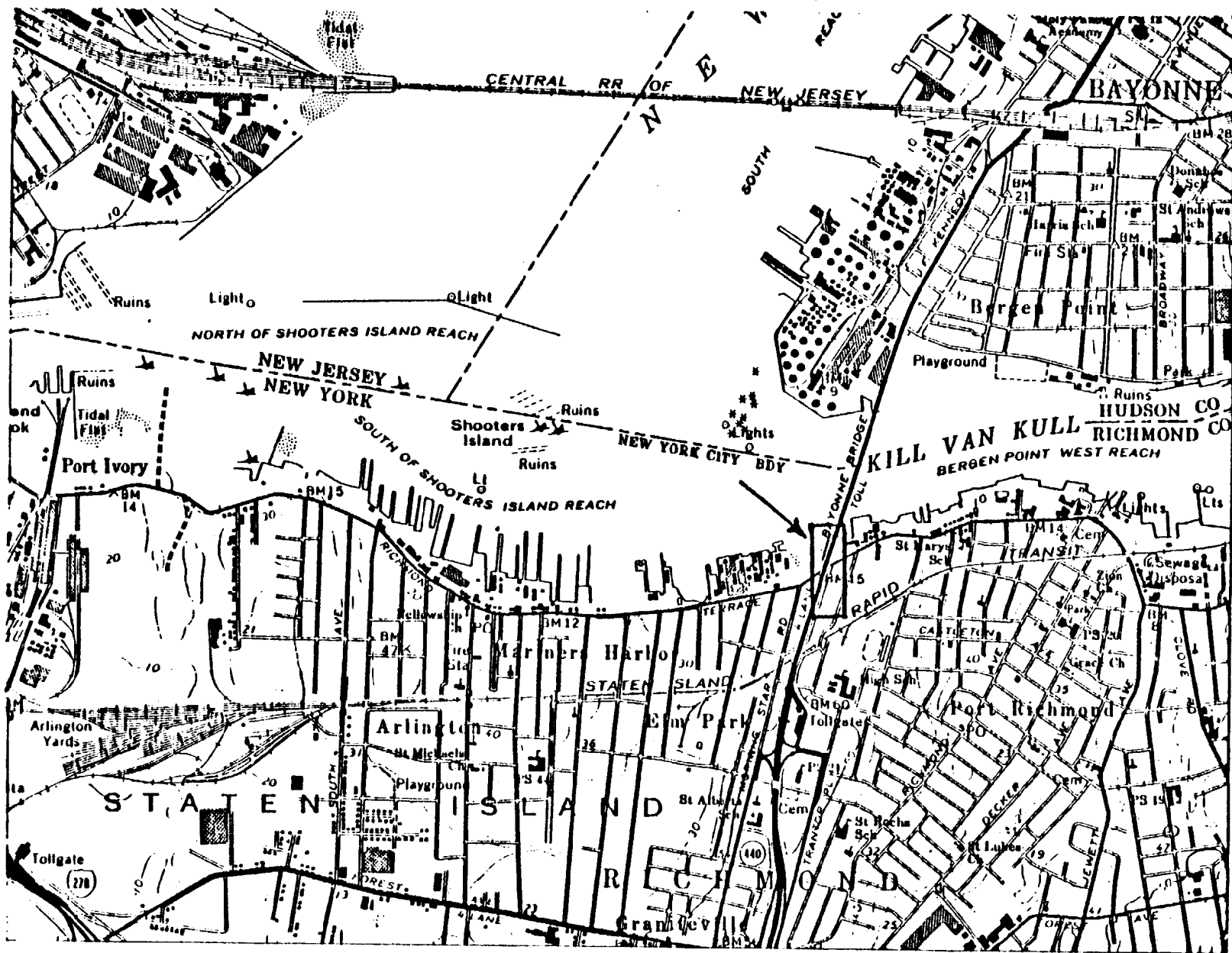


Figure 1. Location of the former Staten Island Warehouse site in Port Richmond, New York.

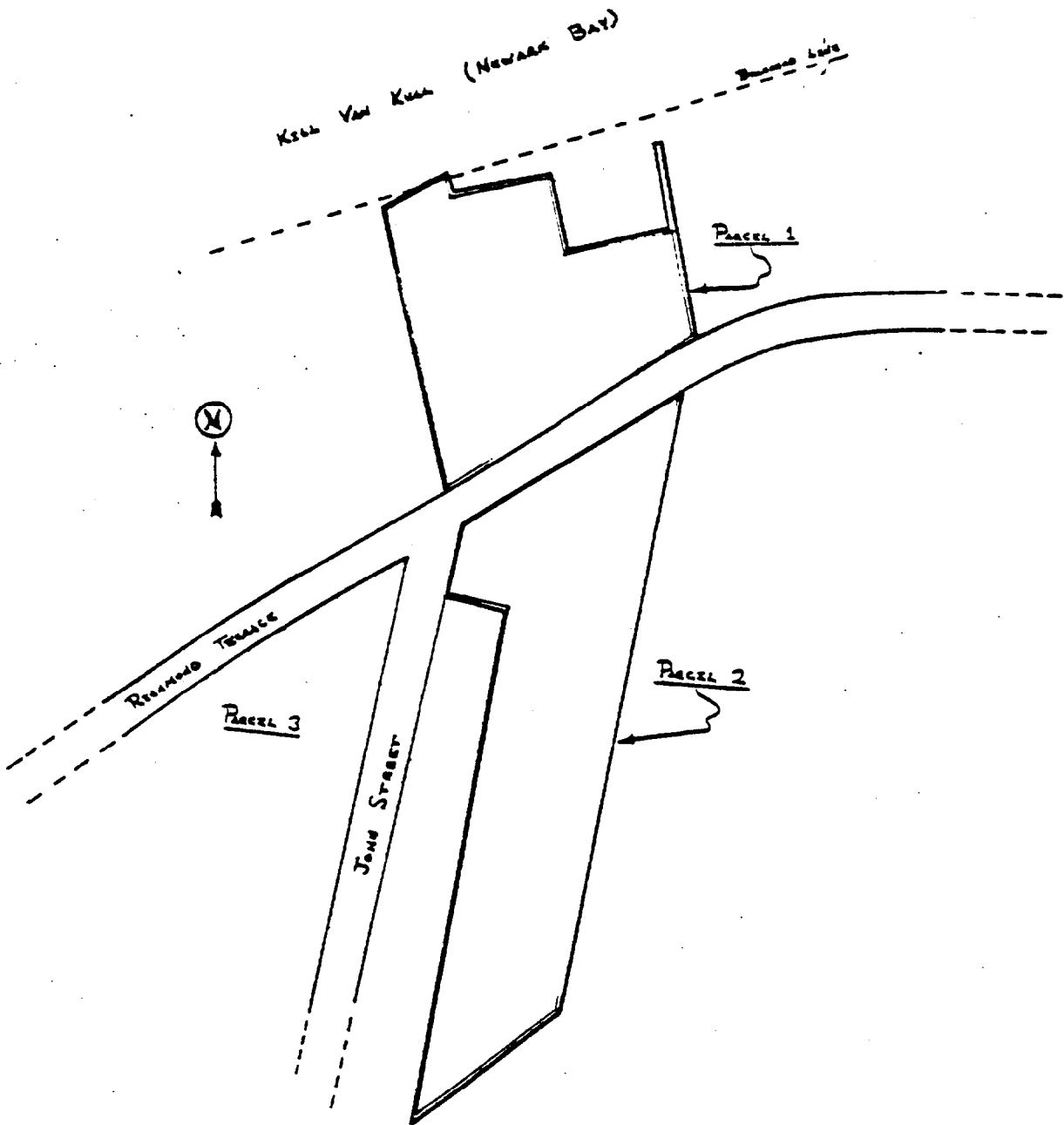


Figure 2. Location of three property parcels formerly owned by Archer-Daniels Midland Company in Port Richmond, New York.



Figure 3. View of Parcel 1 of the former Staten Island Warehouse site looking north.



Figure 4. View of Parcel 2 (left side of John St.) and Parcel 3 (right side of John St.) of the former Staten Island Warehouse site looking south.

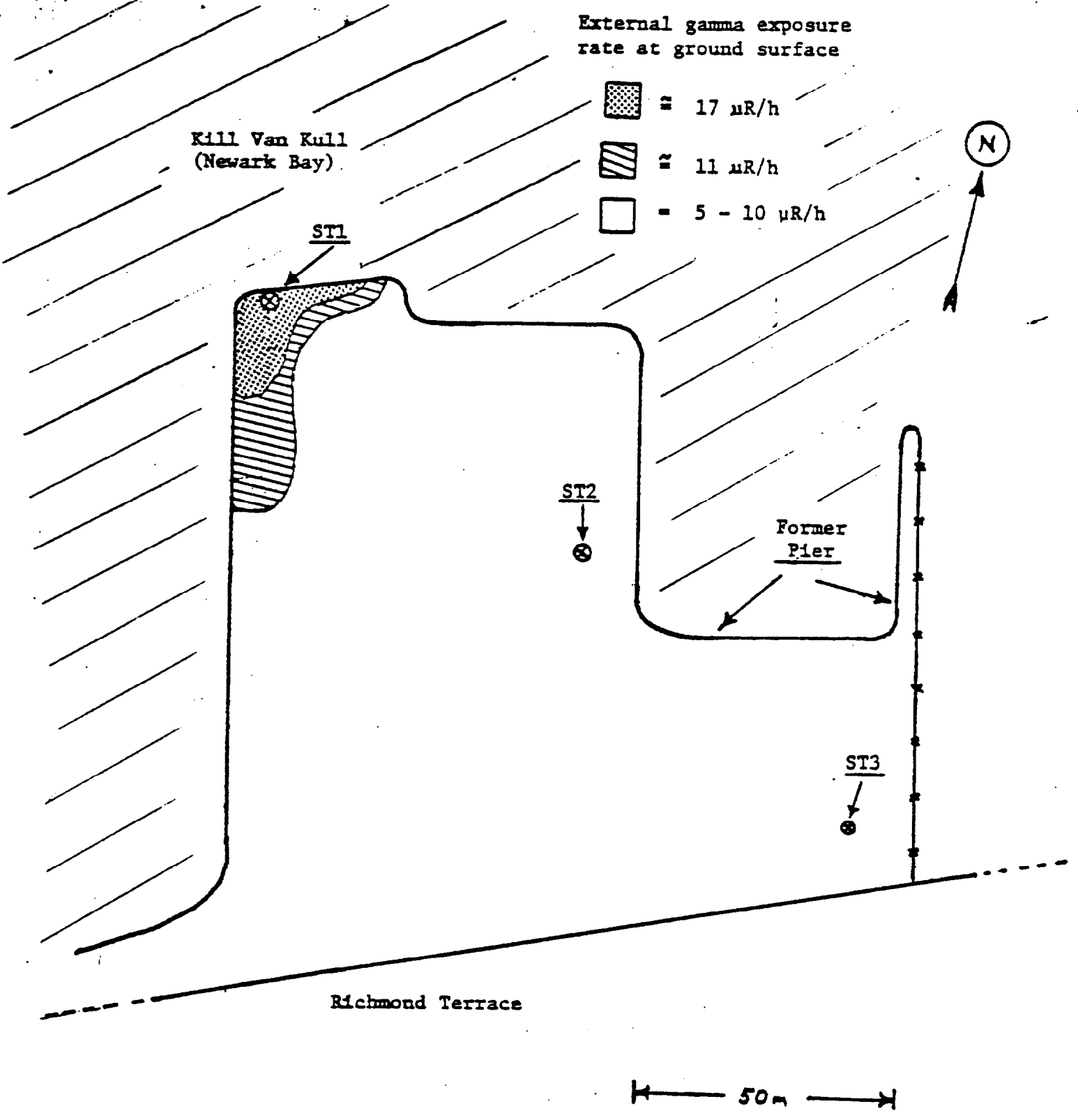


Figure 5. External gamma exposure rates observed at ground surface on Parcel 1 and location of three surface soil samples.



Figure 6. Location of soil sample ST 1 showing layer of contamination at 35 - 40 cm depth.