FILE REC'D 4193

Public Notice

US Army Corps of Engineers
New York District
26 Federal Plaza
New York, N.Y. 10278
ATTN: Regulatory Branch

In replying refer to:

Public Notice No. 14702-92-0762-OD

Published: 4 AUG 1992 Expires: 04 SEP 92

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TO WHOM IT MAY CONCERN:

The New York District Corps of Engineers has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), Section 404 of the Clean Water Act (33 U.S.C. 1344), and Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (33 U.S.C. 1413).

APPLICANT: **Consolidated Edison of New York**
Four Irving Place
New York, New York 10003

WORK: **Maintenance dredging with barge overflow and ocean disposal**

WATERWAY: **The intake structure in front of the screenwell house and wastewater barge pier at their generating station in the Arthur Kill**

LOCATION: **Borough of Staten Island, Richmond County, New Jersey**

A detailed description and plans of the applicant's activity are enclosed to assist in your review.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the activity must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the activity will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement

pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

ALL COMMENTS REGARDING THE PERMIT APPLICATION MUST BE PREPARED IN WRITING AND MAILED TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held.

It should be noted that information submitted by mail is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

Pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531) and based upon a review of the latest published version of the threatened and endangered species listing, a preliminary determination is that the activity under consideration will not affect those species listed or their critical habitat.

Based upon a review of the latest published version of the National Register of Historic Places, there are no known sites eligible for, or included in, the Register within the permit area. Presently unknown archaeological, scientific, prehistorical or historical data may be lost by work accomplished under the required permit.

Reviews of activities pursuant to Section 404 of the Clean Water Act will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act and the applicant will obtain a water quality certificate or waiver from the appropriate state agency in accordance with Section 401 of the Clean Water Act prior to a permit decision.

Pursuant to section 307(c) of the Coastal Zone Management Act of 1972 as amended (16 U.S.C. 1456(c)), for activities under consideration that are located within the coastal zone of a state which has a federally approved coastal zone management program, the applicant has certified in the permit application that the activity complies with, and will be conducted in a manner that is consistent with, the approved state coastal zone management program. By this public notice, we are requesting the state's concurrence with, objection to, or waiver of the applicant's certification. No permit decision will be made until one of these actions occur.

For activities within the coastal zone of New York State, the applicant's certification and accompanying information is available from the Consistency Coordinator, New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, Coastal Zone Management Program, 162 Washington Avenue, Albany, New York 12231, Telephone (518) 474-3642. Comments regarding the applicant's certification should be so addressed.

In addition to any required water quality certificate and coastal zone management program concurrence, the applicant has obtained or requested the following governmental authorization for the activity under consideration:

Permit from New York State Department of Environmental Conservation.

Any comments on the applicant's certification should be addressed to this state office.

If you have any questions concerning this application, you may contact this office at (212) 264-0184 and ask for Mr. Mark Roth.

FOR THE DISTRICT ENGINEER:

Joseph J. Seebode
Chief, Regulatory Branch

Enclosures

CENAN-OP-RW
APPLICATION NUMBER: 92-0762-OD
PUBLIC NOTICE NUMBER: 14702

DESCRIPTION OF WORK

The applicant, Consolidated Edison of NY, proposes to maintenance dredge two irregularly shaped areas in front of their Arthur Kill Generating Station along the Arthur Kill in the Borough of Staten Island, Richmond County, New York. The applicant proposes to dredge by clamshell bucket, with barge overflow, a total of approximately 87,000 cubic yards of material from the two areas, respectively, to a maximum depth of 22 feet below the plane of mean low water with two feet of allowable overdepth as shown on the attached drawings. Approximately 26,000 cubic yards will be dredged from in front of the wastewater barge pier, and 61,000 cubic yards from the intake structure in front of the screenwell house.

The proposal includes ocean disposal of all 87,000 cubic yards of dredged material.

The purpose of the project is twofold: a) to maintain adequate water depths for safe navigation at the wastewater barge pier. The barge removes wastewater from the plant's boilers, and b) to alleviate operational problems at the intake structure in front of the screenwell house. The permit for the proposed work, if issued, will authorize, on an initial basis only, the dredging as specified in this notice. Any subsequent maintenance dredging during the life of the permit will require that the dredged material comply with the appropriate criteria in effect at that time, and will be dependent upon the availability of an approved disposal site. Consideration is being given to issuance of a three year permit for the dredging with review of compliance with the criteria in effect prior to each disposal.

The dredged material would be transported by dump scows and deposited by bottom dumping process at the Mud Dump Site as designated by the U.S. Environmental Protection Agency (USEPA), as shown on the attached maps. The Mud Dump Site has an area of 2 square miles and an average depth of 72 feet, having its corner points located at:

LATITUDE			LONGITUDE		
40°	23'	48" North	73°	51'	28" West
40°	21'	48" North	73°	50'	00" West
40°	21'	48" North	73°	51'	28" West
40°	23'	48" North	73°	50'	00" West

This site has been used for disposal of dredged material since 1914 and has disposal depths within the site ranging from 50 to 100 feet below mean low water. The U.S. Coast Guard conducts surveillance of ocean dumping at the Mud Dump Site.

It is estimated that since 1976 approximately 7.0 million cubic yards of material have been dumped annually at the present disposal site. The disposal of dredged material has created a mound of sediment at the site which, between 1936 and 1986, has resulted in an accumulation of about 44 feet of material.

The applicant has demonstrated the need for the proposed ocean dumping based on the availability of practicable alternative methods of disposal. As stated in the Criteria (40 CFR 227.16(b)) "...alternative methods of disposal are practicable when they are available at reasonable incremental cost and energy expenditures which need not be competitive with the costs of ocean dumping, taking into account the environmental impacts associated with the use of alternatives to ocean dumping...." The New York District has evaluated the practicability of potential disposal alternatives in a report entitled "Dredged Material Disposal Within the New York District." The alternatives considered include land disposal, use as sanitary landfill cover, disposal in subaqueous borrow pits (and possible capping with clean material), creation of islands and/or wetlands, disposal on beaches or wetlands, transport and placement in deep mines, and incineration. Of these, only land disposal is considered a potentially viable alternative at the present time for the particular material proposed for disposal.

The applicant has evaluated methods of upland disposal of the dredged material as an alternative to ocean disposal stating that there is no vacant land in the vicinity of the project area upon which the dredged material could be disposed of or dewatered. Therefore, it would become necessary to transport this material by truck in a semi-fluid state to some available inland disposal site. If such a site could be found, the applicant has determined that the logistics of dealing with their associated constraints (i.e., drying of material, trucking dumping fees, upland disposal approvals, etc.) would increase the projected cost of the project beyond the point that would make the project economically feasible.

TESTING-GENERAL COMMENTS

EPA Region II under the authority of 40 CFR Section 225.2(b) has requested that liquid phase chemical analysis be performed for mercury, cadmium, PCBs, and petroleum hydrocarbons. The results of this analysis are shown in Table 1 for each of the two discrete areas.

Bioassay Results: In accordance with EPA's Ocean Dumping Regulations, published in the Register on 11 January 1977, suspended particulate phase and solid phase bioassays are required for the proposed dredged material utilizing the test species as discussed below. The results of these tests are presented in Table 2 for each of the two discrete areas.

The **suspended particulate phase** is considered to be the supernatant remaining after one hour of undisturbed settling of the mixture resulting from a vigorous 30 minute agitation of one part bottom sediment from the dredging site with four parts water collected from the dredging site or the disposal site, as appropriate for the type of dredging operation. The **solid phase** is considered to be all material settling to the bottom within one hour. For this permit application, natural seawater was substituted for disposal site water in the solid phase bioassay. This substitution conforms with the procedures in the Implementation Manual for the Ecological Evaluation of Proposed Discharge of Dredged Material Into Ocean Waters.

For the suspended particulate phase bioassay, lethal concentrations (LC50s), those concentrations of suspended particulate phase resulting in 50% mortality, were determined for the animal species Acartia tonsa, Mysidopsis bahia and Menidia menidia.

Based on these values, the LPC (Limiting Permissible Concentration) values are determined by applying a safety factor of 100 (0.01 times the critical EC50 or LC50). The material can be considered for disposal only if the concentration of the disposal water in both liquid and suspended particulate phases is diluted to below that of the LPC after 4 hours of initial mixing.

The dilution of the proposed dredged material after disposal at the Mud Dump Site has been evaluated by use of the Tetra Tech computer model. A description of the model has been published as Technical Report D-78-47 of the Corps' Dredged Material Research Program, and is entitled Evaluation and Calibration of the Tetra Tech Dredged Material Disposal Models Based on Field Data. The New York District requested that a study be conducted which would give example dilutions resulting from typical disposal operations and dredged materials found in the New York District. This study has been completed and is entitled Discussion of Dredged Material Disposal Models and Their Application for the New York District.

For the solid phase bioassay, the results are evaluated for biological and statistically significant differences in mortality between test organisms subjected to both proposed dredged sediment and a reference sediment. The reference sediment represents existing background conditions in the vicinity of the dumpsite, but away from the influence of any disposal operation. The Implementation Manual for the Ecological Evaluation of Proposed Discharge of Dredged Material into Ocean Waters, published by USEPA and the Corps of Engineers in July 1977, specifies that differences in survival of the test organisms in the reference and test treatments be evaluated either individually by species or on a pooled community basis. In addition, the Manual has defined the LPC for the solid phase to be exceeded when the difference in mortality between animals in the reference and test sediments is statistically significant and greater than 10 percent.

Body burden analyses of the solid phase organisms surviving the 10 day test to estimate bioaccumulation potential were made for mercury, cadmium, PCBs, and petroleum hydrocarbons. Mean levels for each constituent occurring in the test animals exposed to the proposed dredged material and to the reference sediment are shown in Table 3 for each Reach seen below (reference values are in parentheses). Detection limits are shown for each of the chemical constituents analyzed.

The data listed for the analysis of petroleum hydrocarbons include petroleum compounds plus natural body lipids within the organism. As a result, the values indicated for the test are environmentally conservative.

Due to the discrete nature of the dredging areas proposed by the applicant, sediment analysis and test data, are reported separately by individual area, i.e, screenwell house and fuel pier.

SCREENWELL HOUSE

Based upon analyses of 10 sediment samples submitted by the applicant, the character of the dredged material is as follows: 40.5% sand, 36.4% silt and 23.1% clay.

TABLE 1-SCREENWELL HOUSE

Liquid Phase Chemical Analysis Results (ppb)

CONSTITUENTS	D.L.	ELUTRIATE	SITE WATER
Mercury	(0.2)	N.D.	N.D.
Cadmium	(0.1)	N.D.	N.D.
PCB	(0.1)	N.D.	N.D.
Petroleum hydrocarbons	(50.0)	N.D.	N.D.

D.L. - Detection Limits
N.D. - Not Detected at the Detection Limit

As seen in Table 2 for the screenwell house (seen on the following page, page 8), the suspended particulate phase, Acartia tonsa, was the most sensitive of the three species examined. The LC50 was determined to be 27.3% of the 100% suspended particulate phase after 96 hours. The resulting LPC was therefore determined to be 0.27%. Using the constraints in this study most closely approximating those of the disposal operation for this proposed dredged material, the dilution after four hours would be 0.0043%. The dilution after four hours of 0.0043% is below the LPC of 0.27% for the suspended particulate phases, respectively. Therefore, no constraints on the point disposal or non-point disposal of the dredged material appears warranted.

Also in Table 2, it can be seen that there is a statistically significant difference between survival rates in the test and reference results for Nereis virens, but it is less than 10%.

TABLE 3-SCREENWELL HOUSE

Body Burden Levels (ppm) in Test Species

Constituents	(D.L.)	Palaemonetes pugio	Nereis virens	Mercenaria mercenaria
Mercury	(0.20)	N.D.(N.D.)	N.D.(N.D.)	N.D.(N.D.)
Cadmium	(0.25)	N.D.(N.D.)	N.D.(N.D.)	N.D.(N.D.)
PCB	(0.04)	N.D.(N.D.)	N.D.(N.D.)	N.D.(N.D.)
Petroleum hydrocarbons	(0.10)	N.D.(N.D.)	N.D.(N.D.)	N.D.(N.D.)

D.L. - Detection Limits
N.D. - Not detected at the Detection Limit

TABLE NUMBER 2-SCREENWELL HOUSE: BIOASSAY RESULTS APPLICATION NUMBER: 92-0762-OD

Suspended particulate phase (96 Hour Test)

	50 (critical)	LPC after 4 hours	Dilution after 4 hours
Acartia tonsa	27.3%	0.27%	0.0043
Mysidopsis bahia	61.1%	0.61%	0.0043
Menidia menidia	76.2%	0.76%	0.0043

Solid Phase (10 days)

	% Survival in reference	% Survival in test	Difference (Reference-Test)	Is difference statistically significant? (p=0.5)
Palaemonetes pugio	96.4	94.2	2.2	NO
Mercenaria mercenaria	100.0	99.0	1.0	NO
Nereis virens	100.0	97.0	3.0	YES
TOTAL COMMUNITY	98.8	96.7	2.1	NO

LC 50-Lethal Concentration resulting in 50% mortality
LPC-Limiting Permissible Concentration (0.01 times the critical LC 50)

FUEL PIER

Based upon analyses of 8 sediment samples submitted by the applicant, the character of the dredged material is as follows: 21.25% sand, 50.25% silt and 28.5% clay.

TABLE 1-FUEL PIER

Liquid Phase Chemical Analysis Results (ppb)

CONSTITUENTS	D.L.	ELUTRIATE	SITE WATER
Mercury	(0.2)	N.D.	N.D.
Cadmium	(0.1)	N.D.	N.D.
PCB	(0.1)	N.D.	N.D.
Petroleum hydrocarbons	(50.0)	N.D.	N.D.

D.L. - Detection Limits
N.D. - Not Detected at the Detection Limit

There is a statistically significant difference in the cadmium concentration in the elutriate compared to the site water, which will dilute to environmentally acceptable levels within a reasonable time.

As seen in Table 2 for the fuel pier, the suspended particulate phase, Acartia tonsa, was the most sensitive of the three species examined. The LC50 was determined to be 26.7% of the 100% suspended particulate phase after 96 hours. The resulting LPC was therefore determined to be 0.27%. Using the constraints in this study most closely approximating those of the disposal operation for this proposed dredged material, the dilution after four hours would be 0.0038%. The dilution after four hours of 0.0038% is below the LPC of 0.27% for the suspended particulate phases, respectively. Therefore, no constraints on the point disposal or non-point disposal of the dredged material appears warranted.

Also in Table 2, it can be seen that there is a statistically significant difference between survival rates in the test and reference results for Nereis virens, but it is less than 10%.

TABLE 3-FUEL PIER

Body Burden Levels (ppm) in Test Species

Constituents	(D.L.)	Palaemonetes pugio	Nereis virens	Mercenaria mercenaria
Mercury	(0.20)	N.D.(N.D.)	N.D.(N.D.)	N.D.(N.D.)
Cadmium	(0.25)	N.D.(N.D.)	N.D.(N.D.)	N.D.(N.D.)
PCB	(0.04)	N.D.(N.D.)	N.D.(N.D.)	N.D.(N.D.)
Petroleum hydrocarbons	(0.10)	N.D.(N.D.)	N.D.(N.D.)	N.D.(N.D.)

D.L. - Detection Limits
N.D. - Not detected at the Detection Limit

TABLE NUMBER 2-FUEL PIER: BIOASSAY RESULTS APPLICATION NUMBER: 92-0762-OD

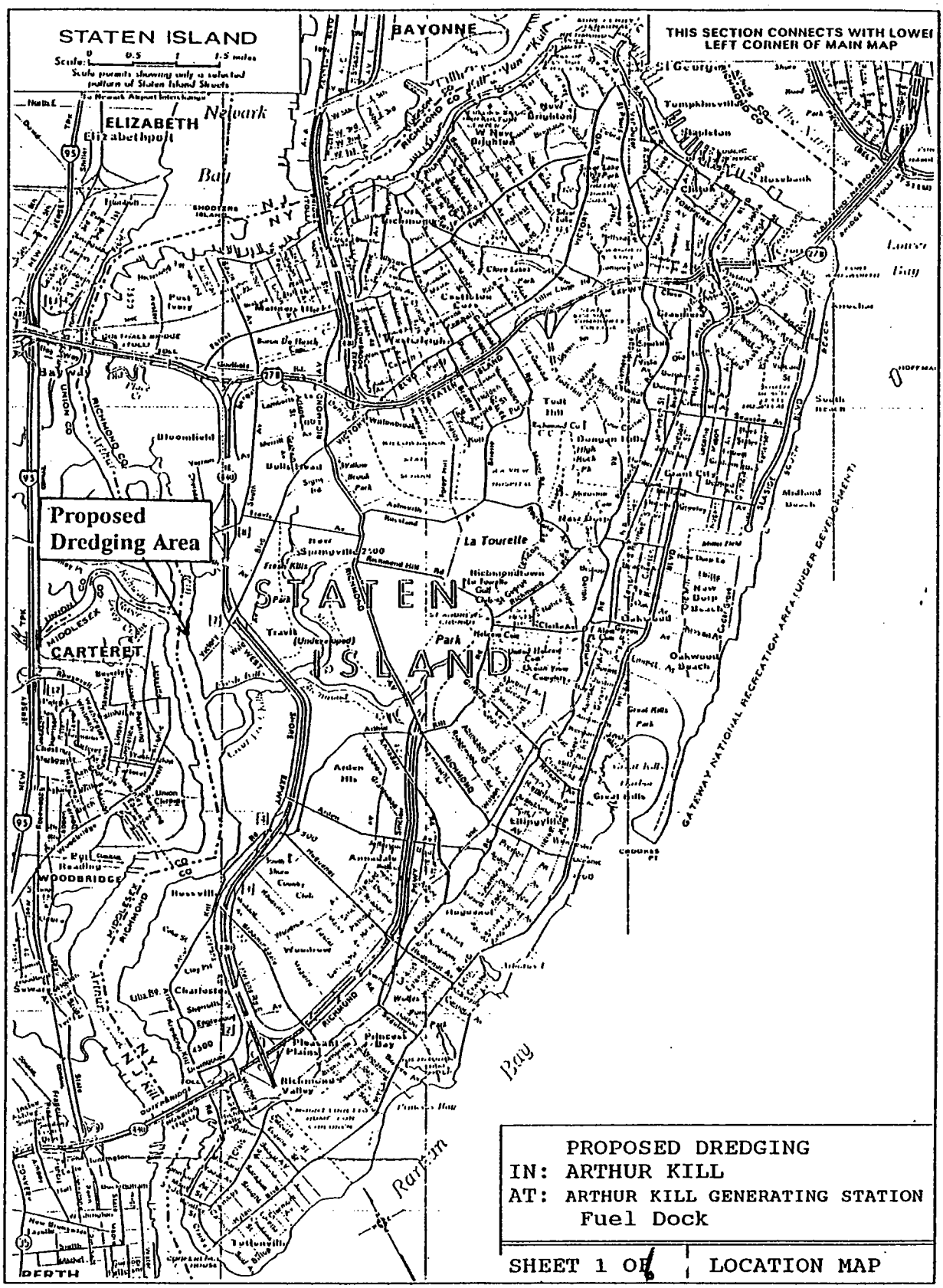
Suspended particulate phase (96 Hour Test)

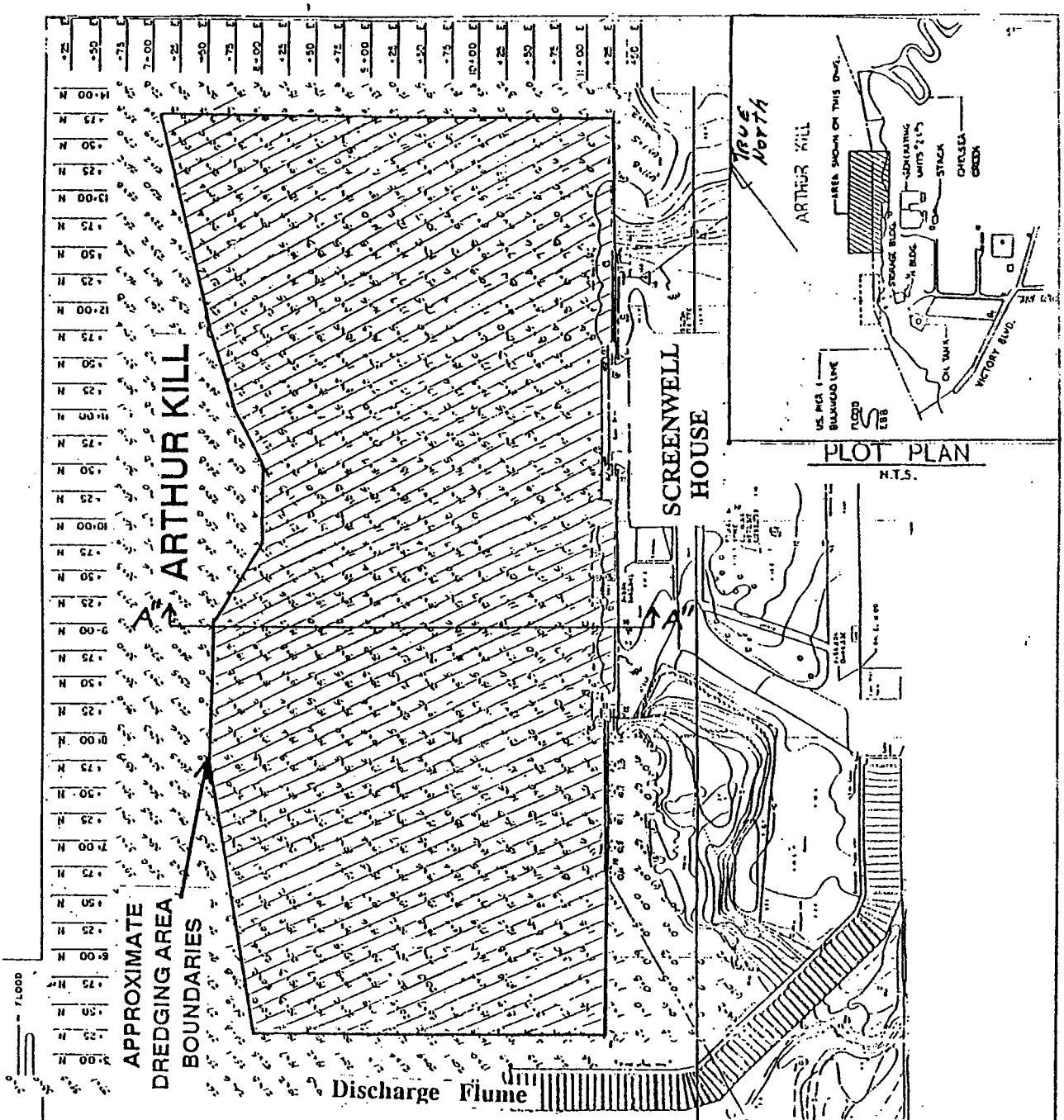
	50 (critical)	LPC after 4 hours	Dilution after 4 hours
Acartia tonsa	26.7%	0.27%	0.0038
Mysidopsis bahia	29.8%	0.30%	0.0038
Menidia menidia	30.0%	0.30%	0.0038

Solid Phase (10 days)

	% Survival in reference	% Survival in test	Difference (Reference-Test)	Is difference statistically significant? (p=0.5)
Palaemonetes pugio	94.2	95.4	-1.2	NO
Mercenaria mercenaria	100.0	99.0	1.0	NO
Nereis virens	100.0	94.0	6.0	YES
TOTAL COMMUNITY	98.1	96.1	2.0	NO

LC 50-Lethal Concentration resulting in 50% mortality
LPC-Limiting Permissible Concentration (0.01 times the critical LC 50)


STATEN ISLAND
BAYONNE
THIS SECTION CONNECTS WITH LOWEI
LEFT CORNER OF MAIN MAP
ELIZABETH
Newark
Bay
Proposed
Dredging Area
STATEN
ISLAND
CARTERET
WOODBRIDGE
PERTH
Arthur Kill
Raritan Bay
GATEWAY NATIONAL RECREATION AREA (UNDER DEVELOPMENT)
PROPOSED DREDGING
IN: ARTHUR KILL
AT: ARTHUR KILL GENERATING STATION
Fuel Dock
SHEET 1 OF
LOCATION MAP

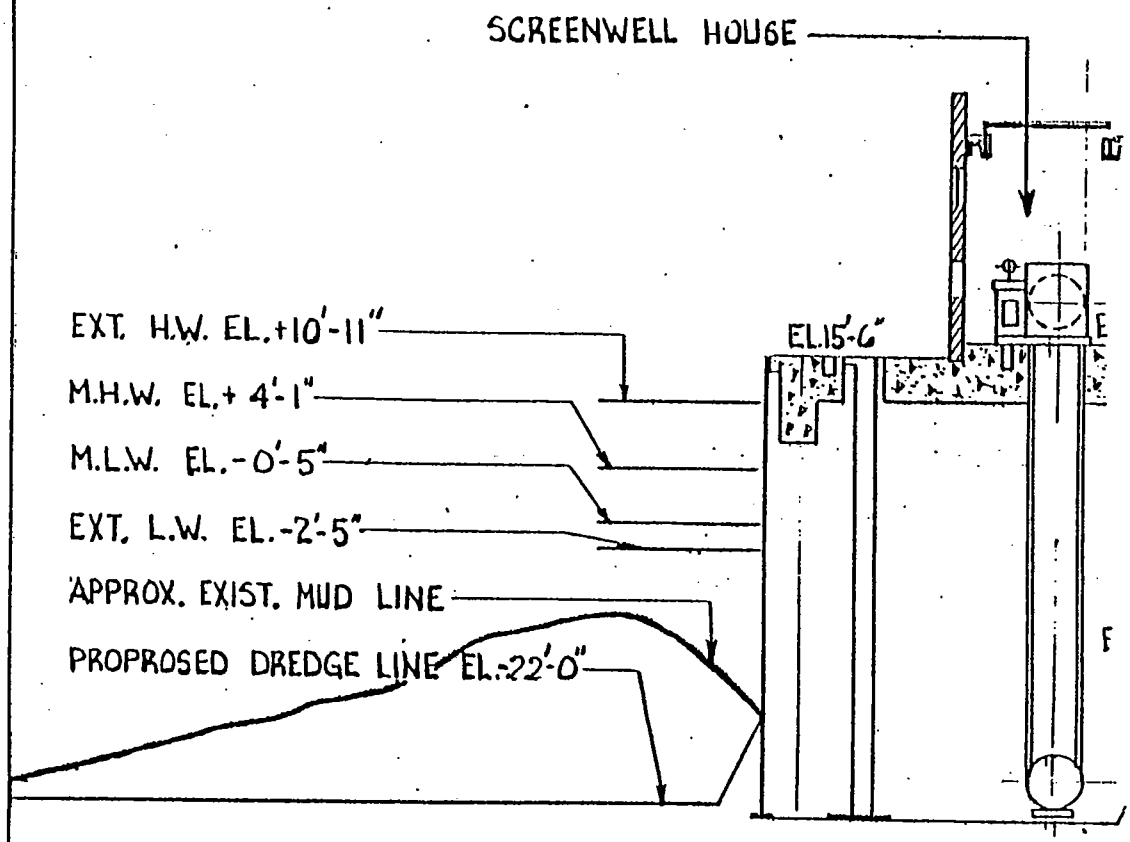


PROPOSED DREDGING
IN: ARTHUR KILL
AT: ARTHUR KILL GENERATING STATION
Screenwell House

APPLICATION BY:
CONSOLIDATED EDISON CO. OF N.Y.

CONDITION SURVEY OF THE SCREENWELL HOUSE AREA
AT ARTHUR KILL GENERATING STATION, APRIL 1990

SHEET 2 OF 6 PLAN VIEW

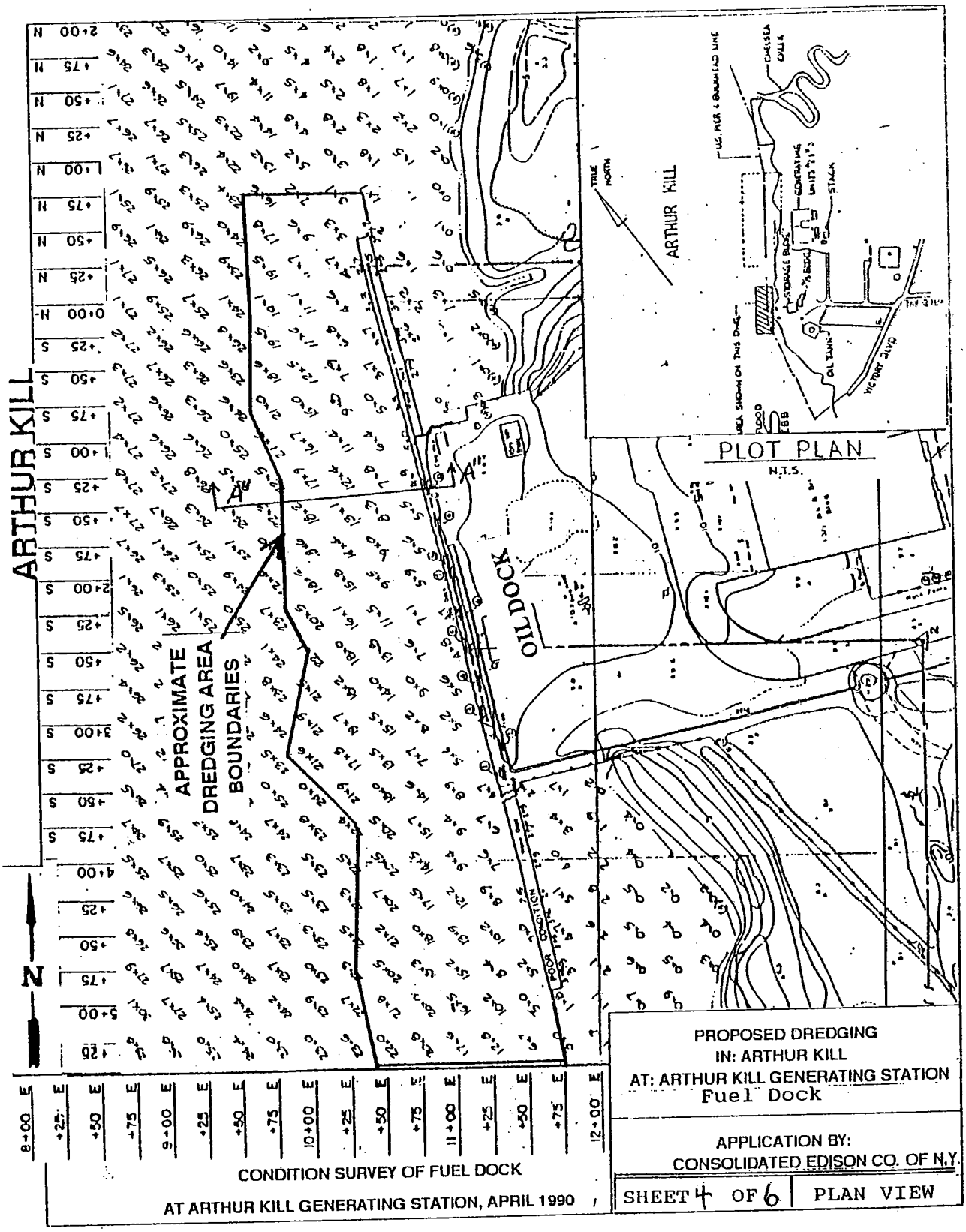


SECTION "A-A" (TYP.)

N.T.S.

PROPOSED DREDGING
IN: ARTHUR KILL
AT: ARTHUR KILL GENERATING STATION
Screenwell House

SHEET 3 OF 6 | SECTION "A-A"



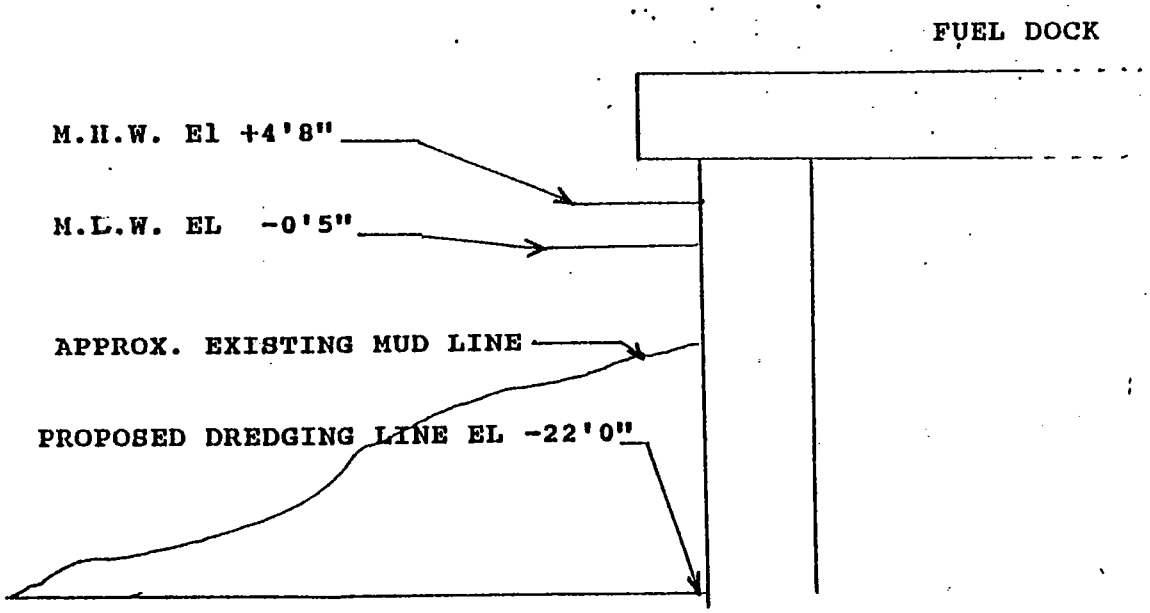
CONDITION SURVEY OF FUEL DOCK

AT ARTHUR KILL GENERATING STATION, APRIL 1990

PROPOSED DREDGING
IN: ARTHUR KILL
AT: ARTHUR KILL GENERATING STATION
Fuel Dock

APPLICATION BY:
CONSOLIDATED EDISON CO. OF N.Y.

SHEET 4 OF 6 | PLAN VIEW



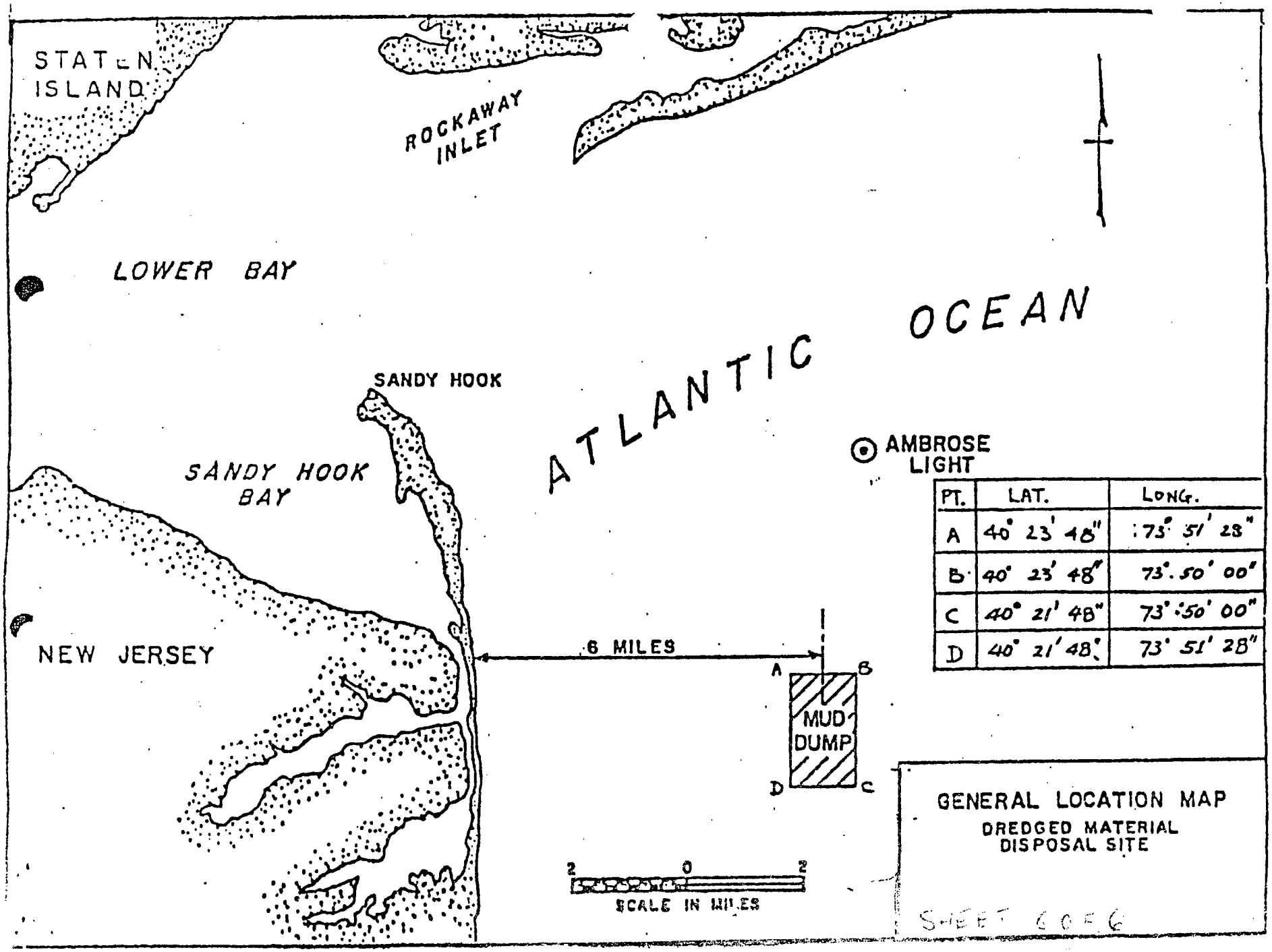
SECTION "A-A" (TYP)

n.t.s

Note:
All elevations refer to Marine & Aviation Datum which is 2'03 feet below mean sea level at Sandy Kook, New Jersey.

PROPOSED DREDGING
IN: ARTHUR KILL
AT: ARTHUR KILL GENERATING STATION
Fuel Dock

SHEET 5 OF 6 | SECTION "A-A"



PT.	LAT.	LONG.
A	40° 23' 48"	73° 51' 28"
B	40° 23' 48"	73° 50' 00"
C	40° 21' 48"	73° 50' 00"
D	40° 21' 48"	73° 51' 28"

GENERAL LOCATION MAP
DREDGED MATERIAL DISPOSAL SITE

SHEET 6 OF 6