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**Report No.** CG-D-137-75
Task No. 754244E.01

# PREDICTED OIL SLICK MOVEMENT FROM VARIOUS LOCATIONS OFF THE NEW JERSEY-DELAWARE COASTLINE


Ivan M. Lissauer

Jerry C. Bacon



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June 1975

Final Report

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**Prepared for**

**DEPARTMENT OF TRANSPORTATION**
**UNITED STATES COAST GUARD**
**Office of Research and Development**
**Washington, D.C. 20590**

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**Technical Report Documentation Page**

| | | |
|---|---|---|
| 1. Report No. CG-D-137-75 | 2. Government Accession No. | 3. Recipient's Catalog No. |
| 4. Title and Subtitle<br>PREDICTED OIL SLICK MOVEMENT FROM VARIOUS LOCATIONS OFF THE NEW JERSEY-DELAWARE COASTLINE | | 5. Report Date<br>June 1975 |
| | | 6. Performing Organization Code |
| 7. Author(s)<br>Ivan M. Lissauer [redacted] Jerry C. Bacon | | 8. Performing Organization Report No.<br>CGR/DC-13/75 |
| 9. Performing Organization Name and Address<br>U. S. Coast Guard Research and Development Center<br>Avery Point<br>Groton, Connecticut 06340 | | 10. Work Unit No. (TRAIS)<br>CG-754244E.01 |
| | | 11. Contract or Grant No. |
| 12. Sponsoring Agency Name and Address<br>Department of Transportation<br>U. S. Coast Guard<br>Office of Research and Development<br>Washington, DC 20590 | | 13. Type of Report and Period Covered<br>Final Report |
| | | 14. Sponsoring Agency Code<br>G-DET-1/62 |

15. Supplementary Notes

16. Abstract

Projections of the movement of oil slicks and their impact location along the shoreline of New Jersey and Delaware were determined from three potential deepwater port sites and three potential oil drilling sites. Average monthly wind speeds and directions and average monthly current patterns were used for predicting the oil slick movement. Probable areas of impact along the shoreline were indicated.

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|---|---|
| 17. Key Words<br>oil slick movement, predicting movement, New Jersey-Delaware coastline | 18. Distribution Statement<br>Document is available to the public through the National Technical Information Service, Springfield, VA 22151 |

| 19. Security Classif. (of this report) | 20. Security Classif. (of this page) | 21. No. of Pages | 22. Price |
|---|---|---|---|
| UNCLASSIFIED | UNCLASSIFIED | 132 | |

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## 1.0 SUMMARY

### 1.1 Purpose and Scope

There are a number of potential oil drilling sites and deepwater port sites along the east coast of the United States. To understand the ecologic and economic implications of a spill from any of these sites, projections of the movement of oil slicks and their impact location along the shoreline must be determined.

Investigations of the movement of potential oil spills from three deepwater port sites and three potential drilling sites (Figure 1) off the New Jersey-Delaware coastline were conducted. The paths of movement of oil slicks from these sites were predicted using average monthly wind speeds and directions and average monthly current patterns.

### 1.2 Conclusions

a. The greatest danger of an oil spill impacting the shoreline occurs when wind directions vary between northeast and south. These wind directions are most frequently associated with coastal storms. The longer a low pressure system remains in the area and produces wind directions between northeast and south, the more likely the oil slick will move toward the shoreline.

b. The most rapid movement of an oil slick toward the coastline occurs when wind direction is from the east or southeast. Predictions based on these wind directions and average monthly wind speeds as well as monthly current patterns indicate:

(1) Slicks from DWP 1 will take 1-2 days to impact on the shoreline.

(2) Slicks from DWP 2 will take 3-4 days to impact the shoreline.

(3) Slicks from DWP 3 will take 1-3 days to impact the shoreline.

(4) Slicks from Site 1 will take 4-7 days to impact the shoreline.

(5) Slicks from Site 2 will take 4-9 days to impact the shoreline.

(6) Slicks from Site 3 will take 4-13 days to impact the shoreline.

c. Figures 37-51 are yearly composites of probable impact areas (Figures 2-36) along the New Jersey-Delaware coastline. The numbers indicate the number of months that an oil slick will impact that area of the beach from a particular site under a given wind condition.

Those areas with high numbers are most susceptible to impact by oil spills during one year.

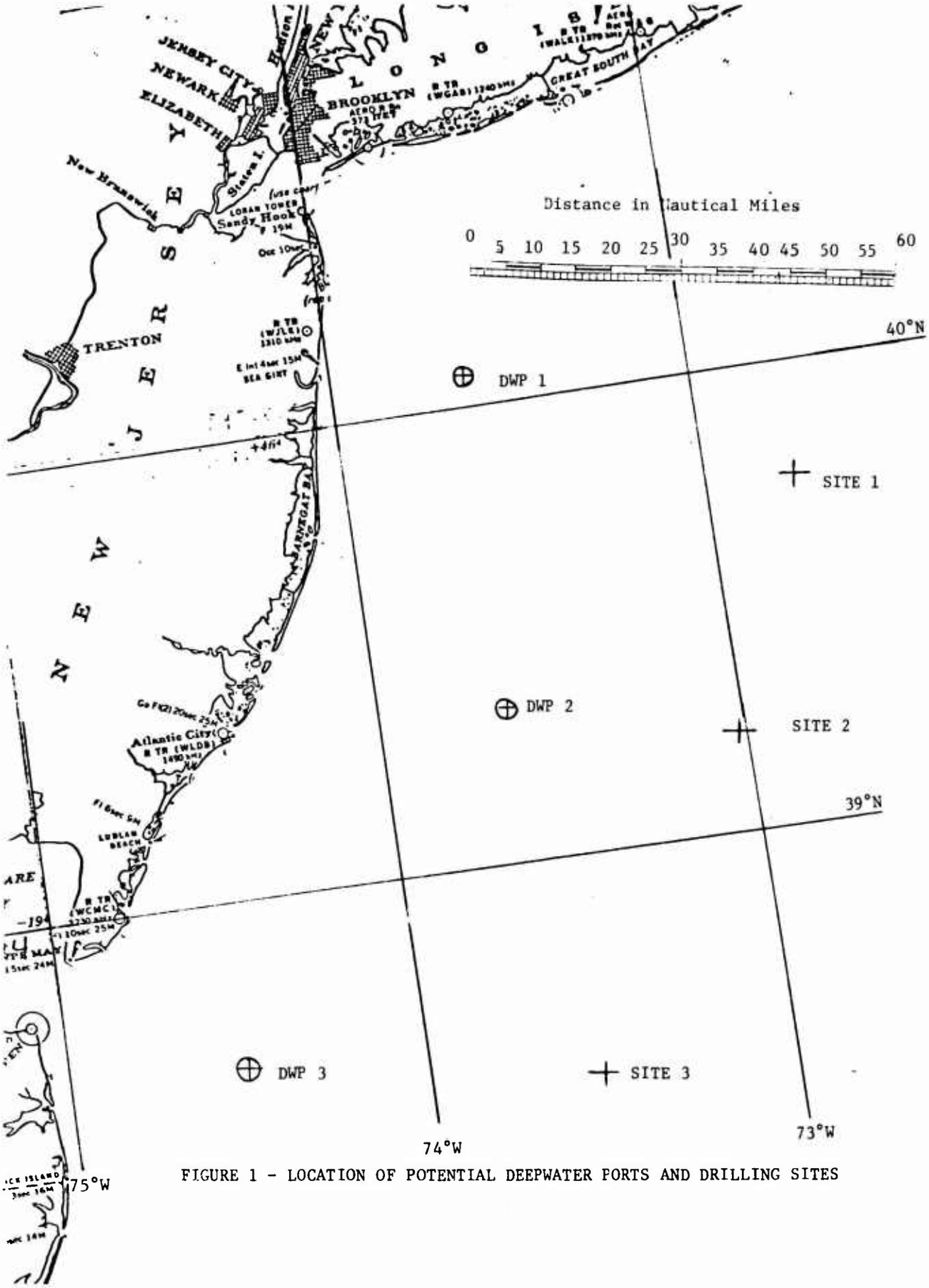



FIGURE 1 - LOCATION OF POTENTIAL DEEPWATER PORTS AND DRILLING SITES

d. The table below shows the number of months per year that a slick will impact the New Jersey-Delaware shoreline for each DWP site or drill site for a given wind direction.

TABLE 1

Number of Months Per Year Oil Slick Will Impact Shoreline for Each Location

| Wind Direction | DWP 1 | DWP 2 | DWP 3 | Site 1 | Site 2 | Site 3 |
|---|---|---|---|---|---|---|
| SW | 2 | 0 | 0 | 0 | 0 | 0 |
| S | 11 | 11 | 11 | 10 | 10 | 4 |
| SE | 11 | 12 | 11 | 11 | 12 | 3 |
| E | 12 | 12 | 6 | 11 | 7 | 0 |
| NE | 11 | 3 | 0 | 0 | 0 | 0 |

### 1.3 Recommendations

Predictions of oil slick movement were based on monthly wind averages and monthly average current patterns. For greater precision in determining the most vulnerable areas of the shoreline a more sophisticated technique should be used. A computer model for this area should be developed (either a new model or an adapted model) and used to predict oil slick movement. The development of a computer model requires that at least one year be devoted to the collection of oceanographic and meteorologic data in the area of the model. These data would be used to verify the accuracy of the model. Once verified, the model could produce actual drift tracks of oil slicks anywhere in the area if appropriate inputs are given each time a solution is needed.

## 2.0 DATA

### 2.1 Wind Data

Surface winds play an important role in the transport of oil on the water. A wind continuing for some time will produce a current the velocity of which depends on the velocity of the wind. The wind drift of an oil slick can be described by a wind factor: oil slick drift rate as a percentage of speed. The wind factor used for the predictions of movement of oil slicks off the New Jersey-Delaware coastline was 3.5%. This value is in good agreement with wind factors observed for the Torrey Canyon slick, 3.4%, and the Gerd Maersk slick, 4.3% (Tomczak, 1964). In addition, Smith (1974) calculated a wind factor of 3.64% ±0.51% based on his determination of the leeway of oil slicks. These values agree well with the value obtained by Schwartzberg (1970) from experiments in a small scale test basin, 3.66% ±0.17%. Lissauer (1974) used the value of 3.5% successfully to predict the movement of oil spills in New York Harbor. The value of 3.5% can be used to predict the wind drift of an oil slick for winds up to 20 knots. Above this speed wave-induced drift appears to be a significant factor in determining the drift of slicks. Because

the relationship between wind drift and wave drift is quite complex and this value has not been quantified, it has been ignored in the forecasting procedure.

Disagreement persists over the magnitude of deviation from wind direction to be expected for oil slick movement. In mid-latitudes of the Northern Hemisphere drift angle can be expected to be to the right of the true wind. However, in shallow water the deflection is at a minimum because frictional forces balance the Coriolis force. Oil slick drift observed by Smith (1974) was directly downwind as was the drift of the Torrey Canyon slick. For predicting the movement of oil slicks off the Delaware-New Jersey coastline, it was assumed that oil slicks move directly downwind.

Wind roses showing the monthly distribution of surface winds from eight directions (N, NE, E, SE, S, SW, W, NW) and the average monthly speed for each direction were constructed for the Atlantic City area, and the areas north and south of Atlantic City. The data used to prepare the wind roses are available from the U. S. Naval Weather Service Command, Summary of Synoptic Meteorological Observations (1970, 1975). The wind roses in conjunction with constructed monthly surface current patterns were used to predict the movement of oil slicks from the three deepwater port sites and the three drilling sites.

## 2.2 Current Data

To obtain the surface current structure in the desired area, it was necessary to assess the results of work previously completed in the New York Bight, the mid-Atlantic Bight, and Atlantic outer-continental shelf areas. This assessment was combined with generally accepted physical and dynamical concepts for the area as presented by Bumpus (1973) and Charnell and Hansen (1974). This information was used to construct twelve monthly surface current charts for the area from Long Island to Cape Hatteras and from the shoreline eastward to 70°W.

Considering that a time scale of one month was used, Gulf Stream meanders normally appearing at a frequency of a few days were smoothed out of the monthly averages. This is reasonable because observed meanders have been east of the area of interest and therefore would not affect this work.

There are no more than four or five recent oceanographic studies in the area. Bumpus (1973) has contributed much on the New York Bight and the near coastline south of the Bight. The NOAA Mesa project has contributed information in the same area. The U. S. Coast Guard Oceanographic Unit has been experimenting with surface current charts based on ART flight results. These charts provide the user with a surface current regime purported to be "accurate" for approximately a two-week period. Although this work is still being evaluated, when one looks at one year of compiled charts, a reasonable current regime can be seen.

Another contributing work, completed by NAVOCEANO (1975), is the summarized surface-current/ship-drift data analyzed on a monthly basis for

Marsden sub-squares. The data base for this dates back to 1904. Other studies have been completed for the area, some originating from the University of Delaware, from Boicourt (1974) with the Johns Hopkins University, other NAVOCEANO studies, the U. S. Environmental Protection Agency, and EG&G (1975). Important facts agreed upon by all investigators include:

a. On the continental shelf, the primary flow is southwest throughout the entire year at both the surface and along the bottom.

b. The surface circulation and geostrophic flow are markedly affected by persistent winds.

c. The net drift along the entire coast is density driven.

d. Estuarine flow may be expected inshore at the mouths of large bays (e.g., at the entrance to New York Harbor, the net flow is relatively fresh and outbound at the surface, and salty and inbound along the bottom).

e. The small scale flow at the entrance to New York Harbor is primarily tidal dominated.

f. Large variations throughout the area may be caused by meteorological events and meanders from persistent currents.

g. The Gulf Stream and Labrador currents exist as persistent currents.

The monthly charts used in this work were constructed by plotting the monthly mean currents reported by the various investigators and graphically computing an average vectorial picture of all the plots. A review of this work showed that the monthly current picture does depict a temporal variation in the general flow patterns. However, this temporal variation more aptly corresponds to the large scale of a seasonal change. These current patterns are subject to small scale perturbations caused by low pressure systems moving through the area. These perturbations are equivalent to small scale temporal variations and were not depicted in this study.

The constructed charts showed surface layer movement, and it was assumed that the oil moves in the same direction and with the same speed as the water. This assumption is valid for predicting the oil/water movement vector so long as one realizes that this movement refers to the center of the oil spill. The spreading of the oil on the surface of the water requires other considerations.

Fay and Hoult (1971) have developed spreading functions for an oil spill. Lissauer (1974) applied these to the predictive techniques developed for New York Harbor with satisfactory results. For this offshore study in large unrestricted water areas, it will require on the order of days for the center of an oil spill to impact the coastline. By applying the spreading functions to spills of various sizes, one alters the time of impact by only a few hours. In addition, the general areas

of shoreline (Figures 2-36) where oil was predicted to impact would remain the same for spills of 10,000 barrels or 1,000,000 barrels. Therefore, various spill sizes were not used in the movement predictions.

The method used to predict the movement of the oil was to add the surface current vector and the wind vector determined from the wind data. The resultant vector showed the movement of the center of an oil spill, regardless of size, as it was affected by wind and surface current. This method was applied to the three DWP sites and the three drill sites. For each month, trajectories were computed for those directions of the wind which would result in impact on the coastline (Figures 2-36). These movements and pertinent data are summarized in Tables 1A-71A.

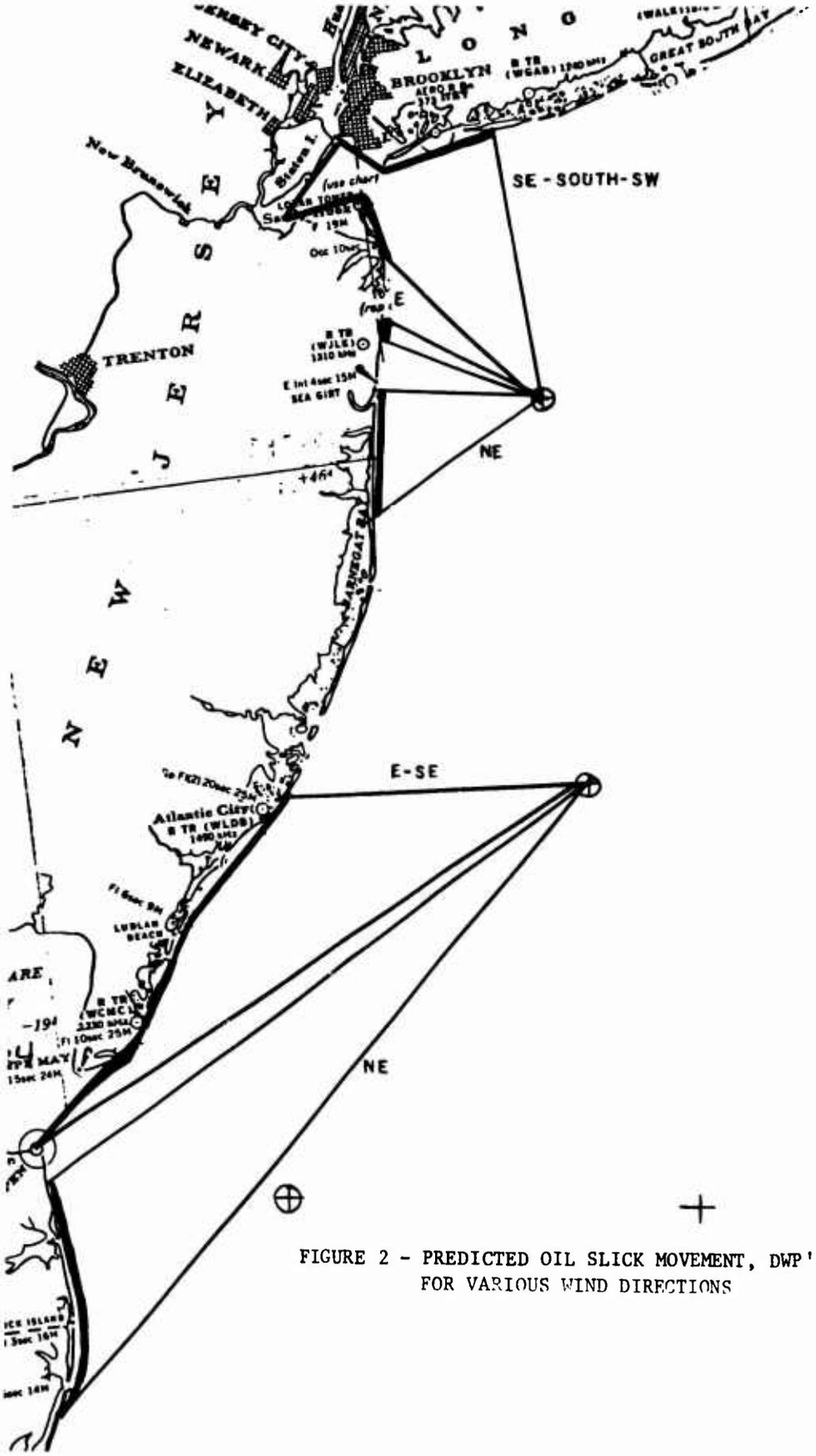



FIGURE 2 - PREDICTED OIL SLICK MOVEMENT, DWP'S 1 & 2, JANUARY FOR VARIOUS WIND DIRECTIONS

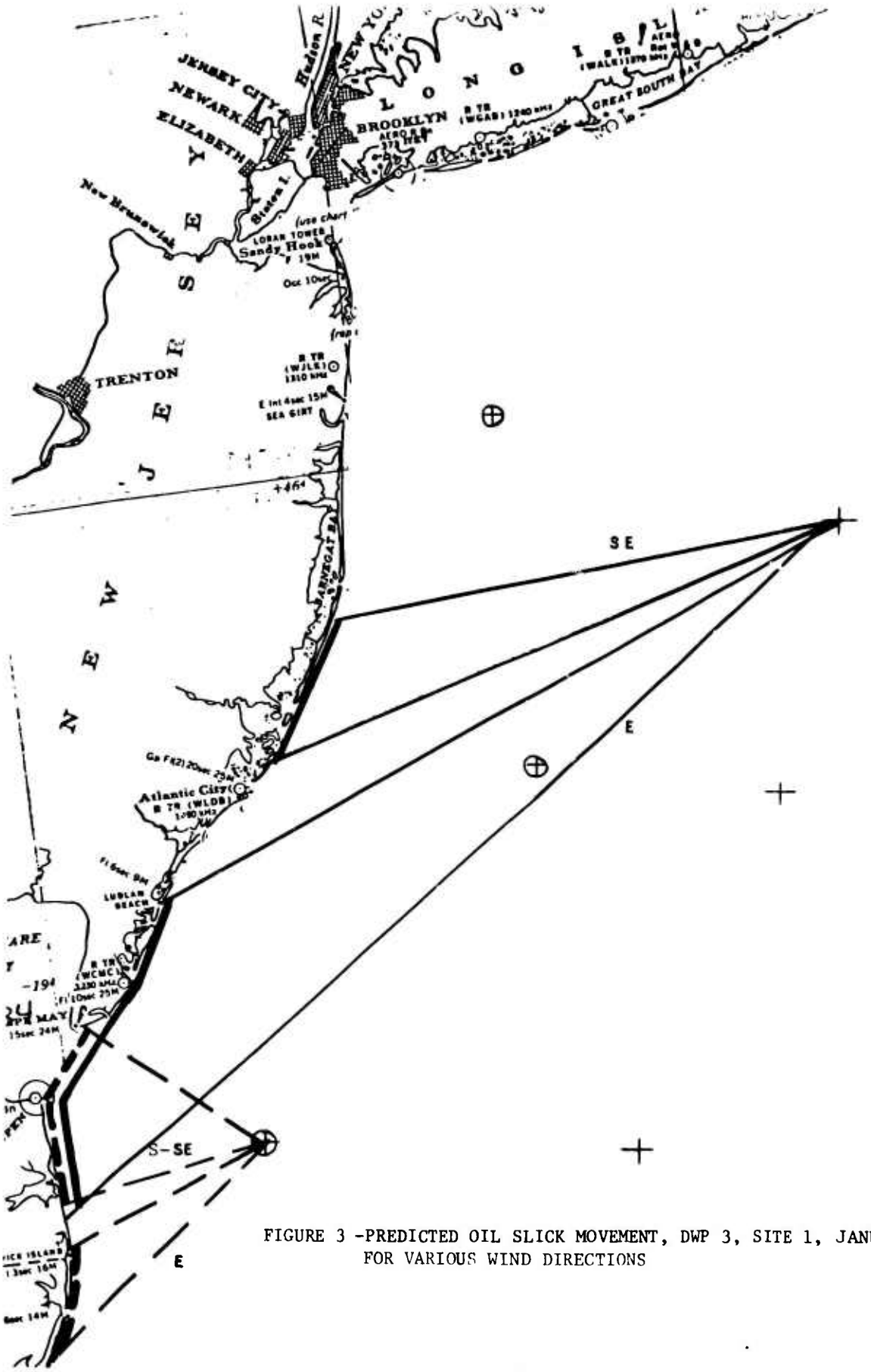



FIGURE 3 -PREDICTED OIL SLICK MOVEMENT, DWP 3, SITE 1, JANUARY FOR VARIOUS WIND DIRECTIONS

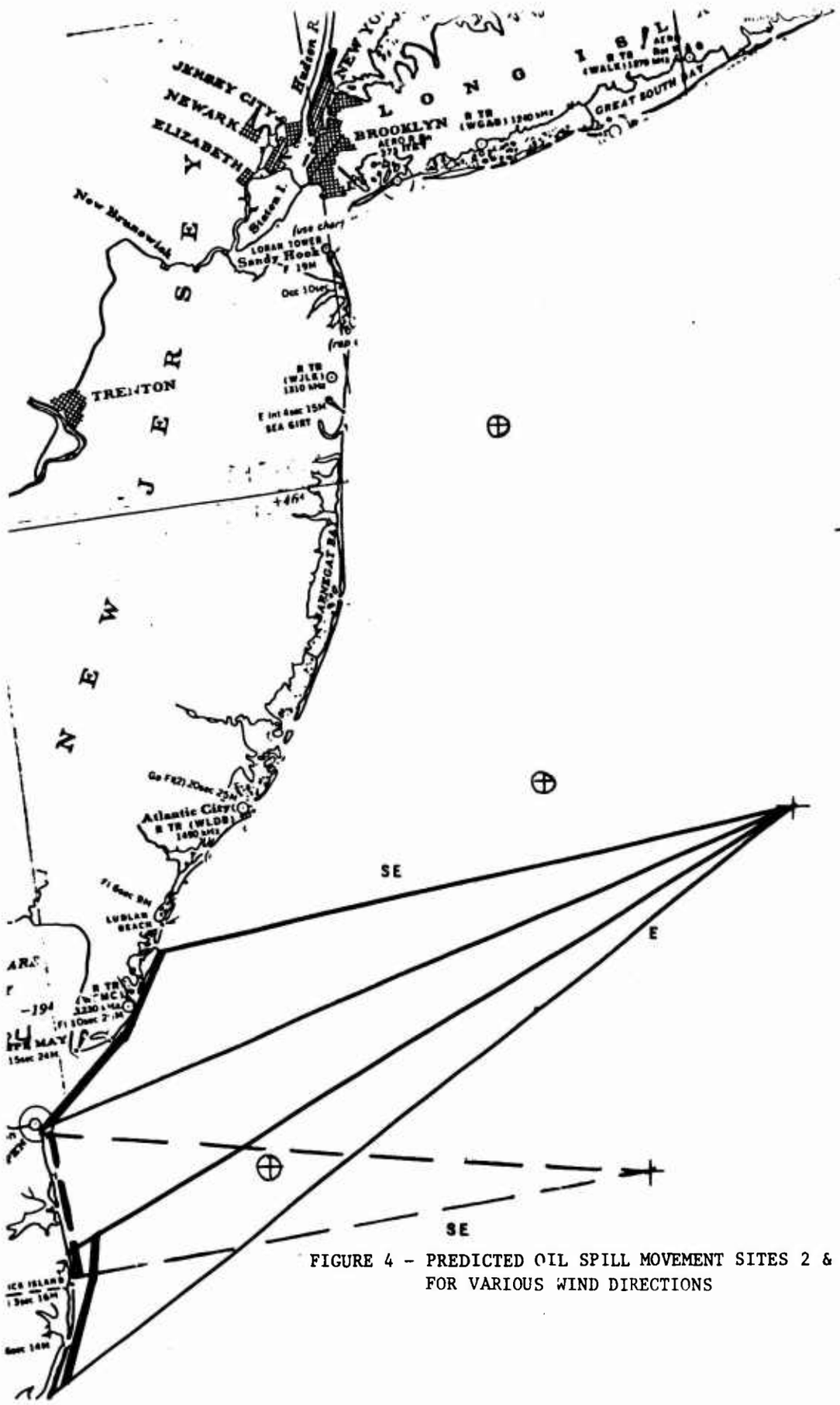



FIGURE 4 - PREDICTED OIL SPILL MOVEMENT SITES 2 & 3, JANUARY FOR VARIOUS WIND DIRECTIONS

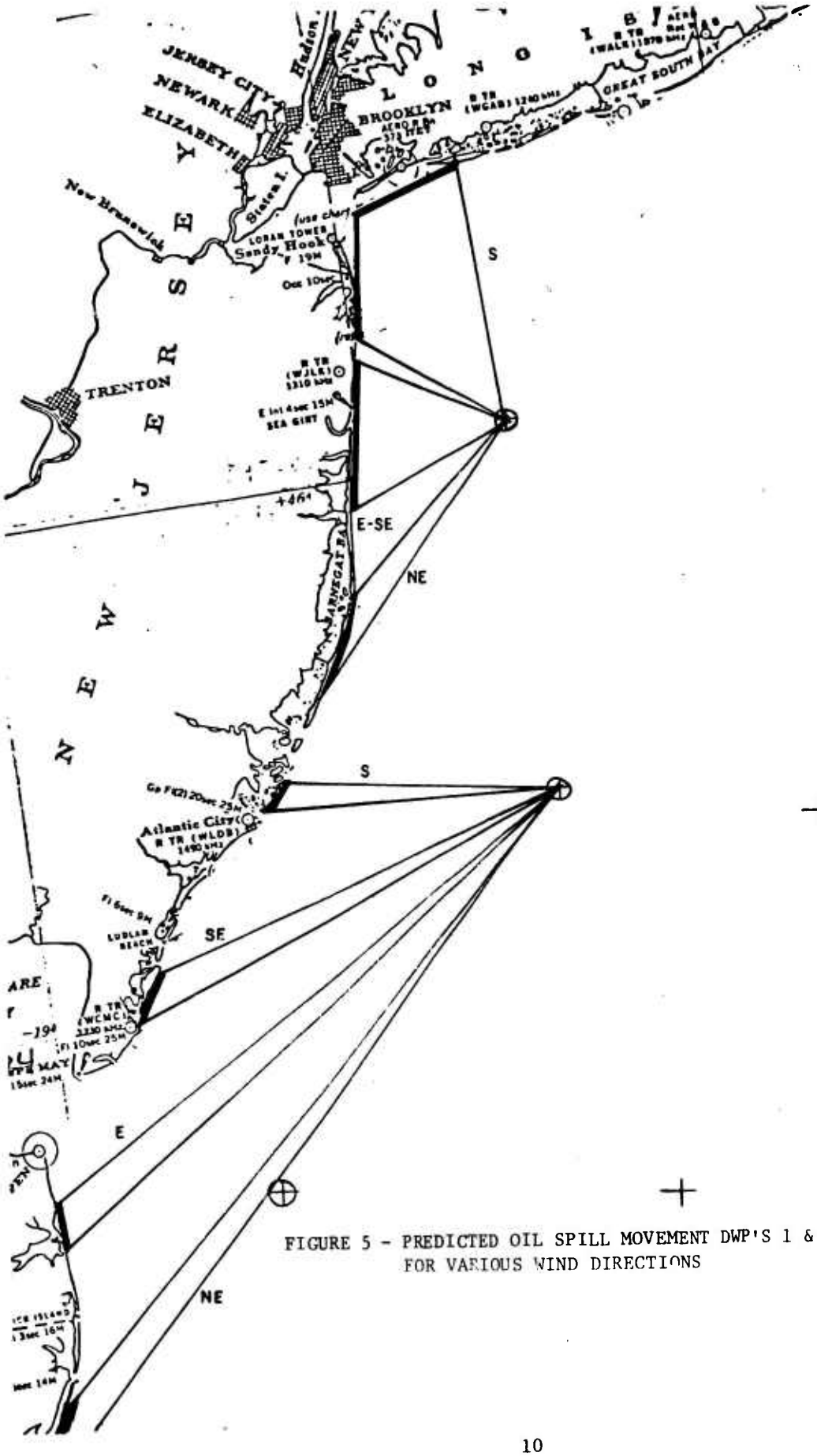



FIGURE 5 - PREDICTED OIL SPILL MOVEMENT DWP'S 1 & 2, FEBRUARY FOR VARIOUS WIND DIRECTIONS

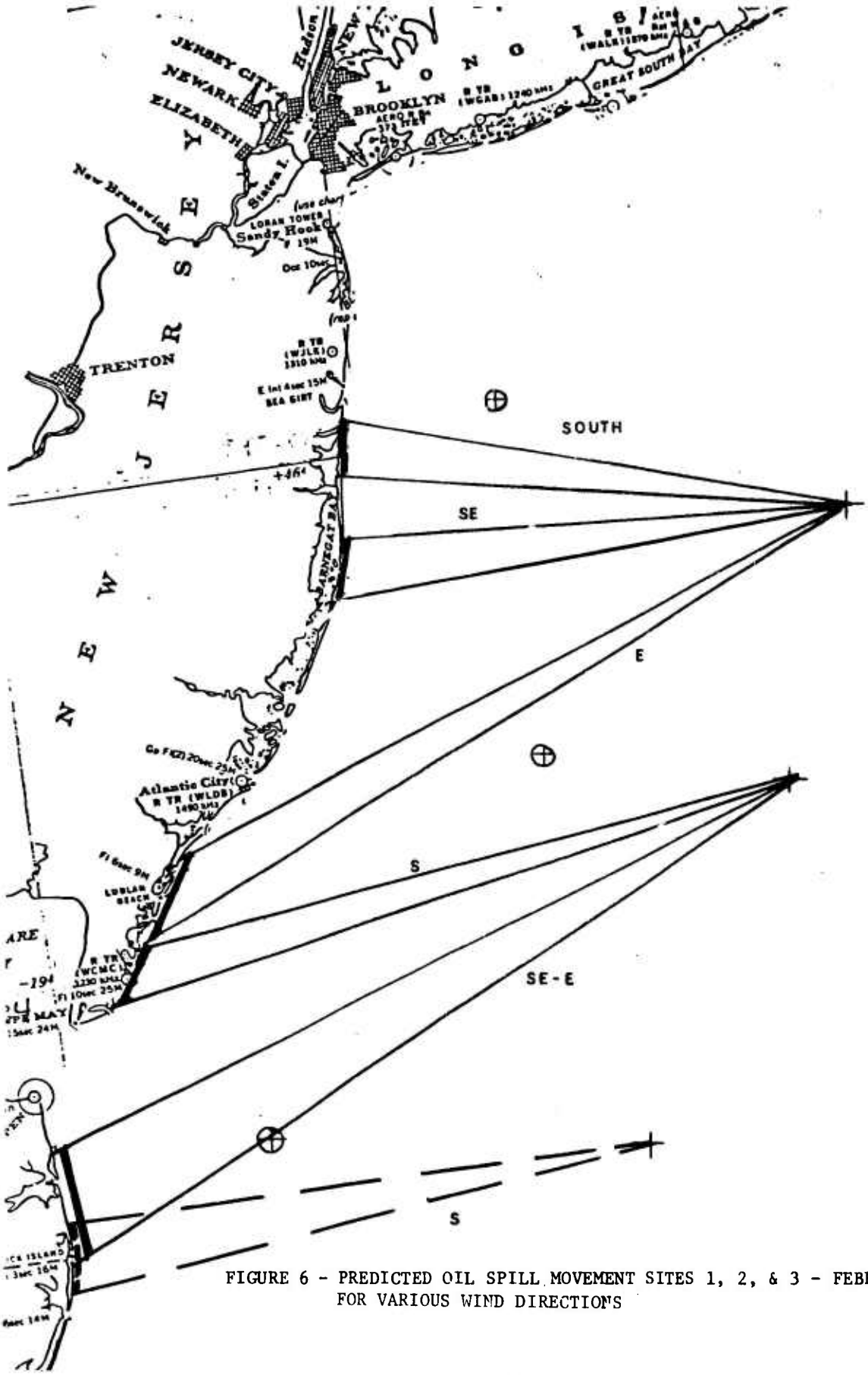



FIGURE 6 - PREDICTED OIL SPILL MOVEMENT SITES 1, 2, & 3 - FEBRUARY FOR VARIOUS WIND DIRECTIONS

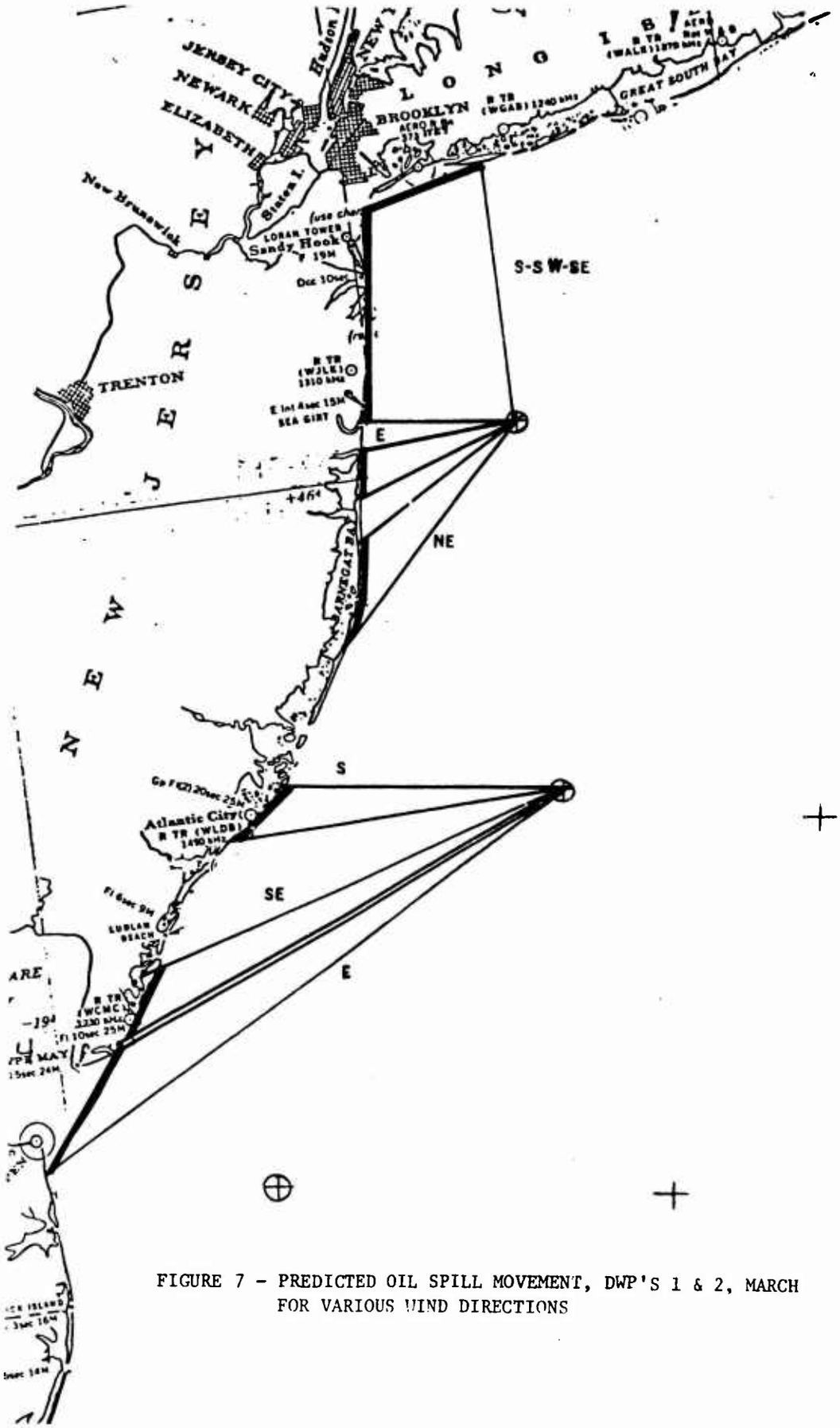



FIGURE 7 - PREDICTED OIL SPILL MOVEMENT, DWP'S 1 & 2, MARCH FOR VARIOUS WIND DIRECTIONS

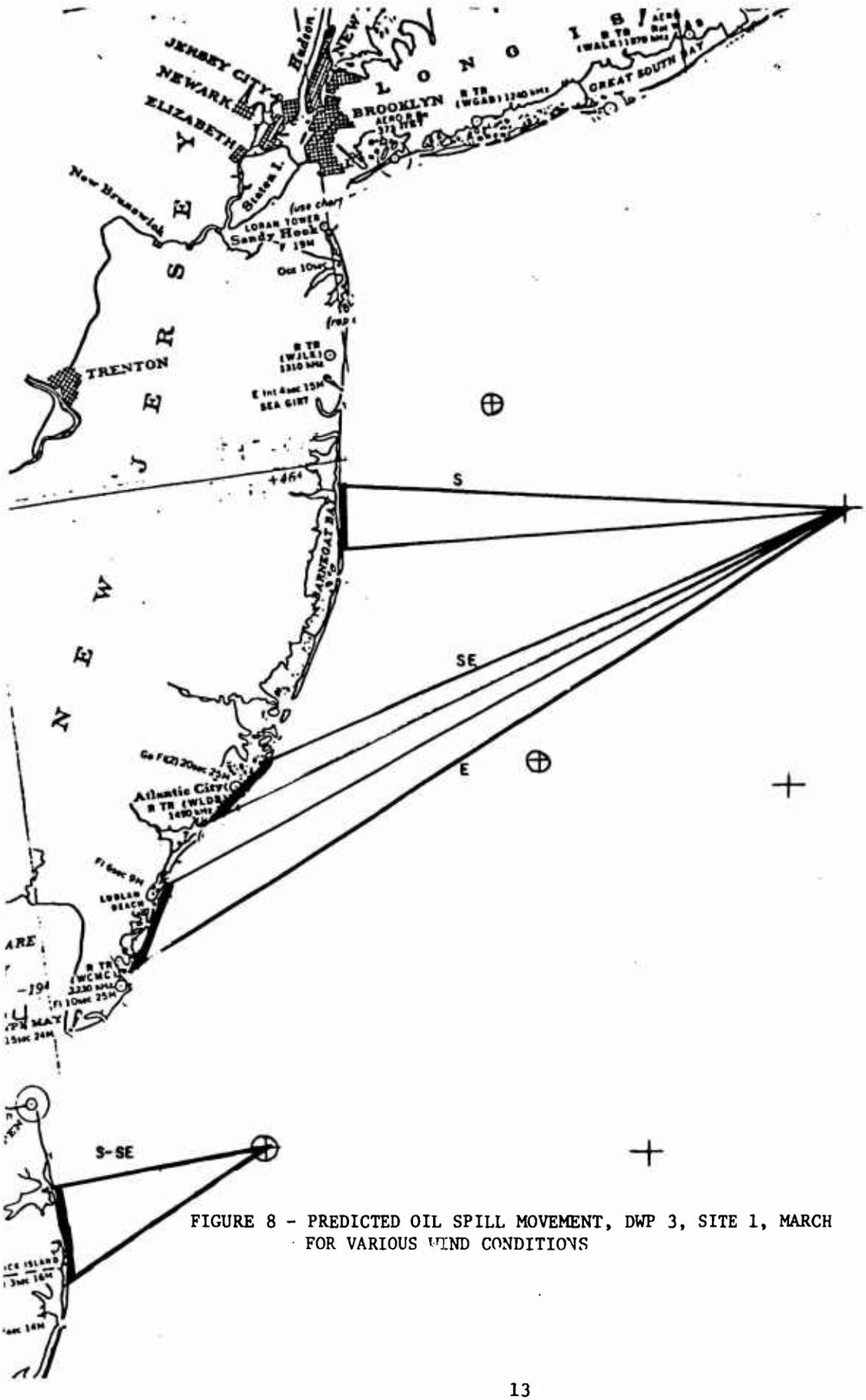



FIGURE 8 - PREDICTED OIL SPILL MOVEMENT, DWP 3, SITE 1, MARCH FOR VARIOUS WIND CONDITIONS

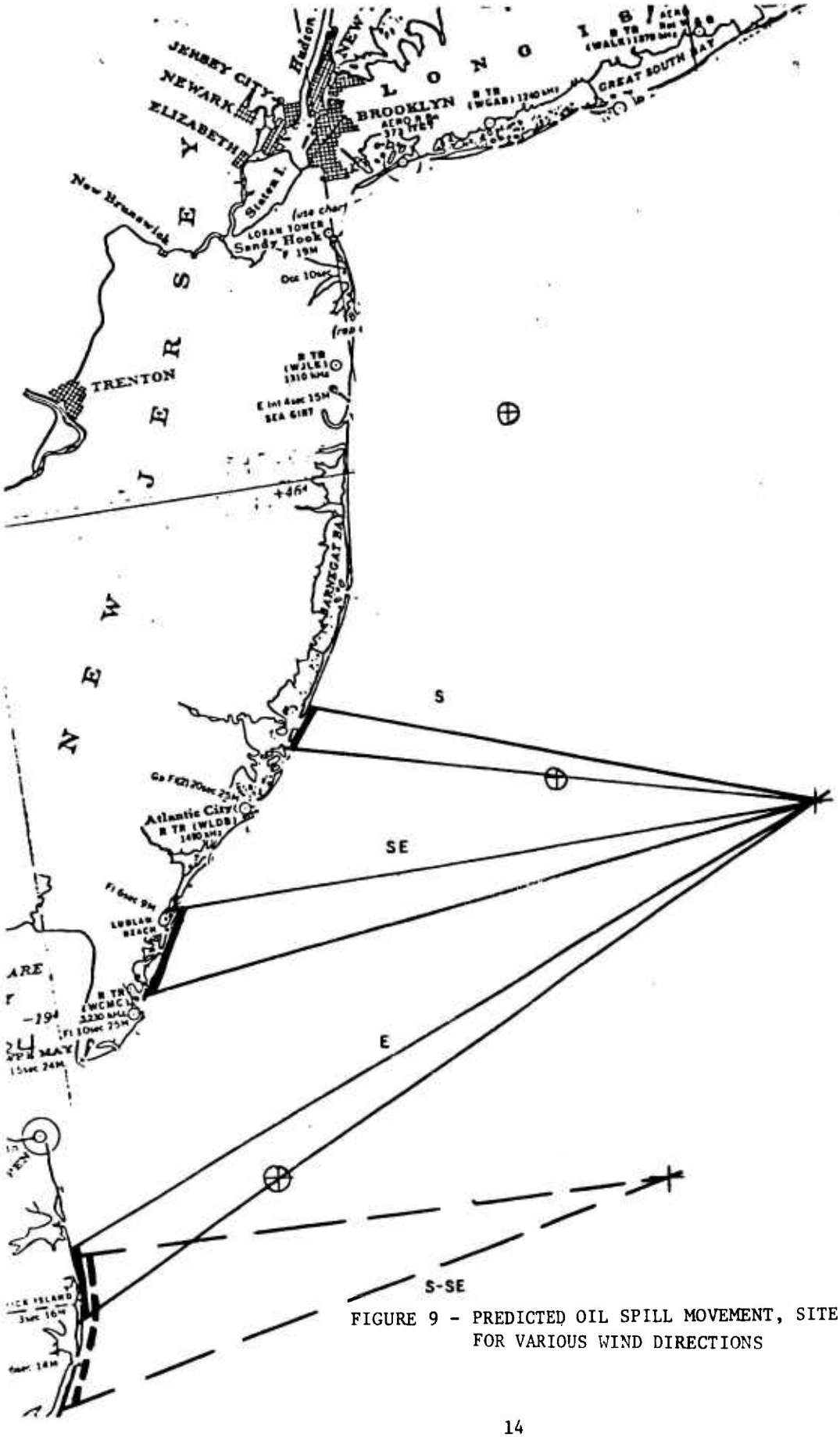



FIGURE 9 - PREDICTED OIL SPILL MOVEMENT, SITES 2 & 3, MARCH FOR VARIOUS WIND DIRECTIONS

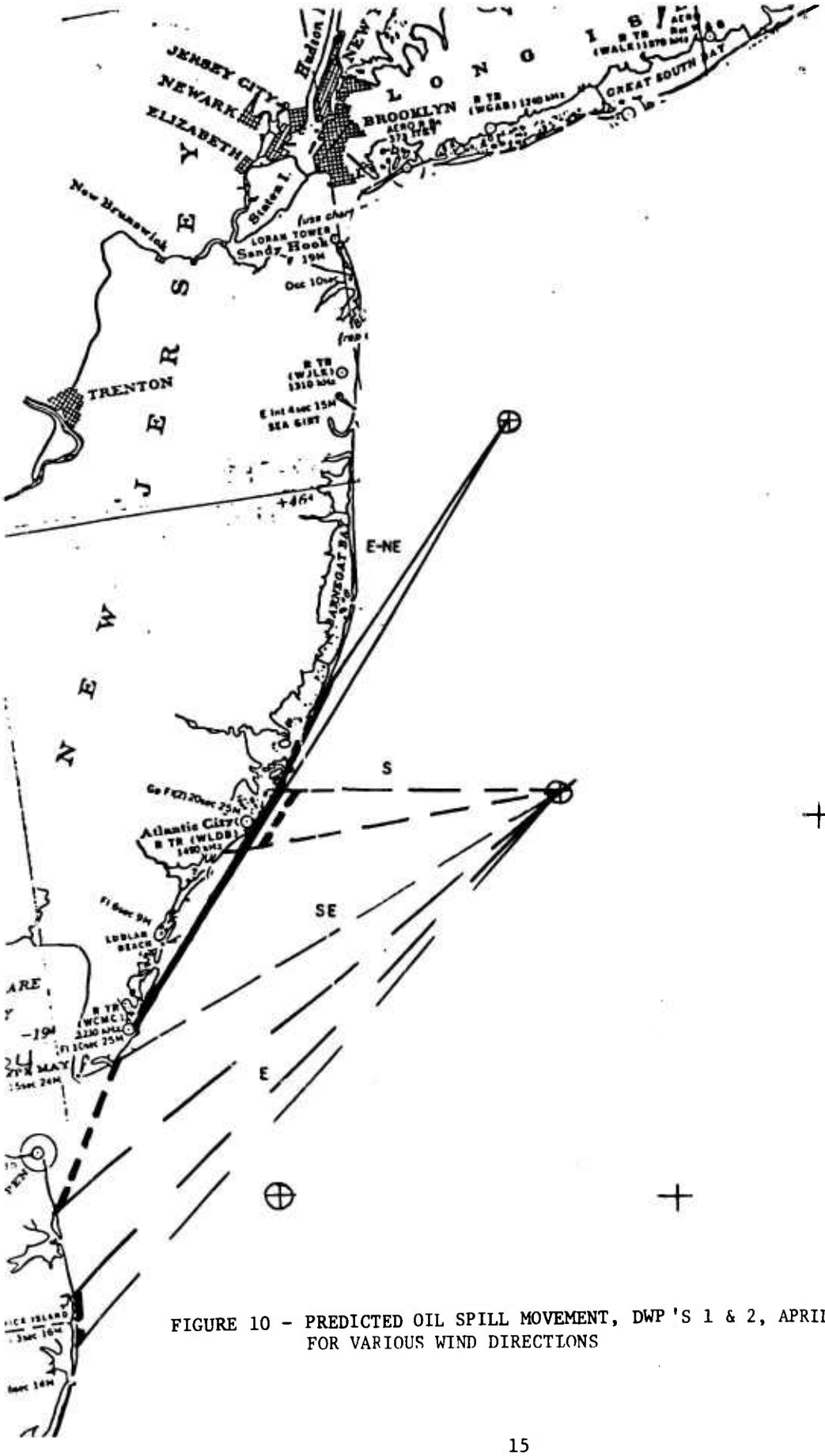



FIGURE 10 - PREDICTED OIL SPILL MOVEMENT, DWP 'S 1 & 2, APRIL FOR VARIOUS WIND DIRECTIONS

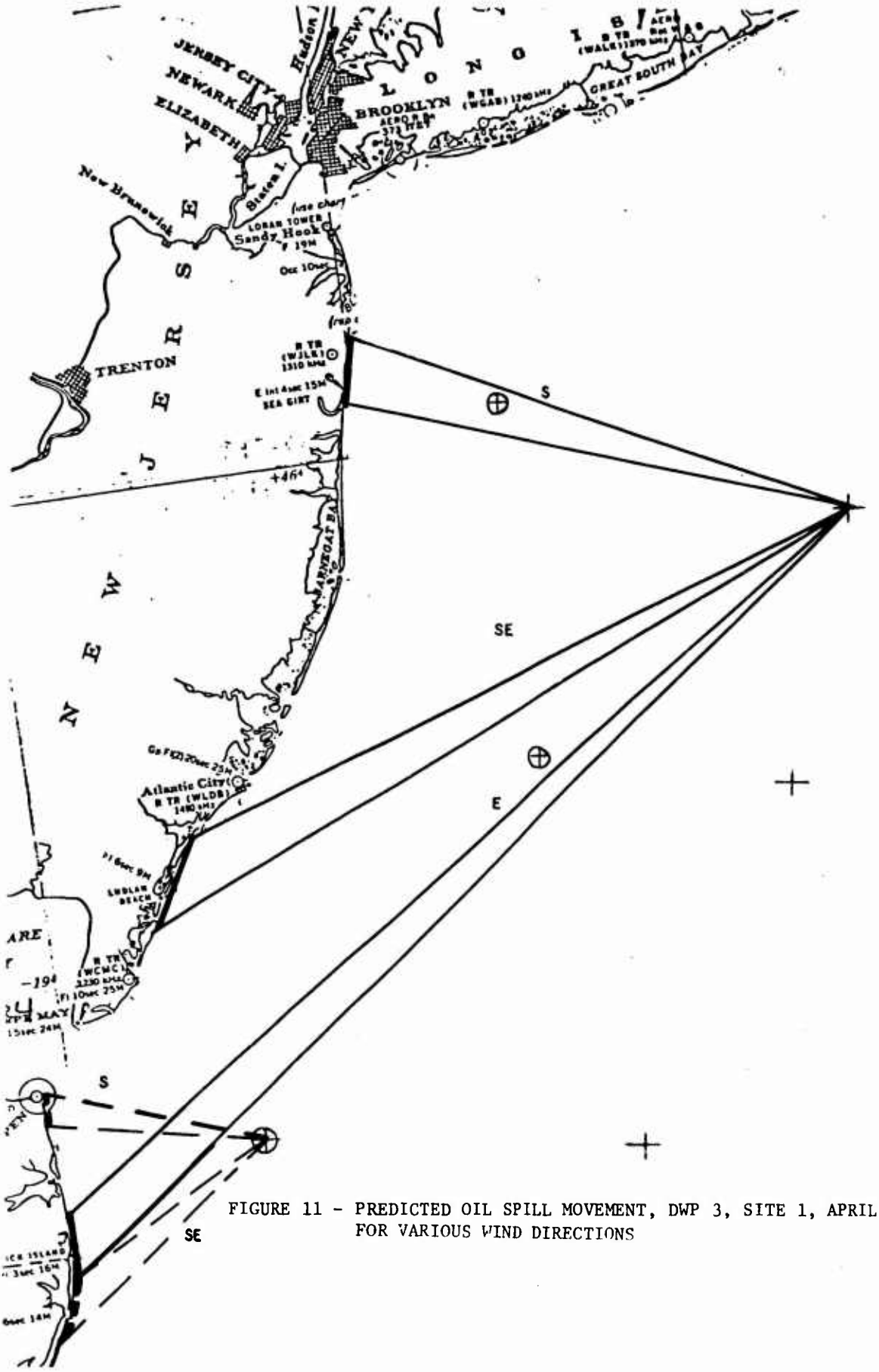



FIGURE 11 - PREDICTED OIL SPILL MOVEMENT, DWP 3, SITE 1, APRIL FOR VARIOUS WIND DIRECTIONS

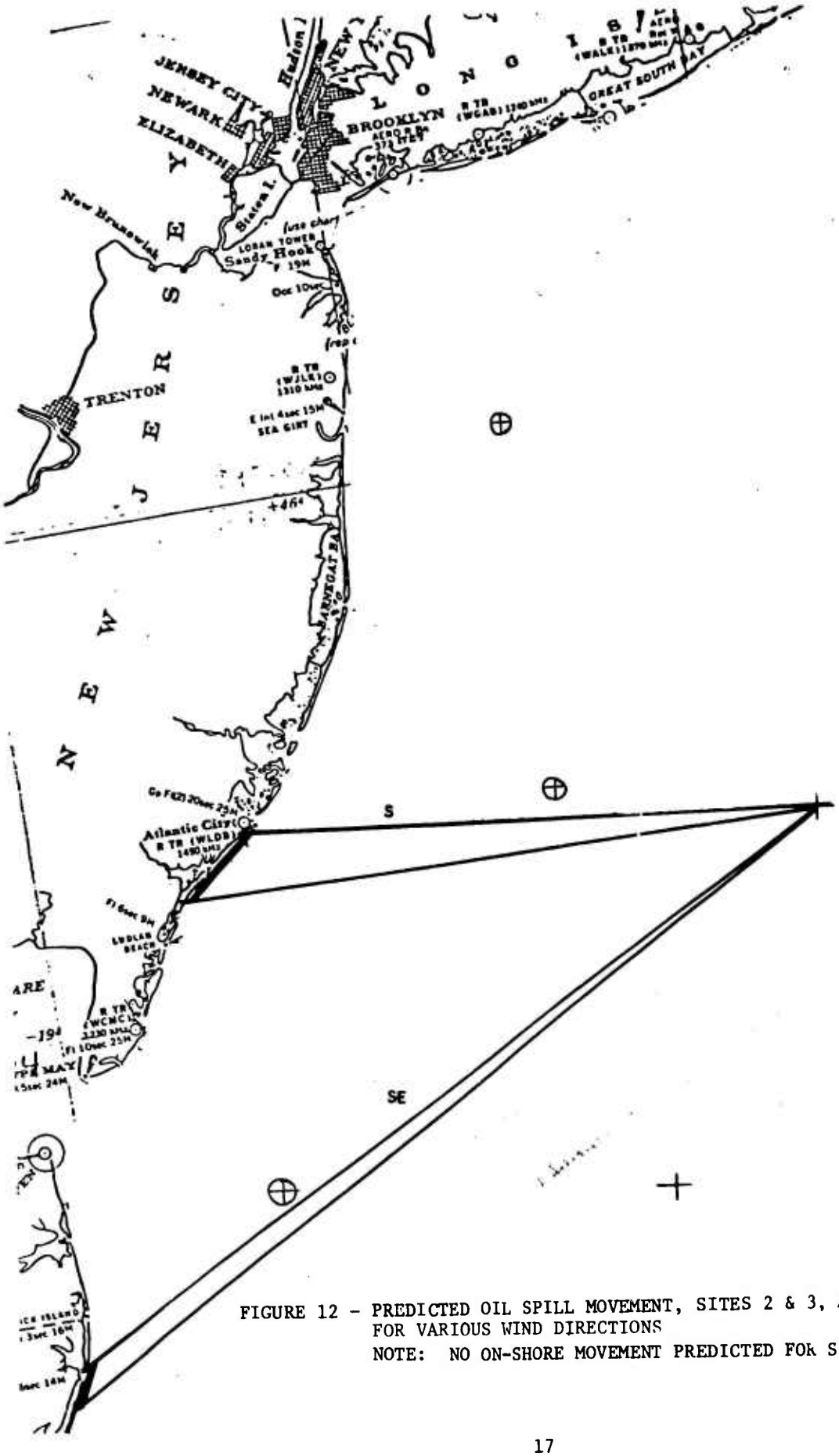



FIGURE 12 - PREDICTED OIL SPILL MOVEMENT, SITES 2 & 3, APRIL FOR VARIOUS WIND DIRECTIONS

NOTE: NO ON-SHORE MOVEMENT PREDICTED FOR SITE 3.

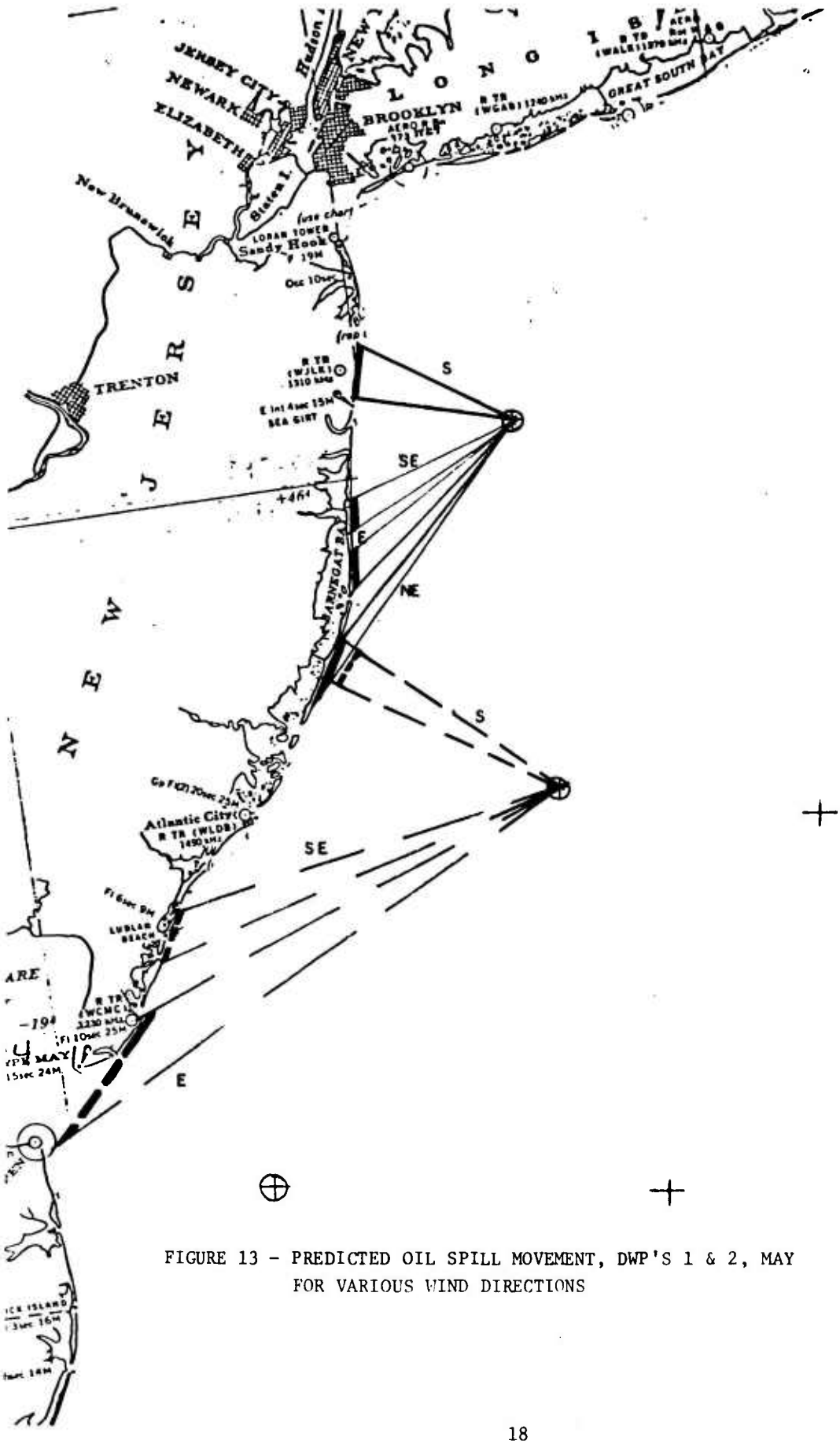



FIGURE 13 - PREDICTED OIL SPILL MOVEMENT, DWP'S 1 & 2, MAY FOR VARIOUS WIND DIRECTIONS

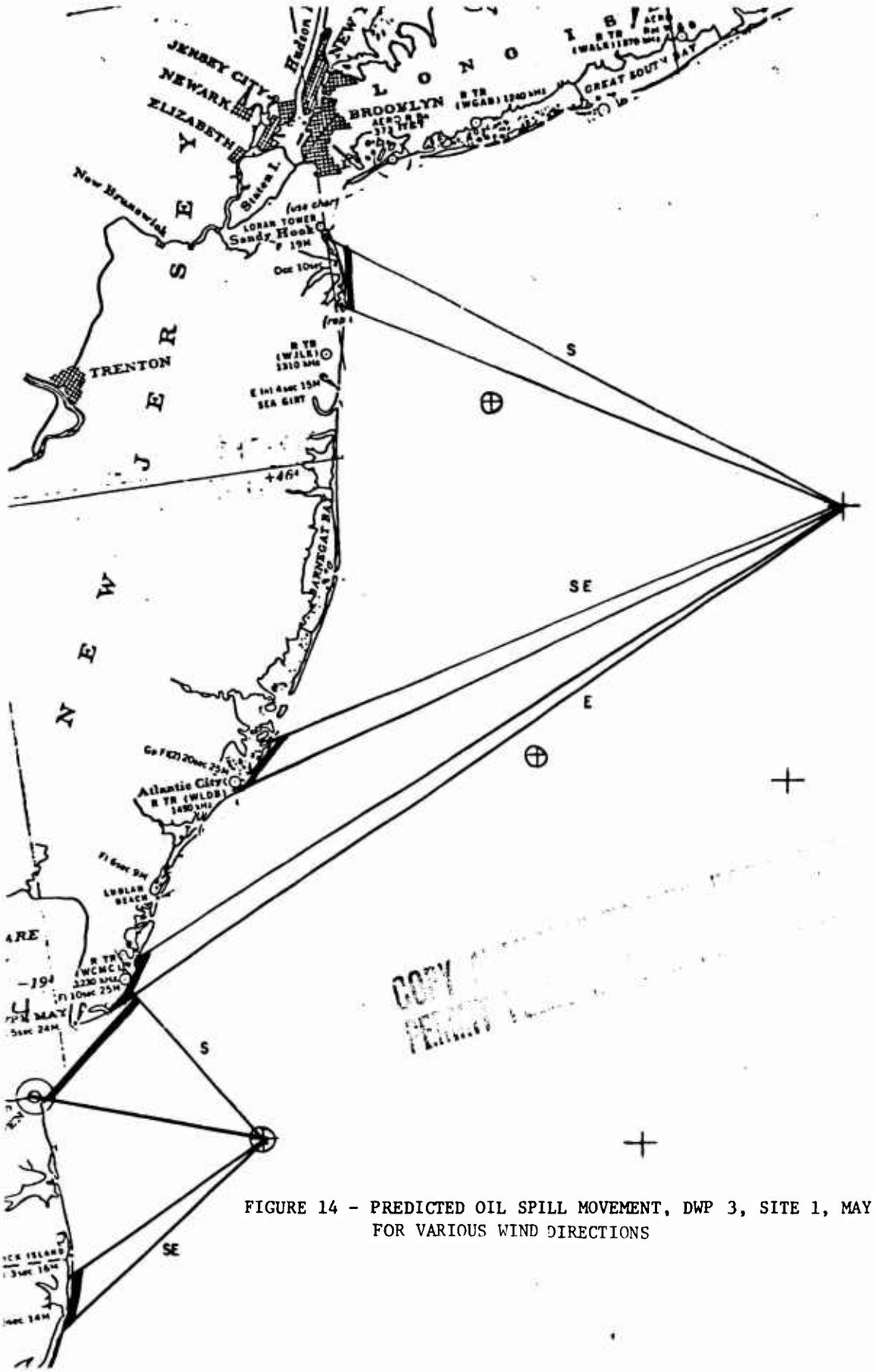



FIGURE 14 - PREDICTED OIL SPILL MOVEMENT, DWP 3, SITE 1, MAY FOR VARIOUS WIND DIRECTIONS

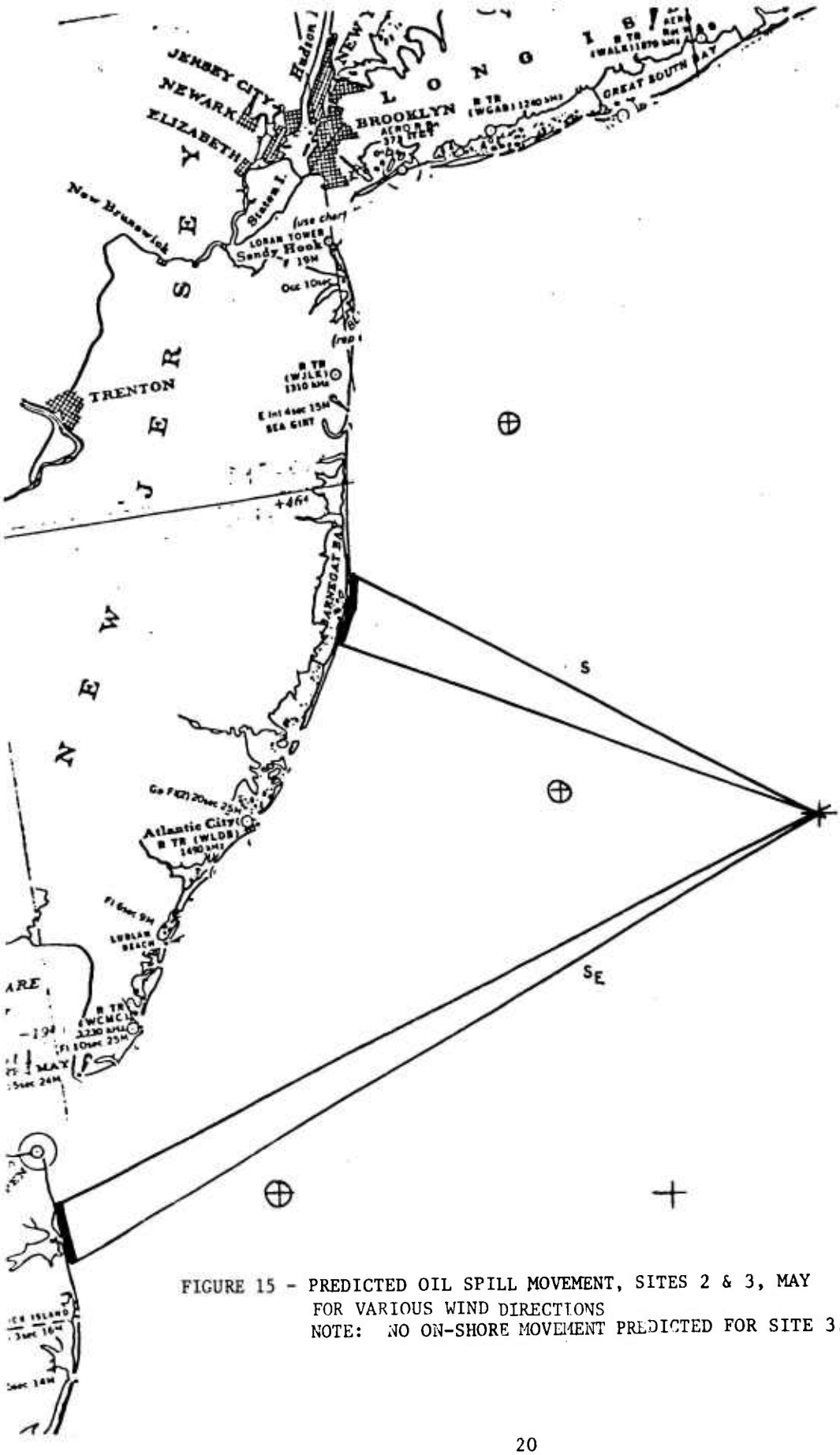



FIGURE 15 - PREDICTED OIL SPILL MOVEMENT, SITES 2 & 3, MAY
FOR VARIOUS WIND DIRECTIONS
NOTE: NO ON-SHORE MOVEMENT PREDICTED FOR SITE 3.

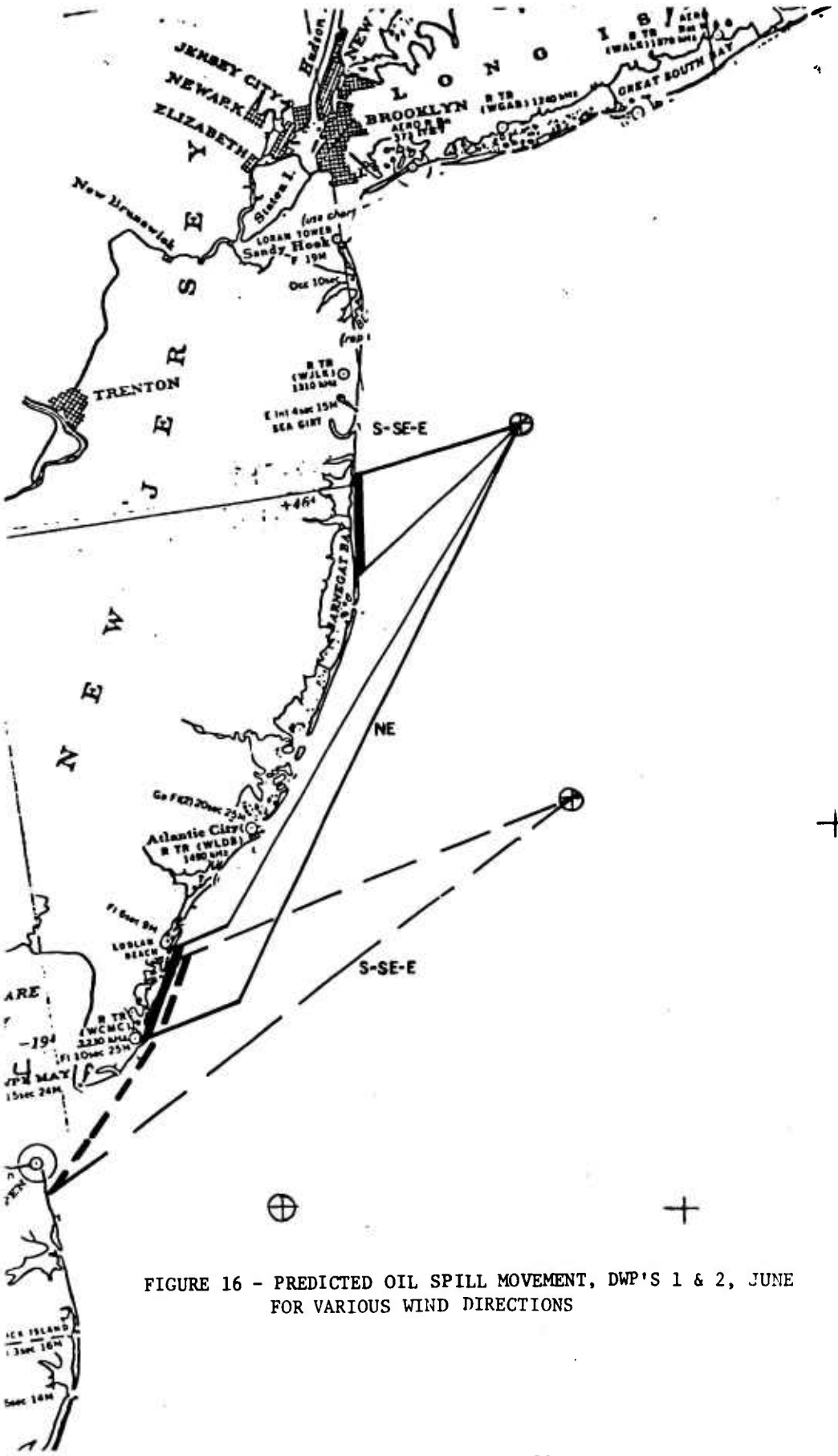



FIGURE 16 - PREDICTED OIL SPILL MOVEMENT, DWP'S 1 & 2, JUNE FOR VARIOUS WIND DIRECTIONS

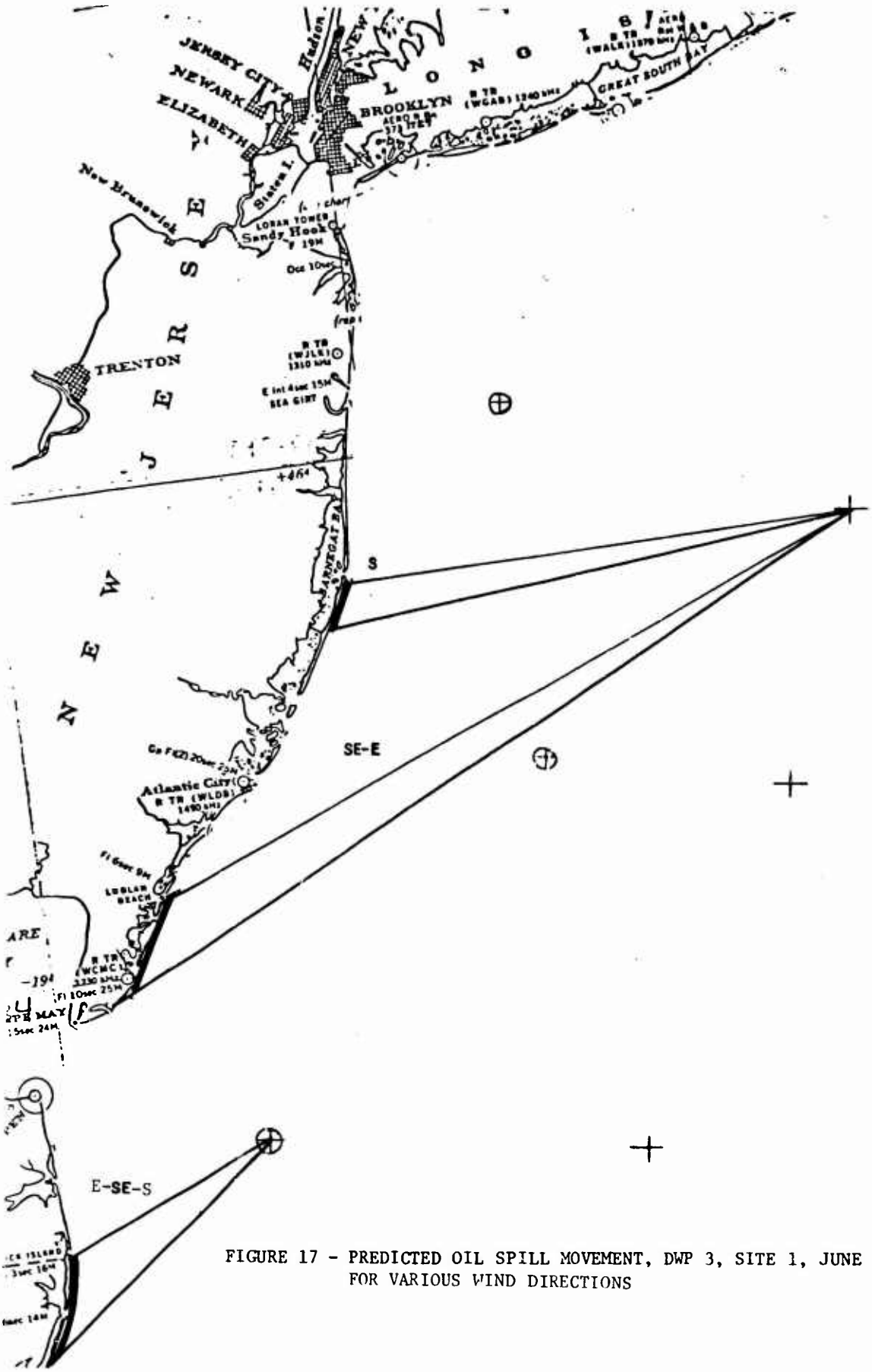



FIGURE 17 - PREDICTED OIL SPILL MOVEMENT, DWP 3, SITE 1, JUNE FOR VARIOUS WIND DIRECTIONS

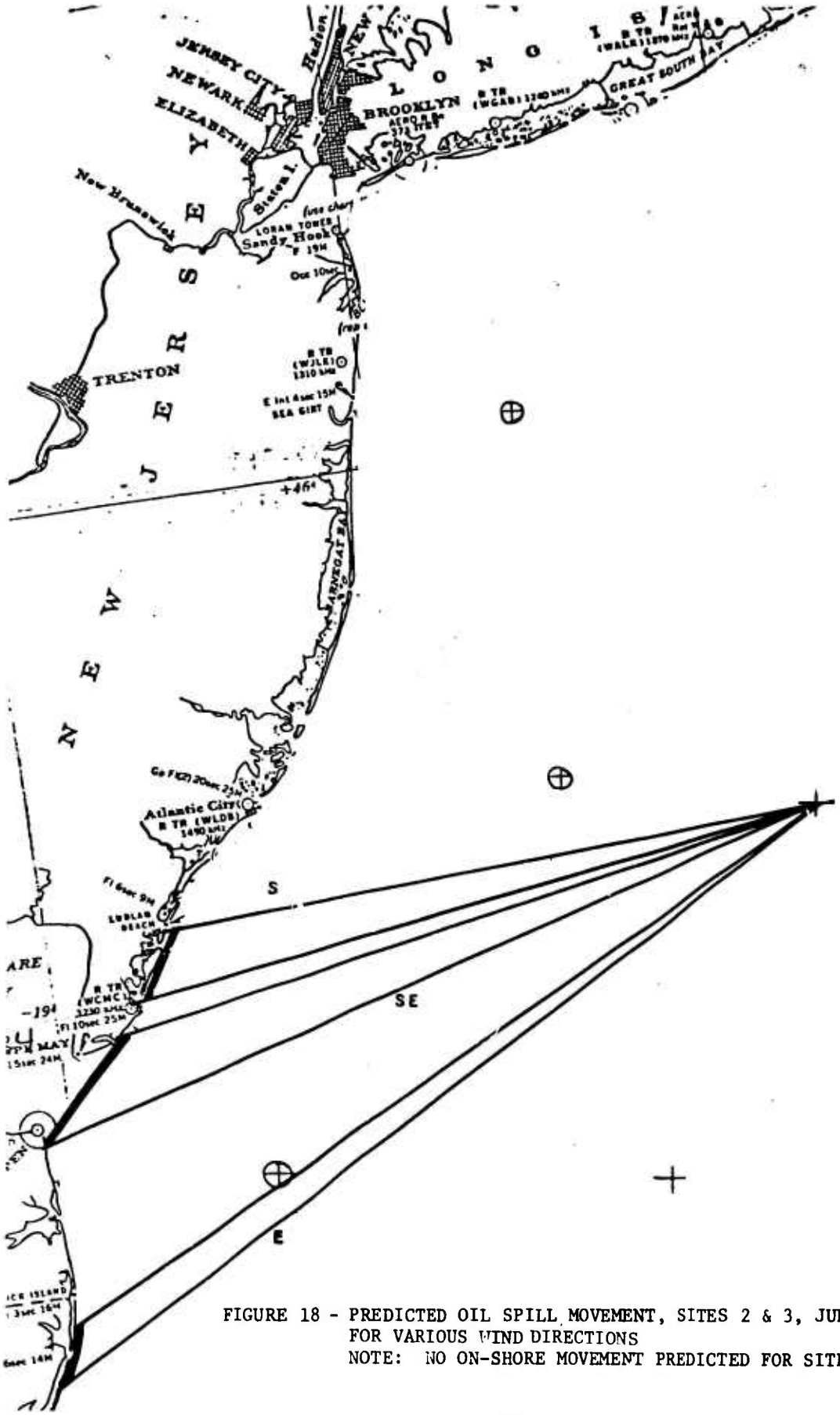



FIGURE 18 - PREDICTED OIL SPILL MOVEMENT, SITES 2 & 3, JUNE FOR VARIOUS WIND DIRECTIONS
NOTE: NO ON-SHORE MOVEMENT PREDICTED FOR SITE 3.

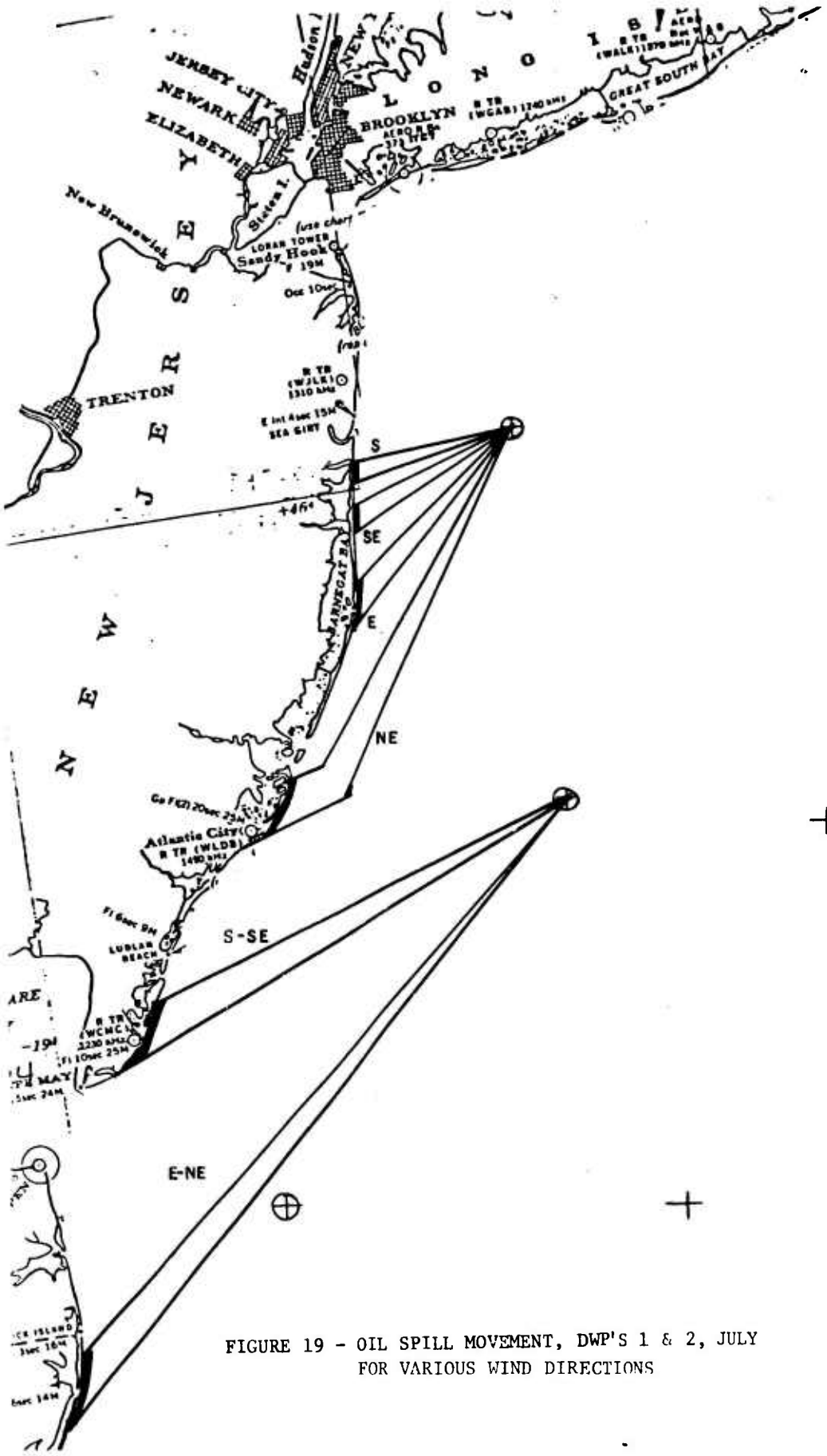



FIGURE 19 - OIL SPILL MOVEMENT, DWP'S 1 & 2, JULY
FOR VARIOUS WIND DIRECTIONS

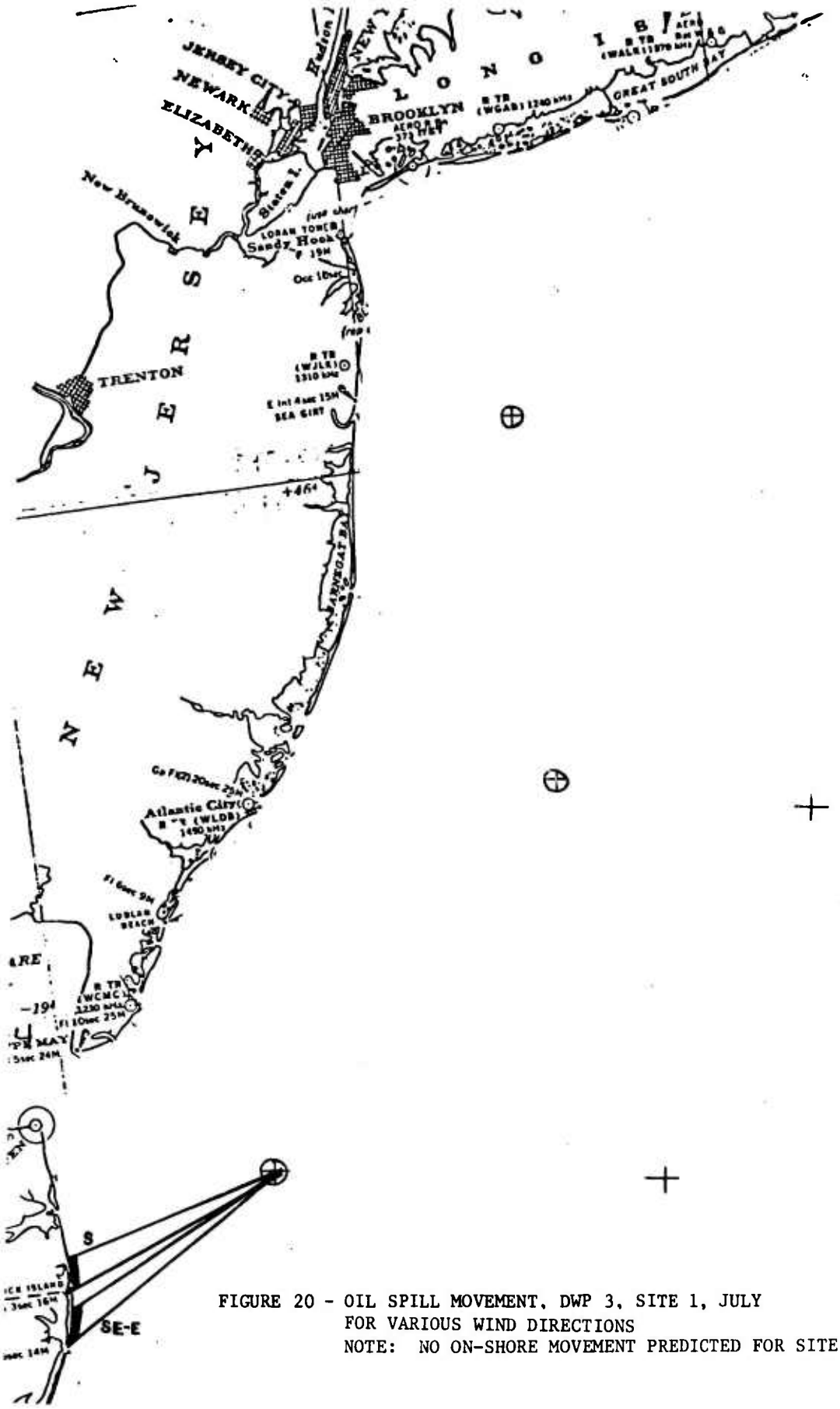



FIGURE 20 - OIL SPILL MOVEMENT, DWP 3, SITE 1, JULY
FOR VARIOUS WIND DIRECTIONS
NOTE: NO ON-SHORE MOVEMENT PREDICTED FOR SITE 1.

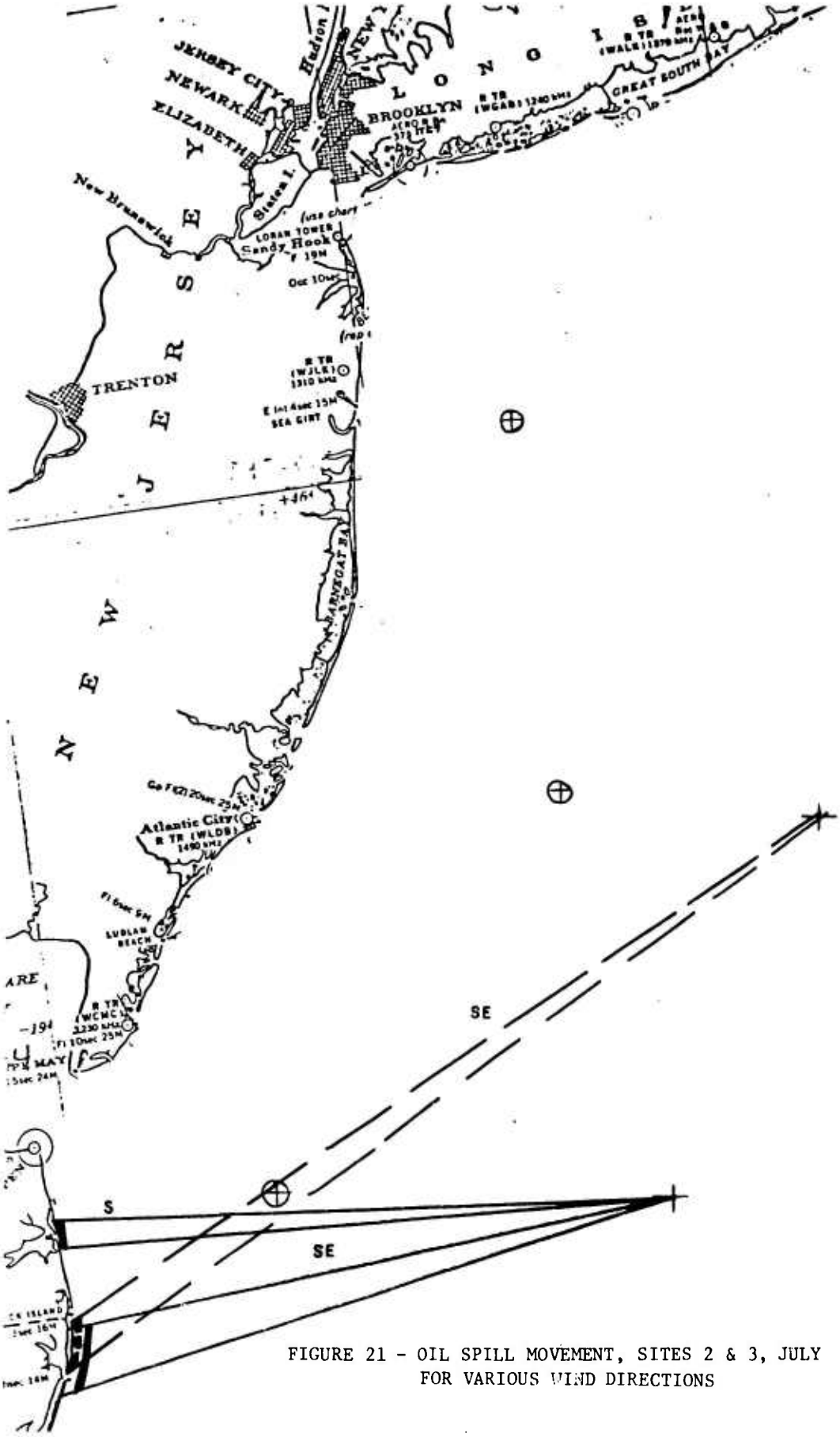



FIGURE 21 - OIL SPILL MOVEMENT, SITES 2 & 3, JULY
FOR VARIOUS WIND DIRECTIONS

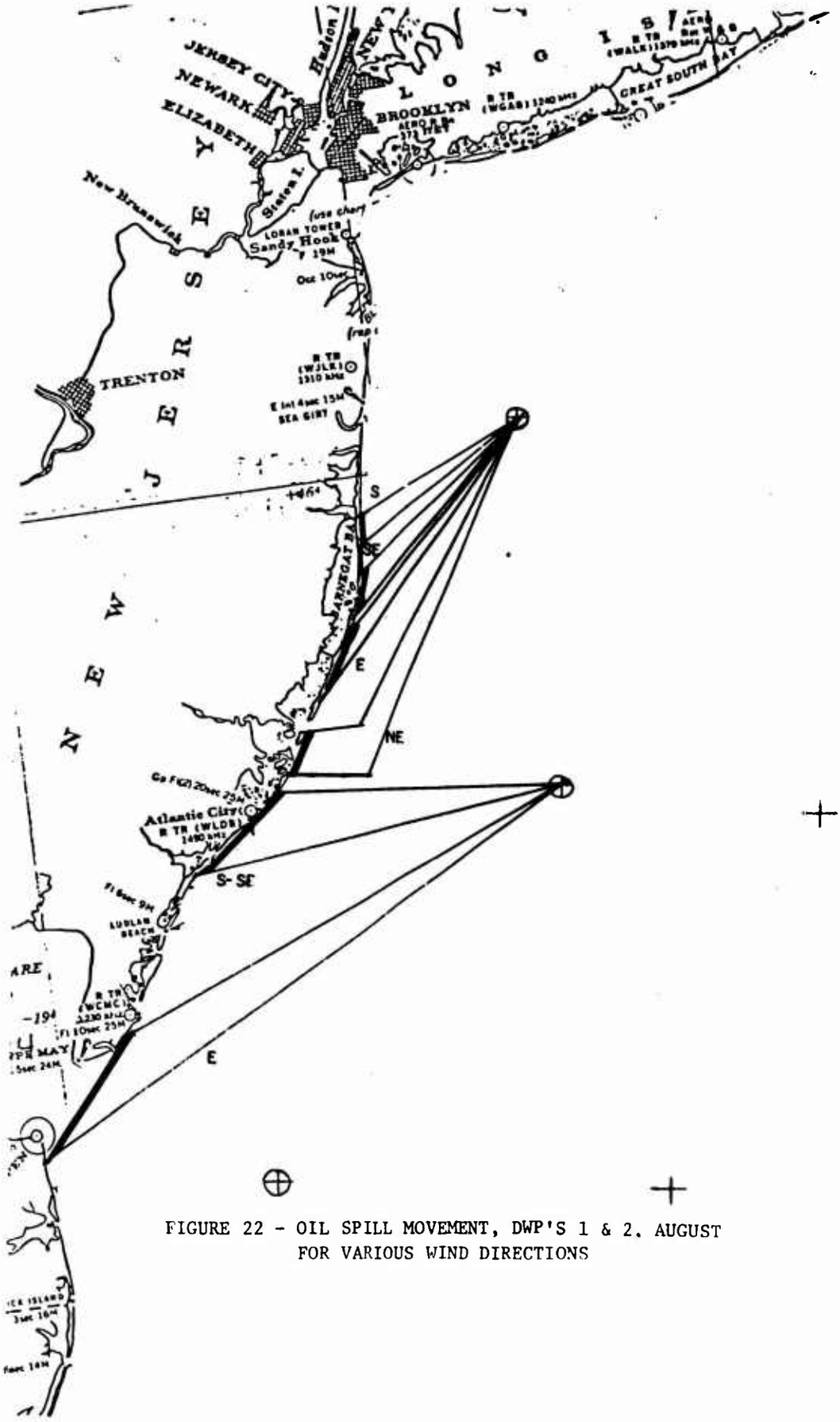



FIGURE 22 - OIL SPILL MOVEMENT, DWP'S 1 & 2, AUGUST
FOR VARIOUS WIND DIRECTIONS

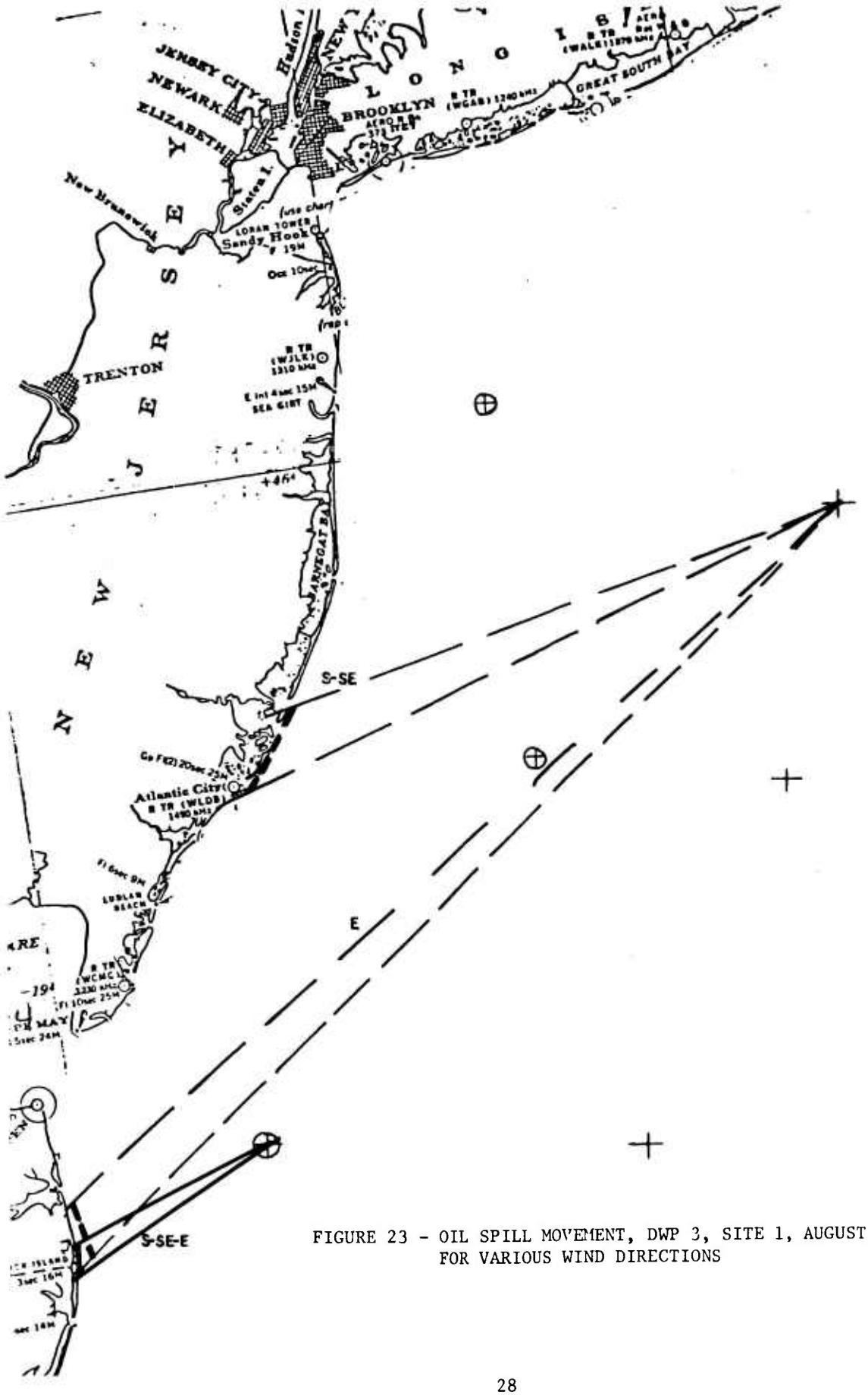



FIGURE 23 - OIL SPILL MOVEMENT, DWP 3, SITE 1, AUGUST FOR VARIOUS WIND DIRECTIONS

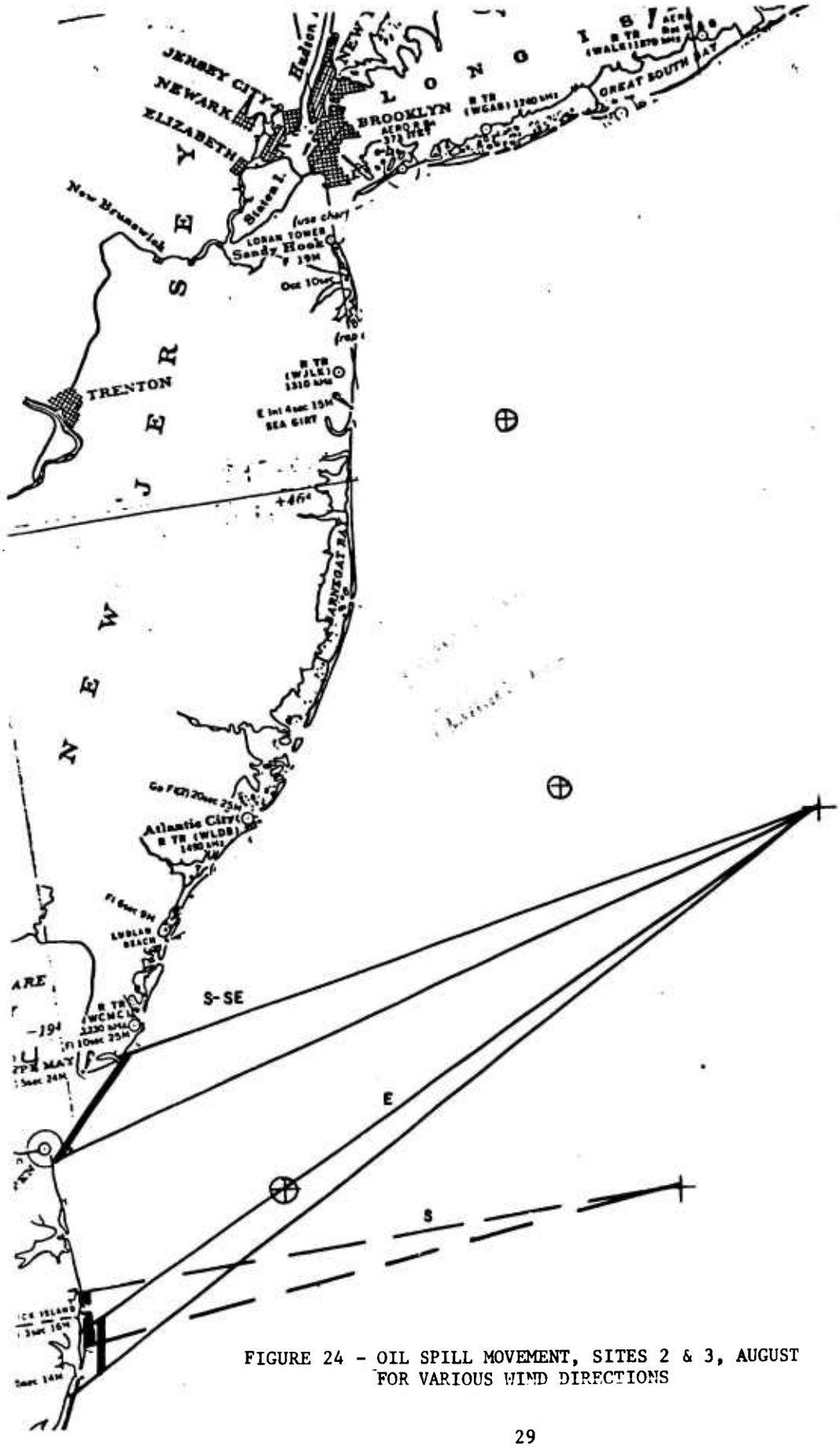



FIGURE 24 - OIL SPILL MOVEMENT, SITES 2 & 3, AUGUST FOR VARIOUS WIND DIRECTIONS

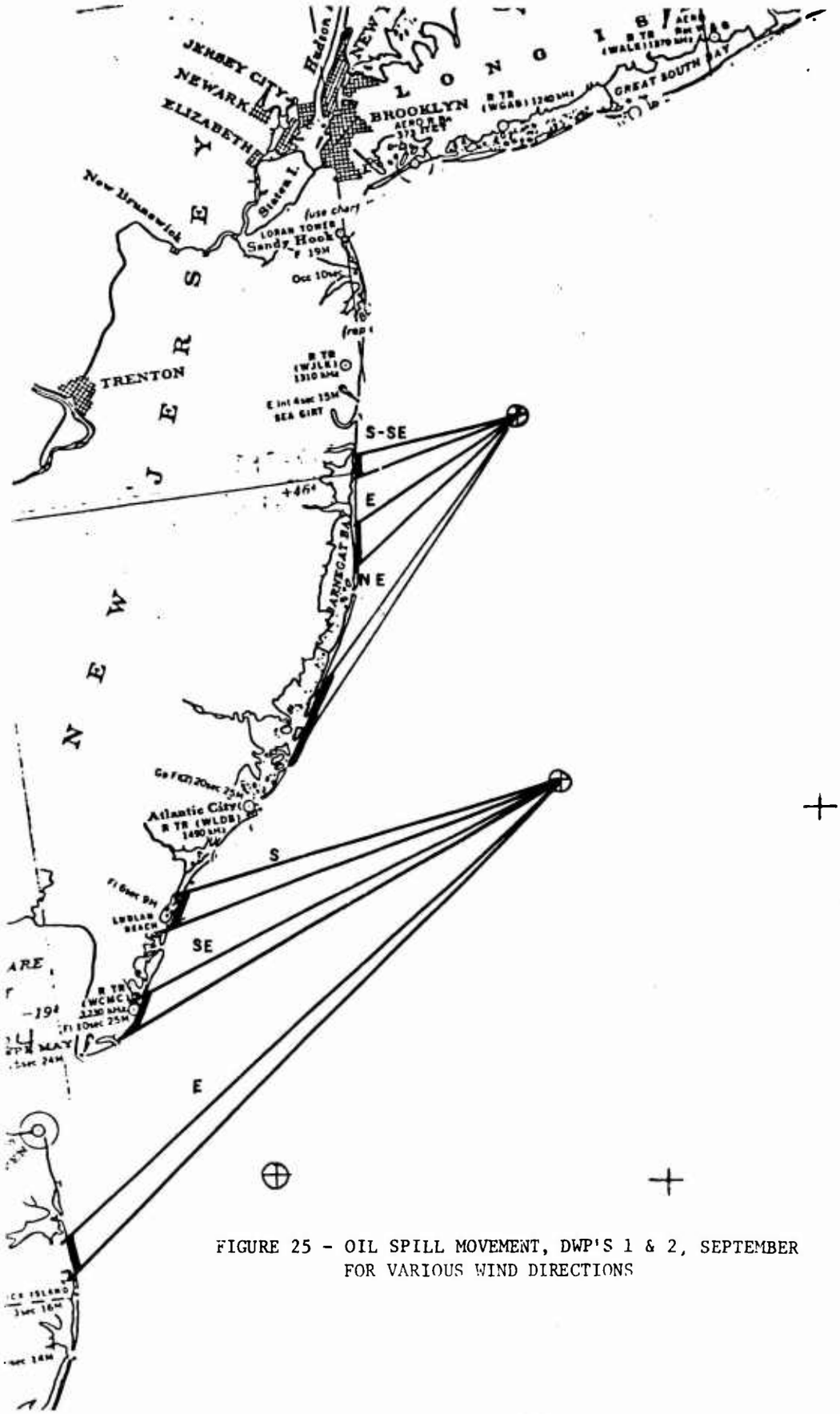



FIGURE 25 - OIL SPILL MOVEMENT, DWP'S 1 & 2, SEPTEMBER FOR VARIOUS WIND DIRECTIONS

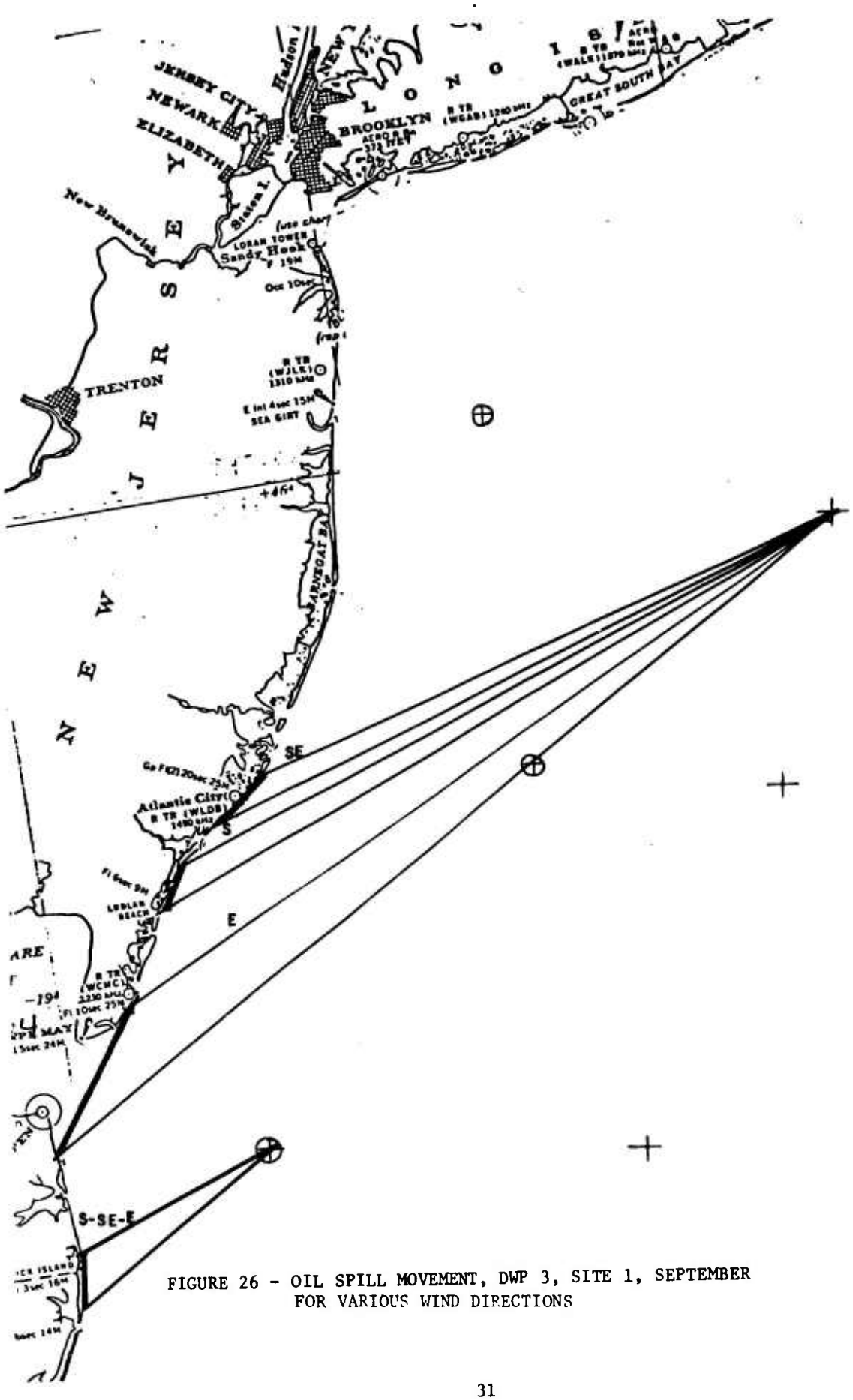



FIGURE 26 - OIL SPILL MOVEMENT, DWP 3, SITE 1, SEPTEMBER FOR VARIOUS WIND DIRECTIONS

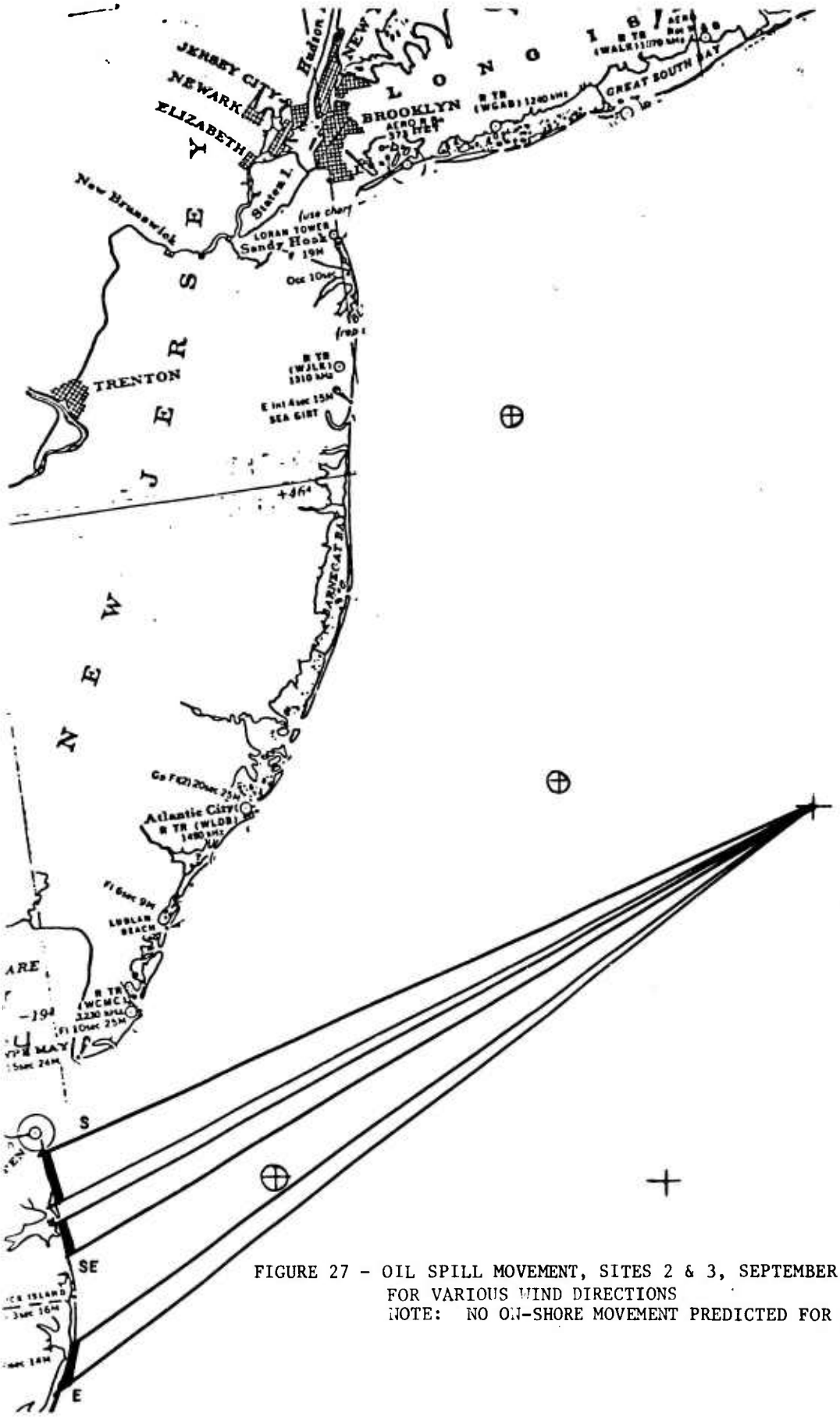



FIGURE 27 - OIL SPILL MOVEMENT, SITES 2 & 3, SEPTEMBER
FOR VARIOUS WIND DIRECTIONS
NOTE: NO ON-SHORE MOVEMENT PREDICTED FOR SITE 3.

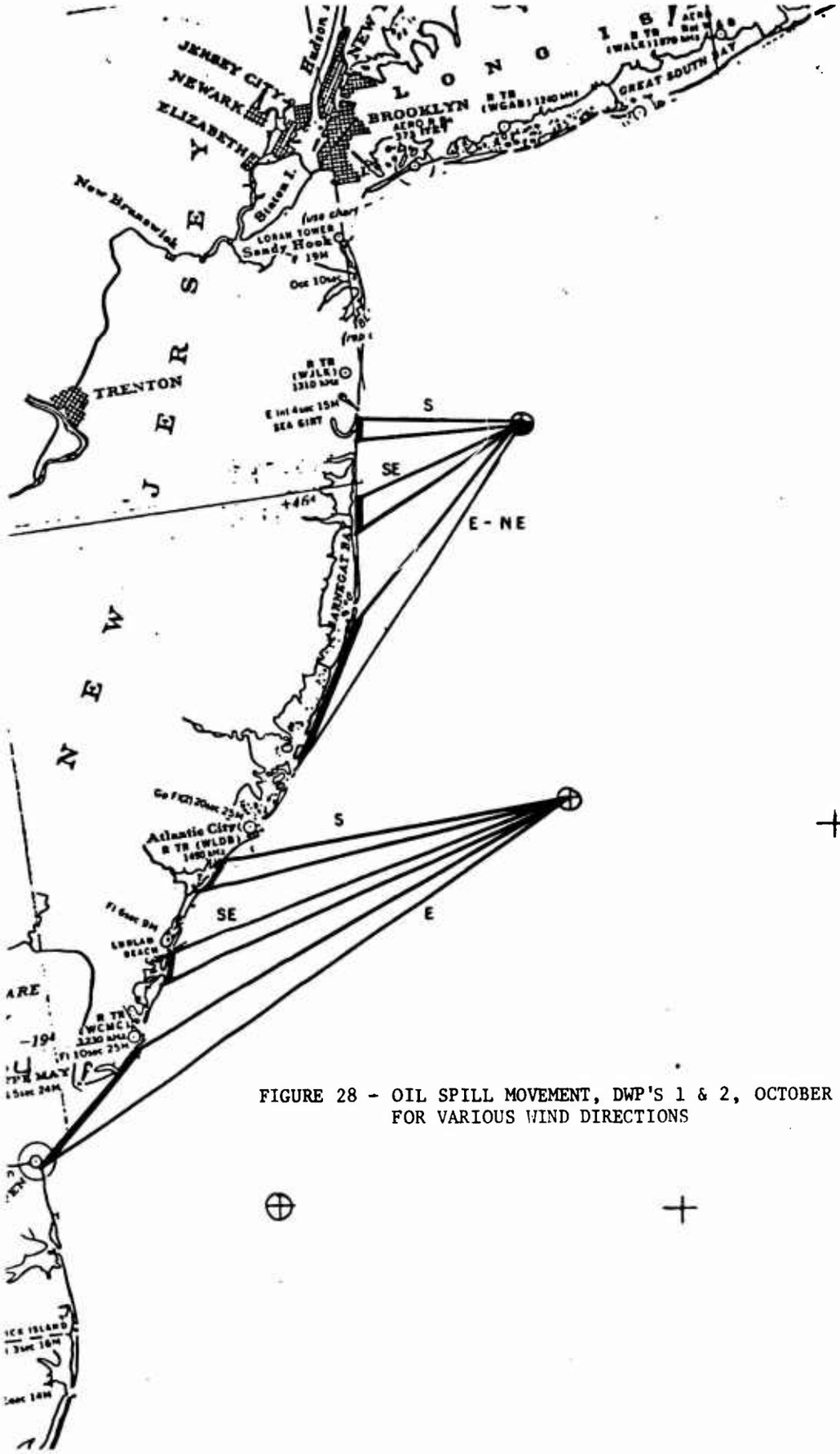



FIGURE 28 - OIL SPILL MOVEMENT, DWP'S 1 & 2, OCTOBER FOR VARIOUS WIND DIRECTIONS

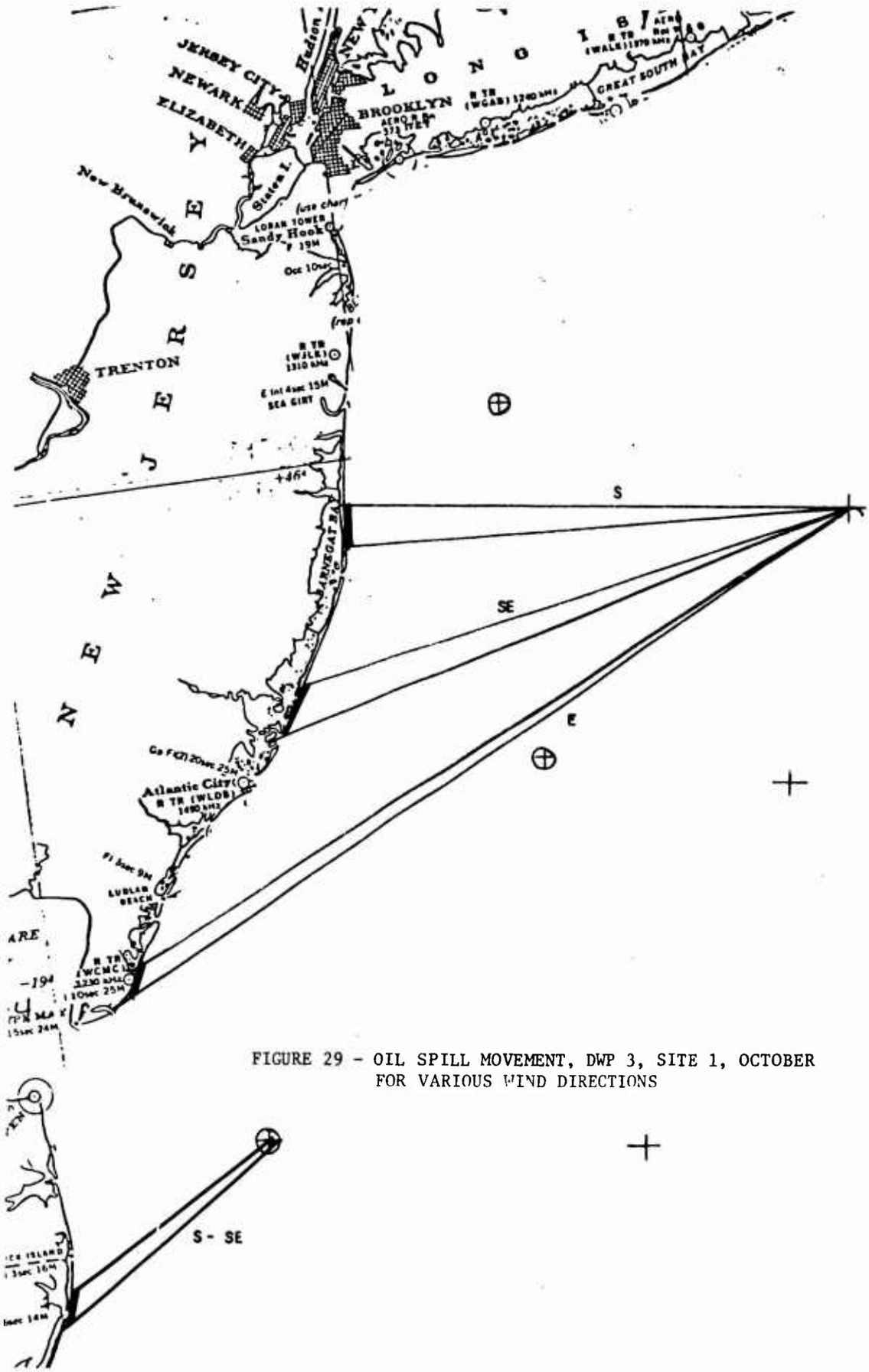



FIGURE 29 - OIL SPILL MOVEMENT, DWP 3, SITE 1, OCTOBER FOR VARIOUS WIND DIRECTIONS

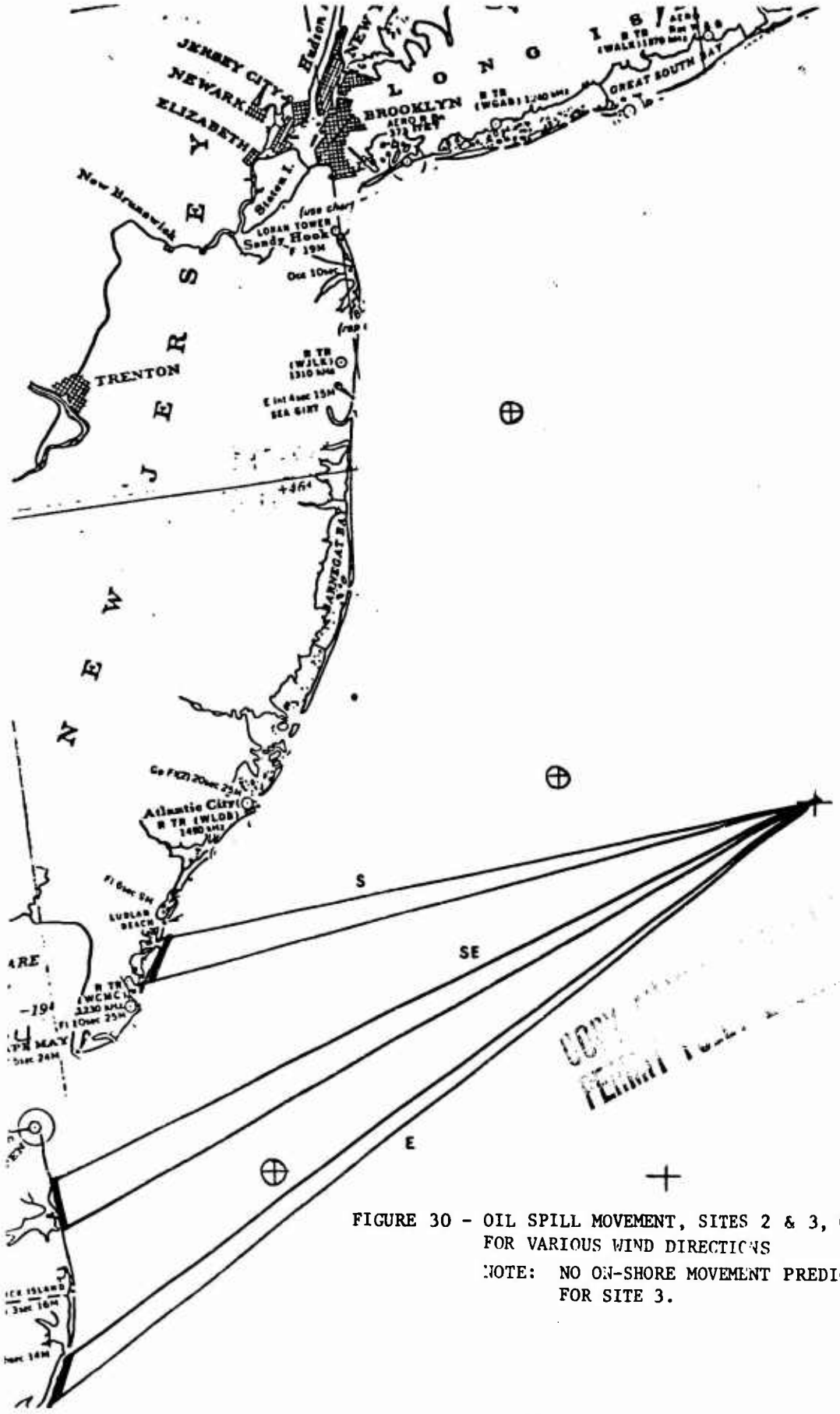



FIGURE 30 - OIL SPILL MOVEMENT, SITES 2 & 3, OCTOBER FOR VARIOUS WIND DIRECTIONS

NOTE: NO ON-SHORE MOVEMENT PREDICTED FOR SITE 3.

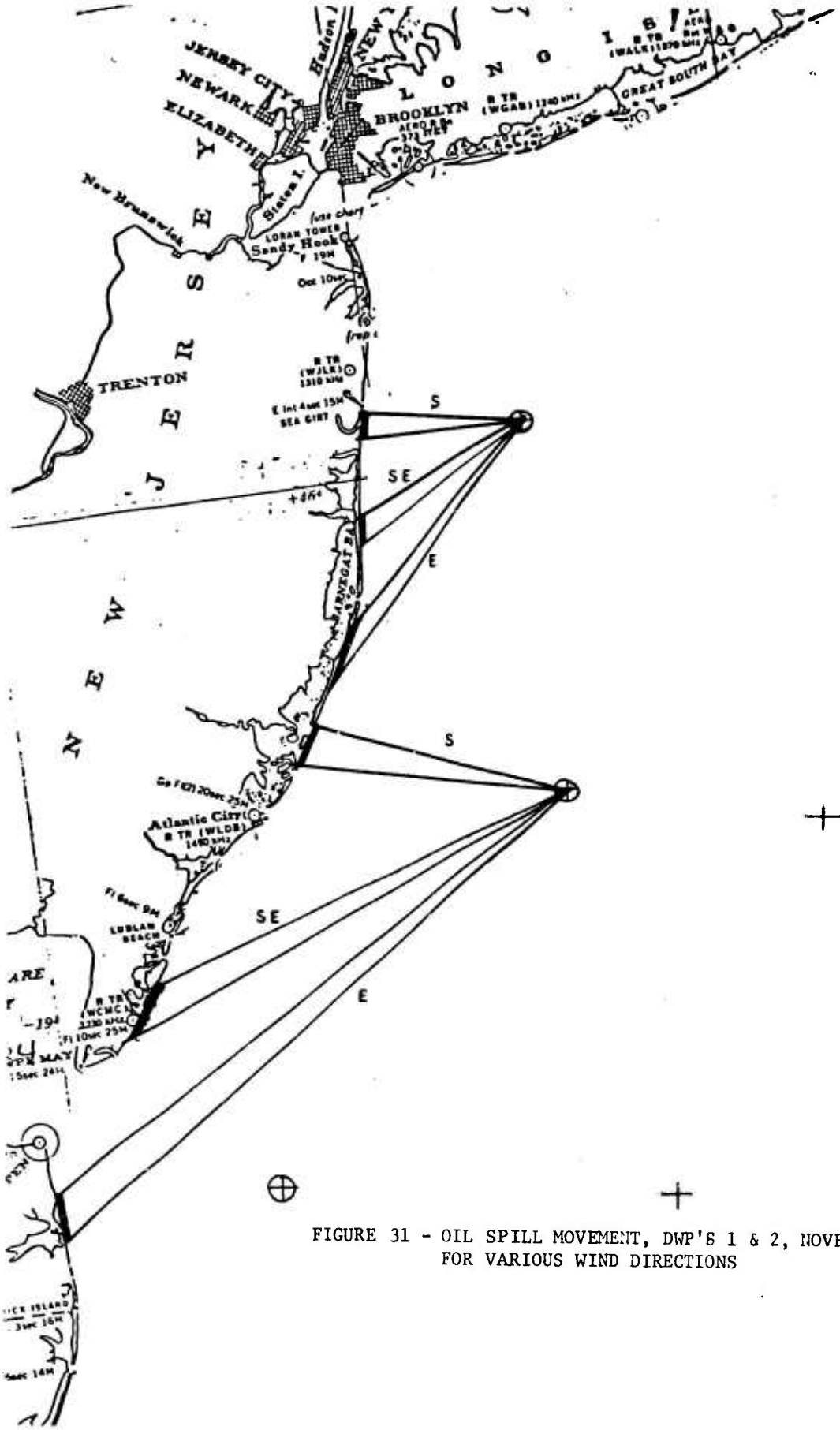



FIGURE 31 - OIL SPILL MOVEMENT, DWP'S 1 & 2, NOVEMBER FOR VARIOUS WIND DIRECTIONS

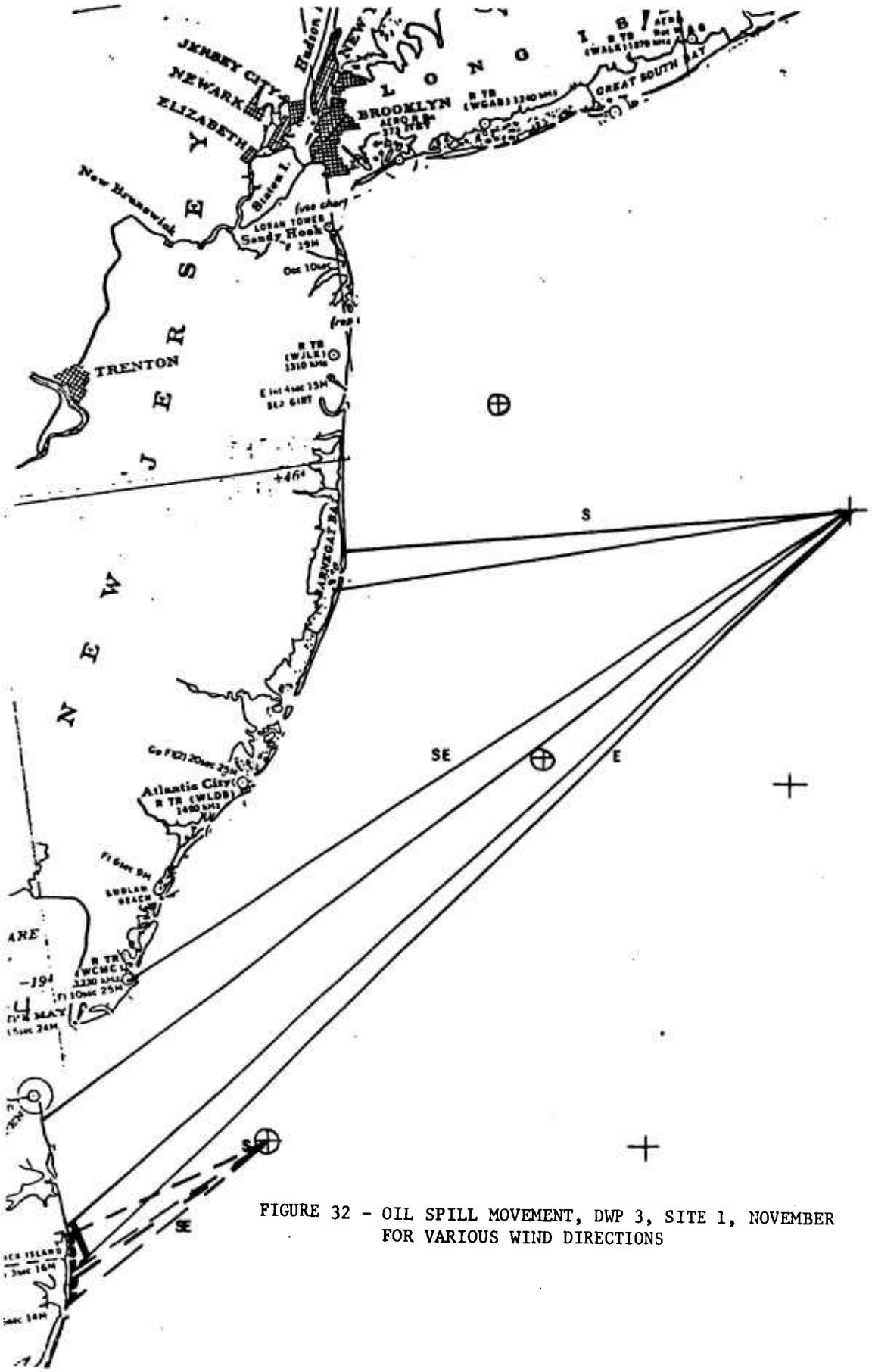



FIGURE 32 - OIL SPILL MOVEMENT, DWP 3, SITE 1, NOVEMBER FOR VARIOUS WIND DIRECTIONS

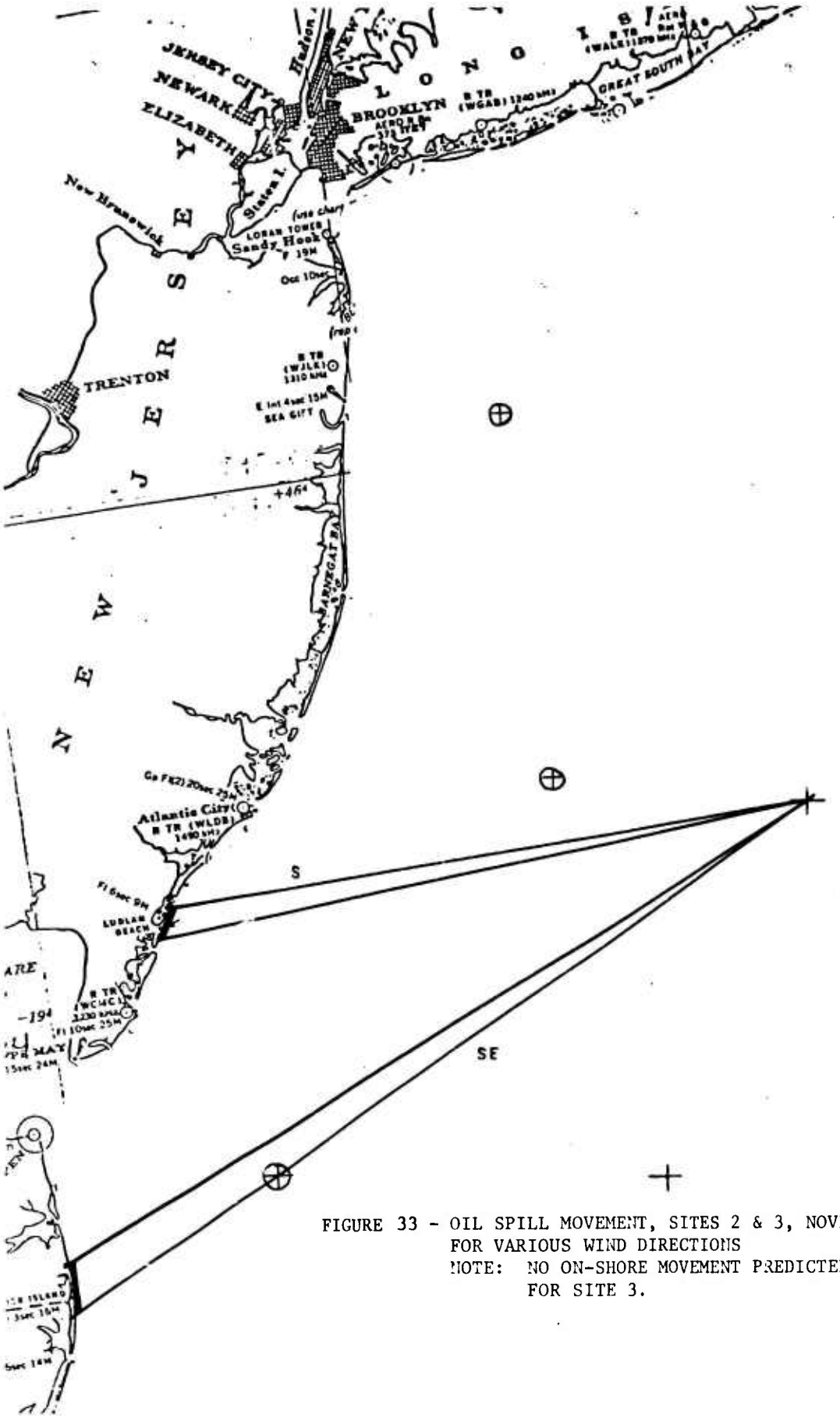



FIGURE 33 - OIL SPILL MOVEMENT, SITES 2 & 3, NOVEMBER FOR VARIOUS WIND DIRECTIONS
NOTE: NO ON-SHORE MOVEMENT PREDICTED FOR SITE 3.

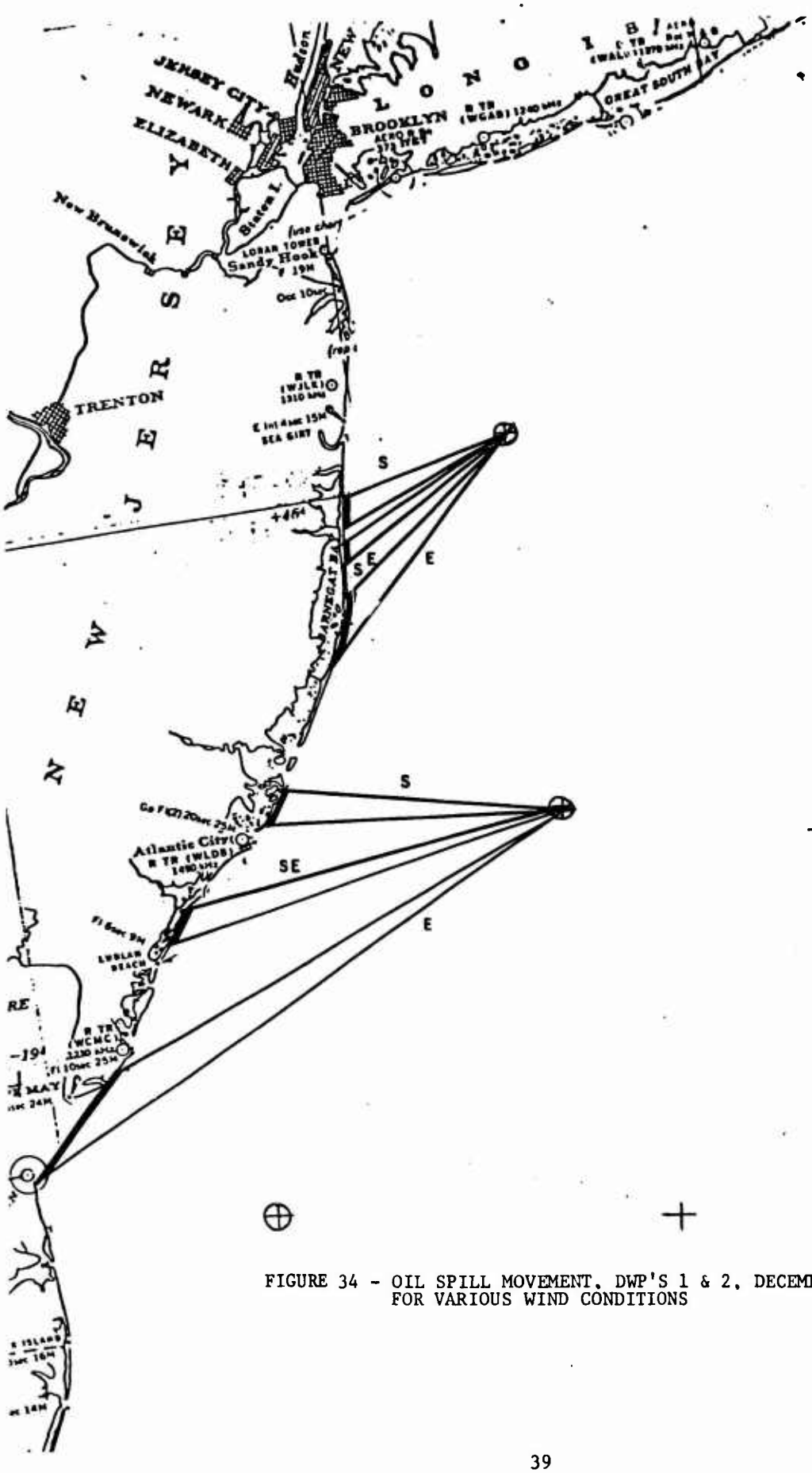



FIGURE 34 - OIL SPILL MOVEMENT, DWP'S 1 & 2, DECEMBER FOR VARIOUS WIND CONDITIONS

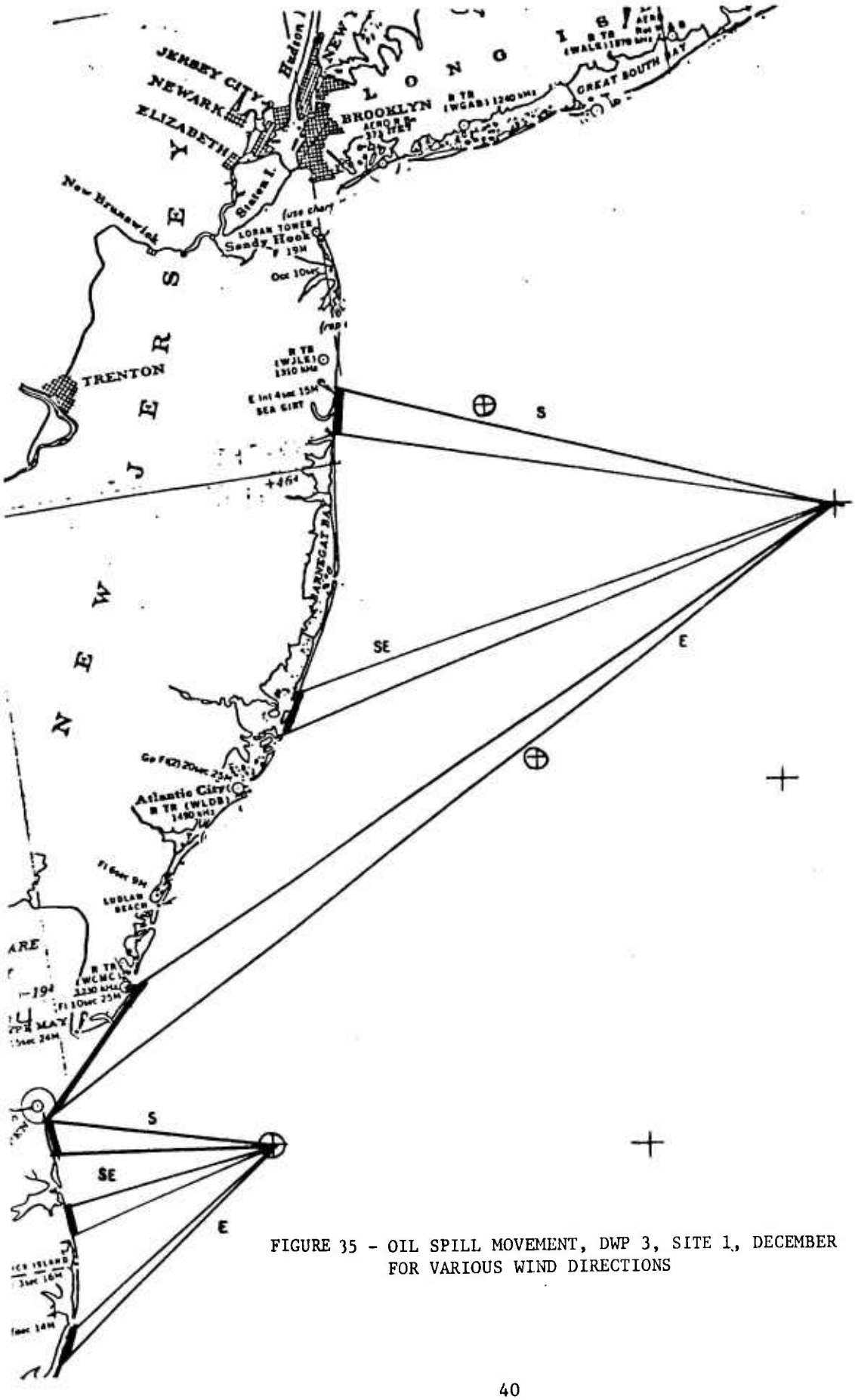



FIGURE 35 - OIL SPILL MOVEMENT, DWP 3, SITE 1, DECEMBER FOR VARIOUS WIND DIRECTIONS

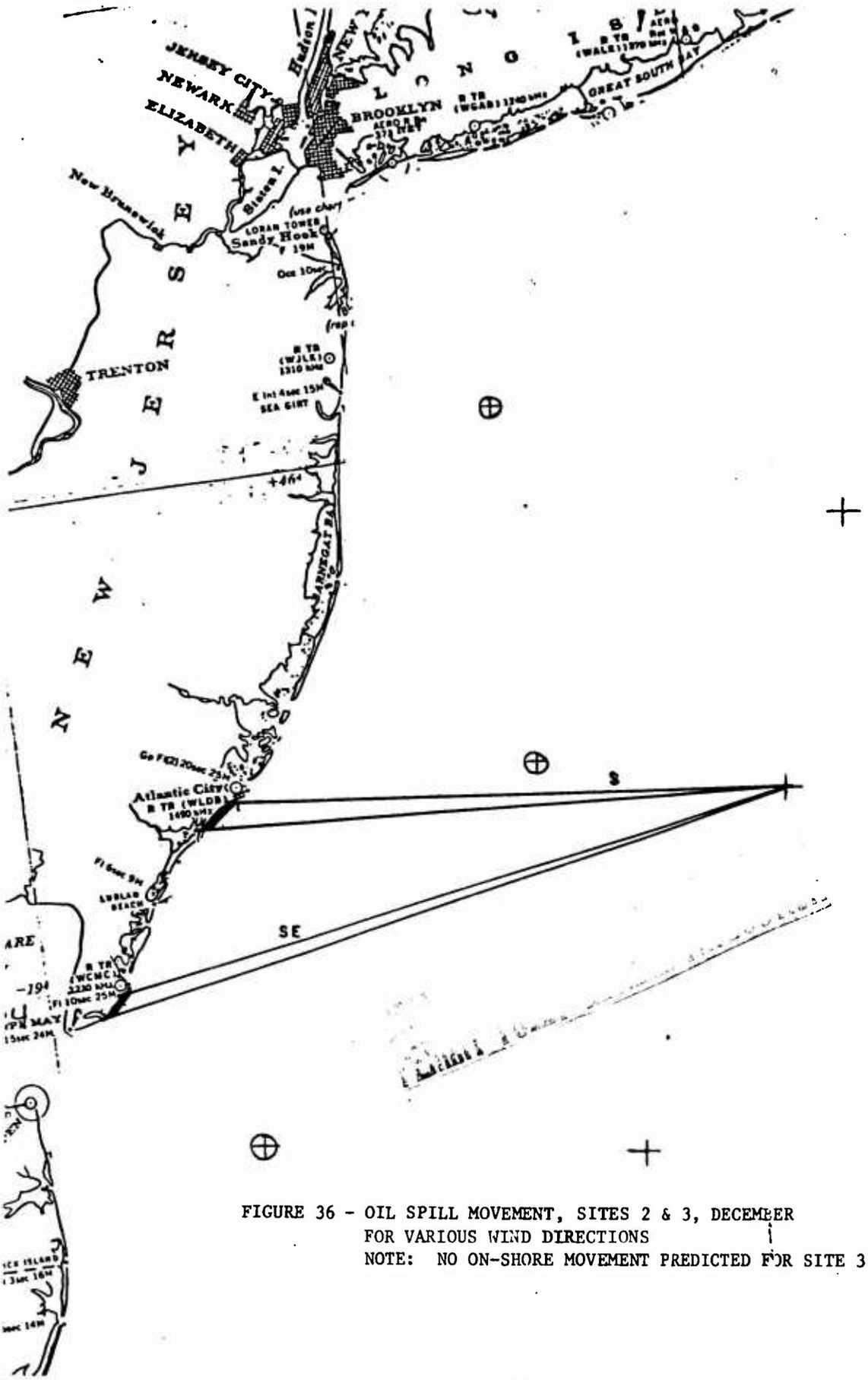



FIGURE 36 - OIL SPILL MOVEMENT, SITES 2 & 3, DECEMBER
FOR VARIOUS WIND DIRECTIONS
NOTE: NO ON-SHORE MOVEMENT PREDICTED FOR SITE 3.

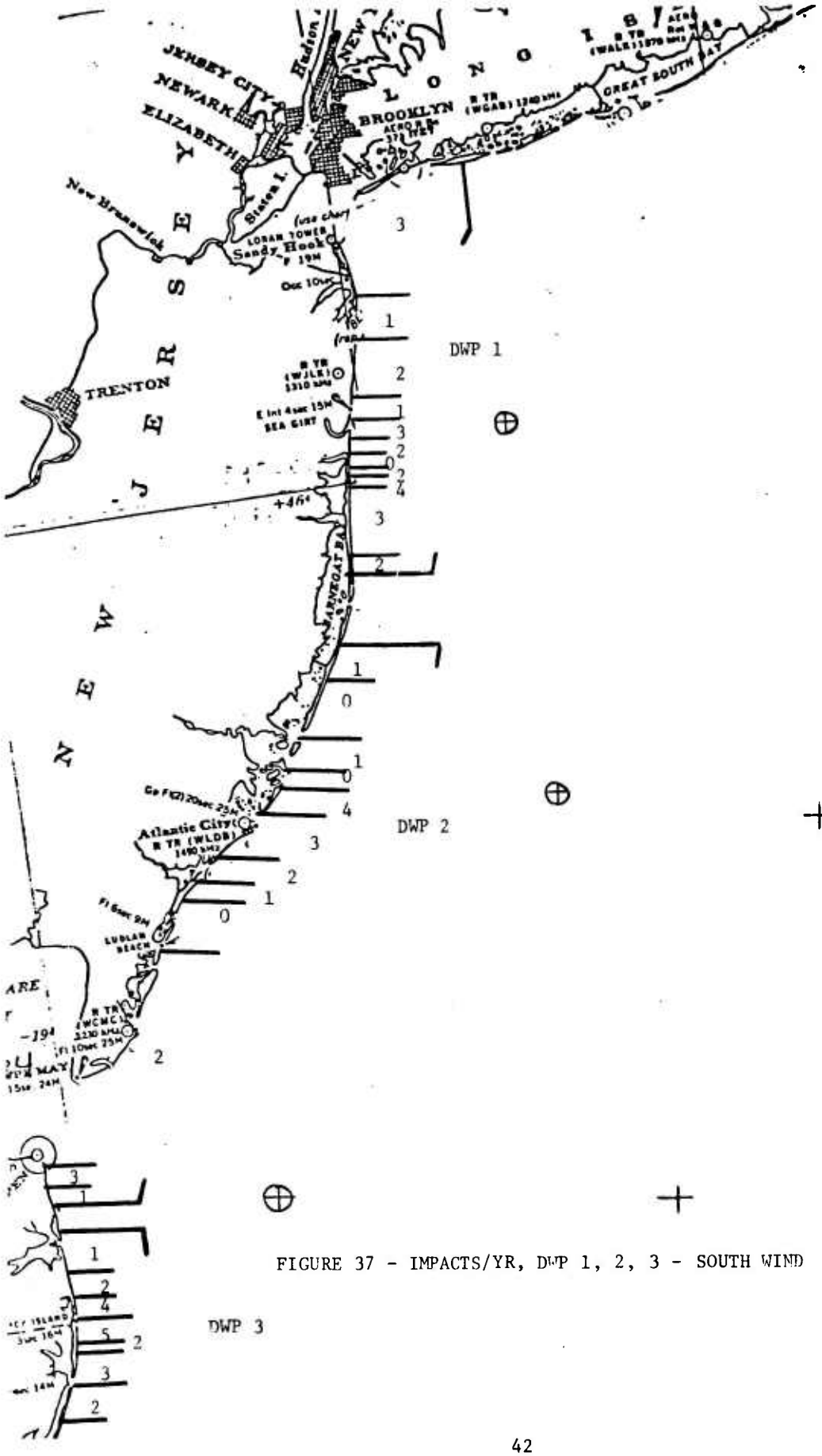



FIGURE 37 - IMPACTS/YR, DWP 1, 2, 3 - SOUTH WIND

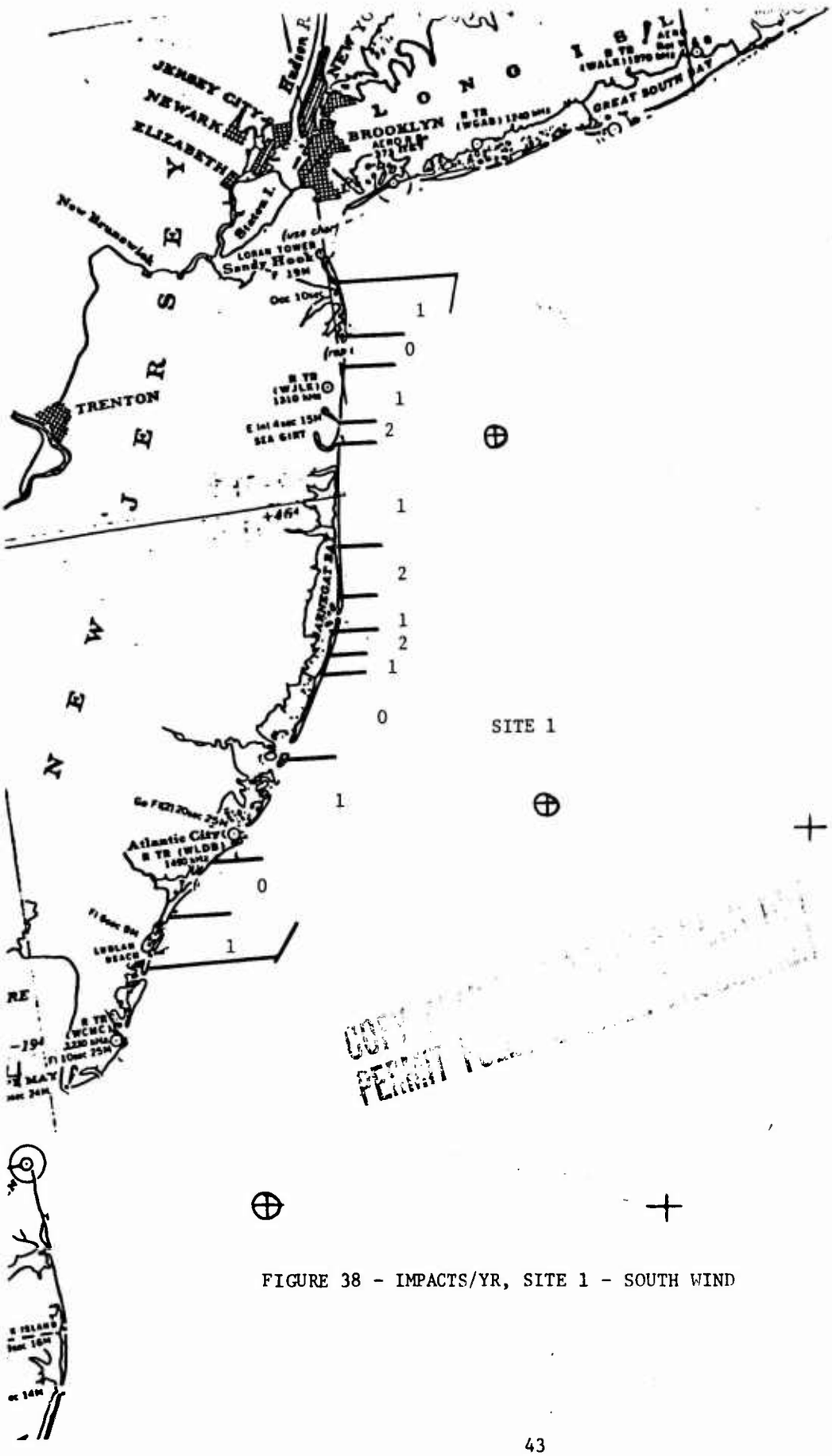
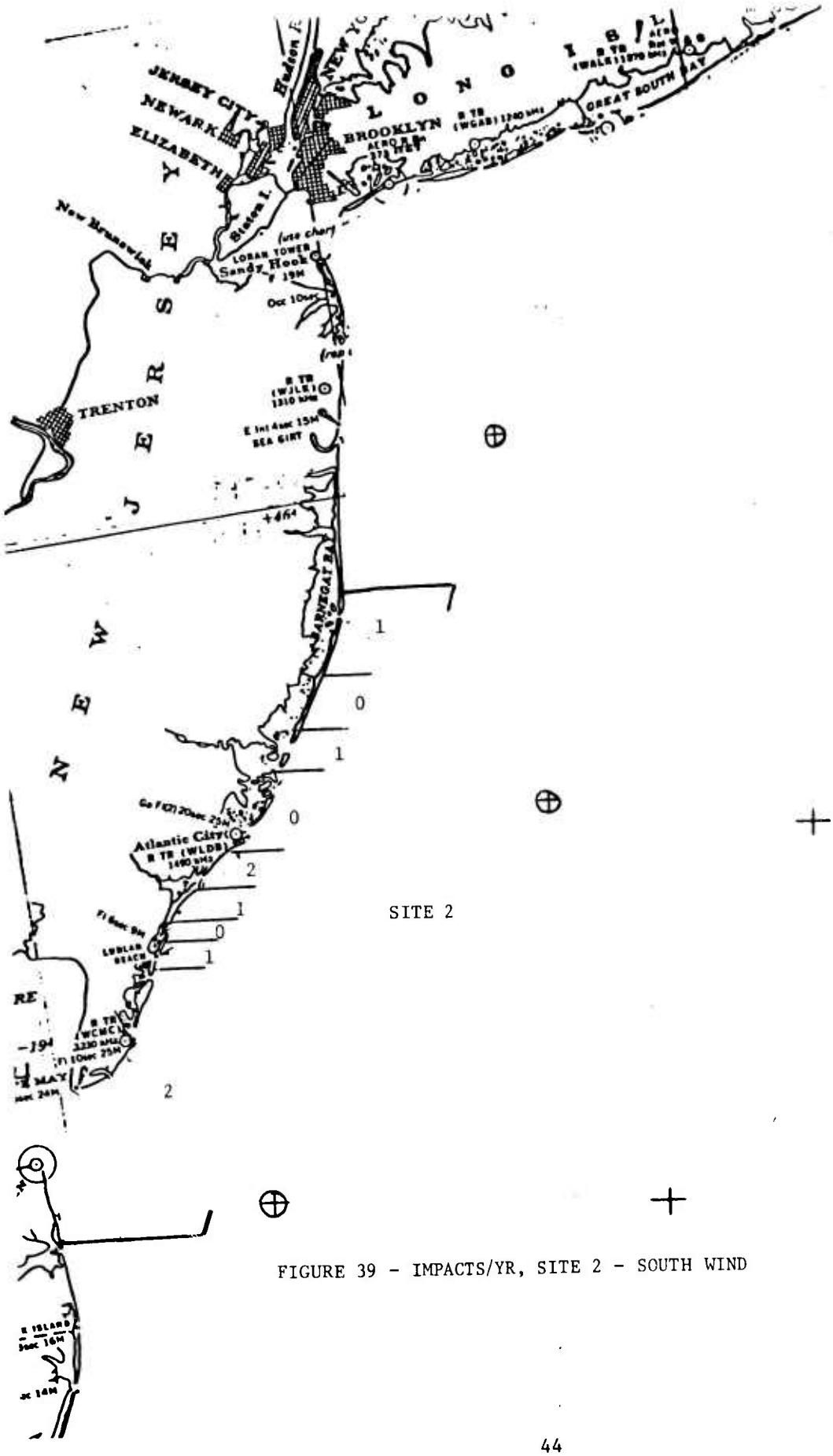



FIGURE 38 - IMPACTS/YR, SITE 1 - SOUTH WIND




SITE 2

FIGURE 39 - IMPACTS/YR, SITE 2 - SOUTH WIND

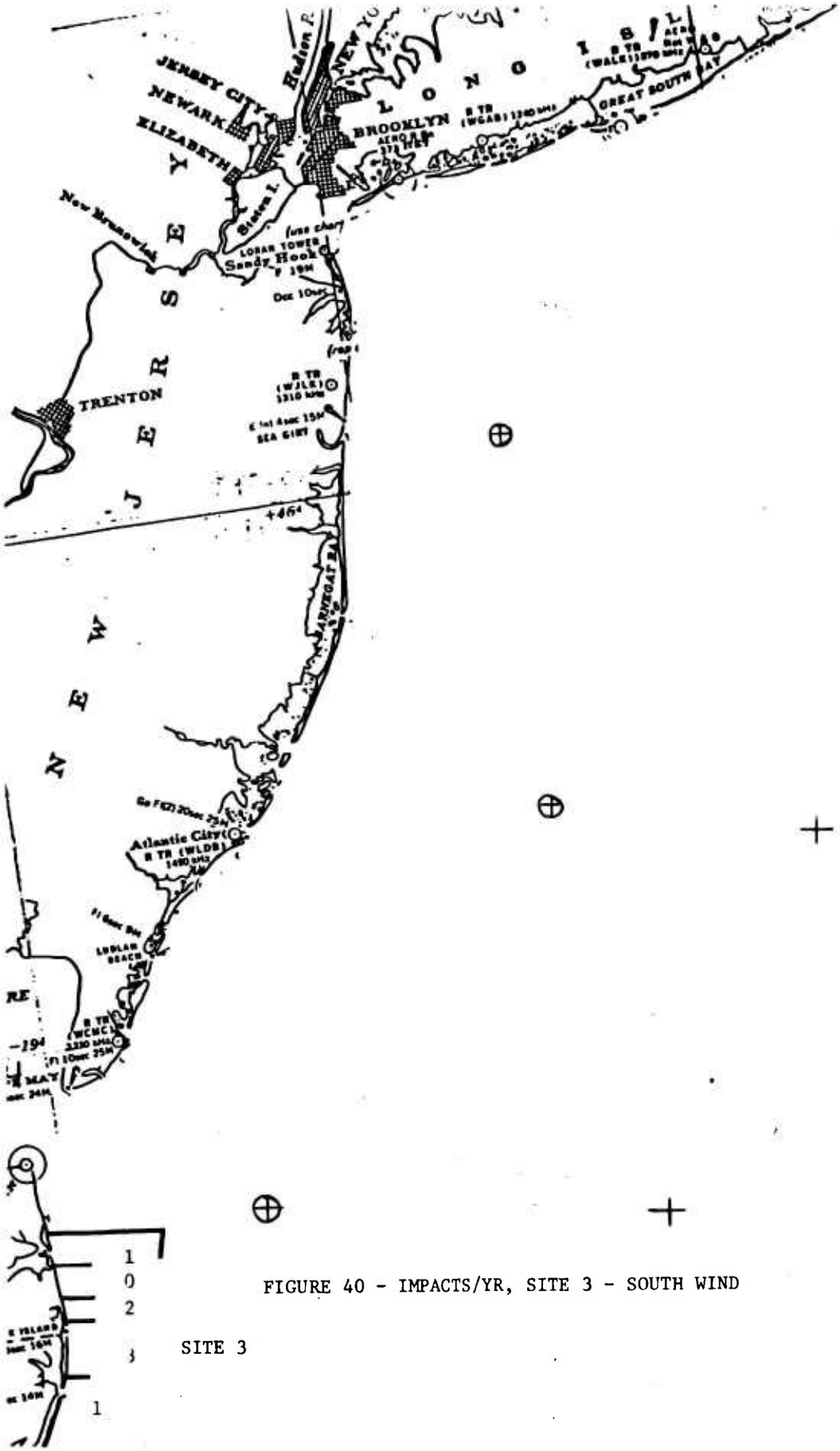



FIGURE 40 - IMPACTS/YR, SITE 3 - SOUTH WIND




SITE 3

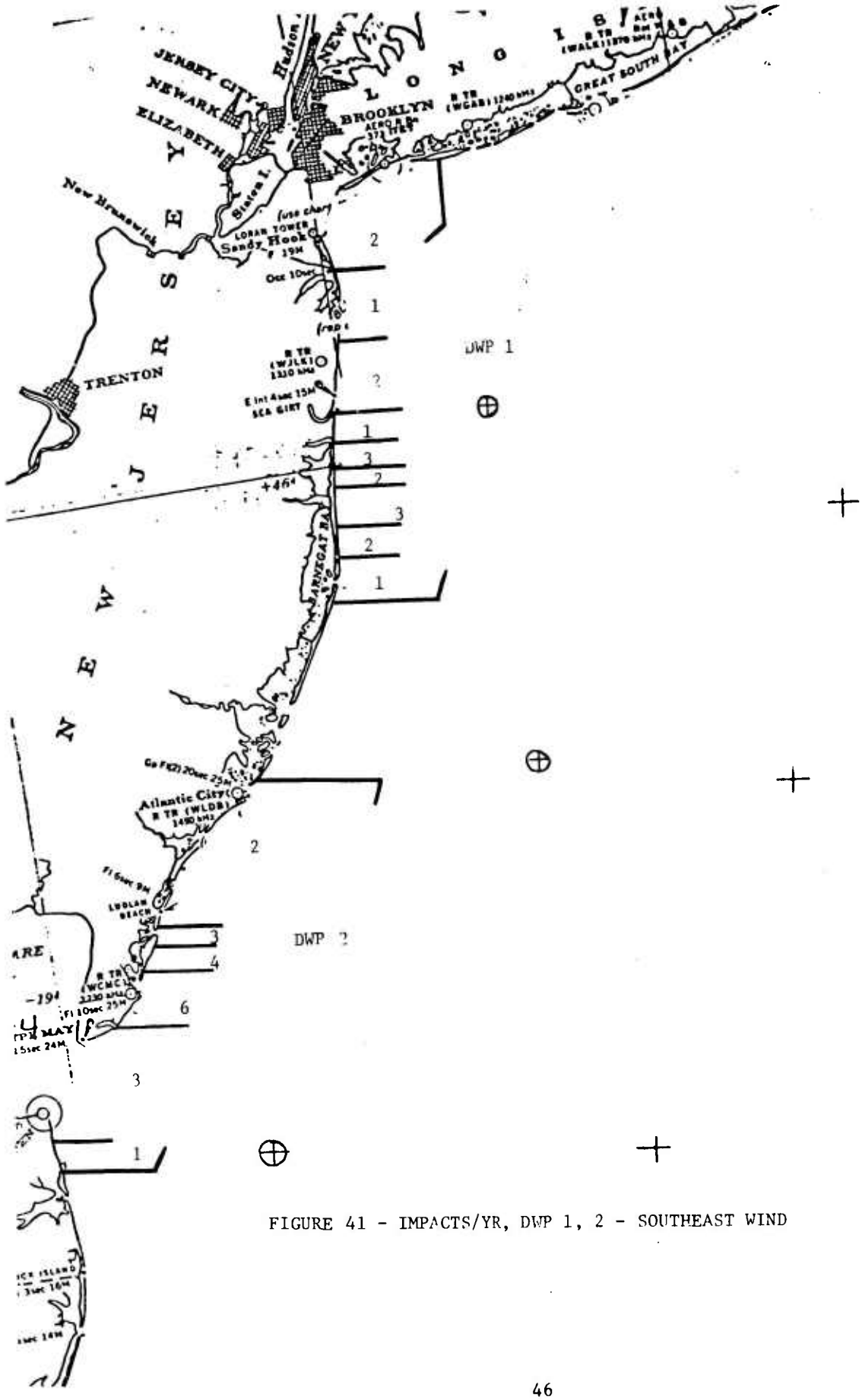



FIGURE 41 - IMPACTS/YR, DWP 1, 2 - SOUTHEAST WIND

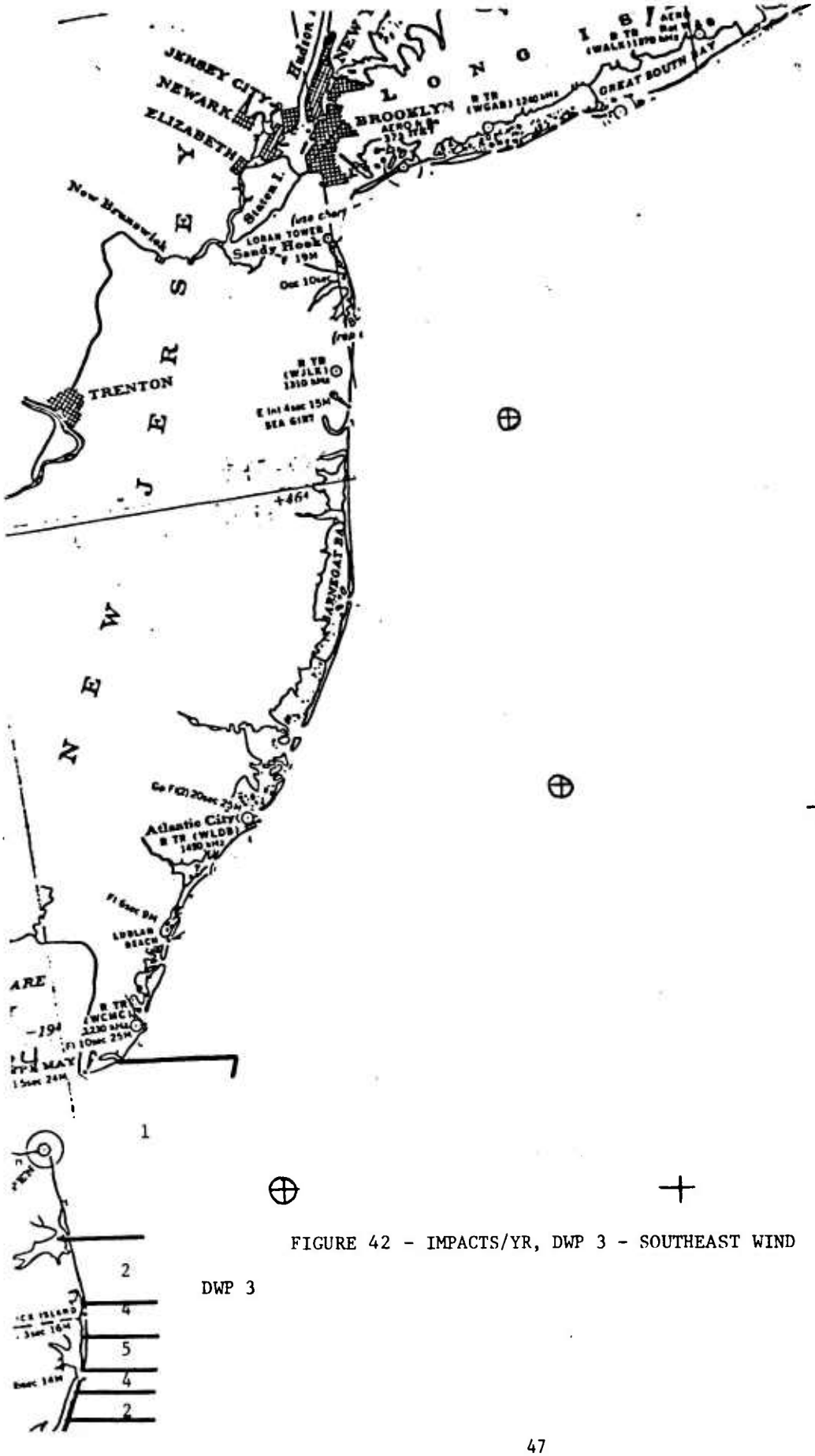
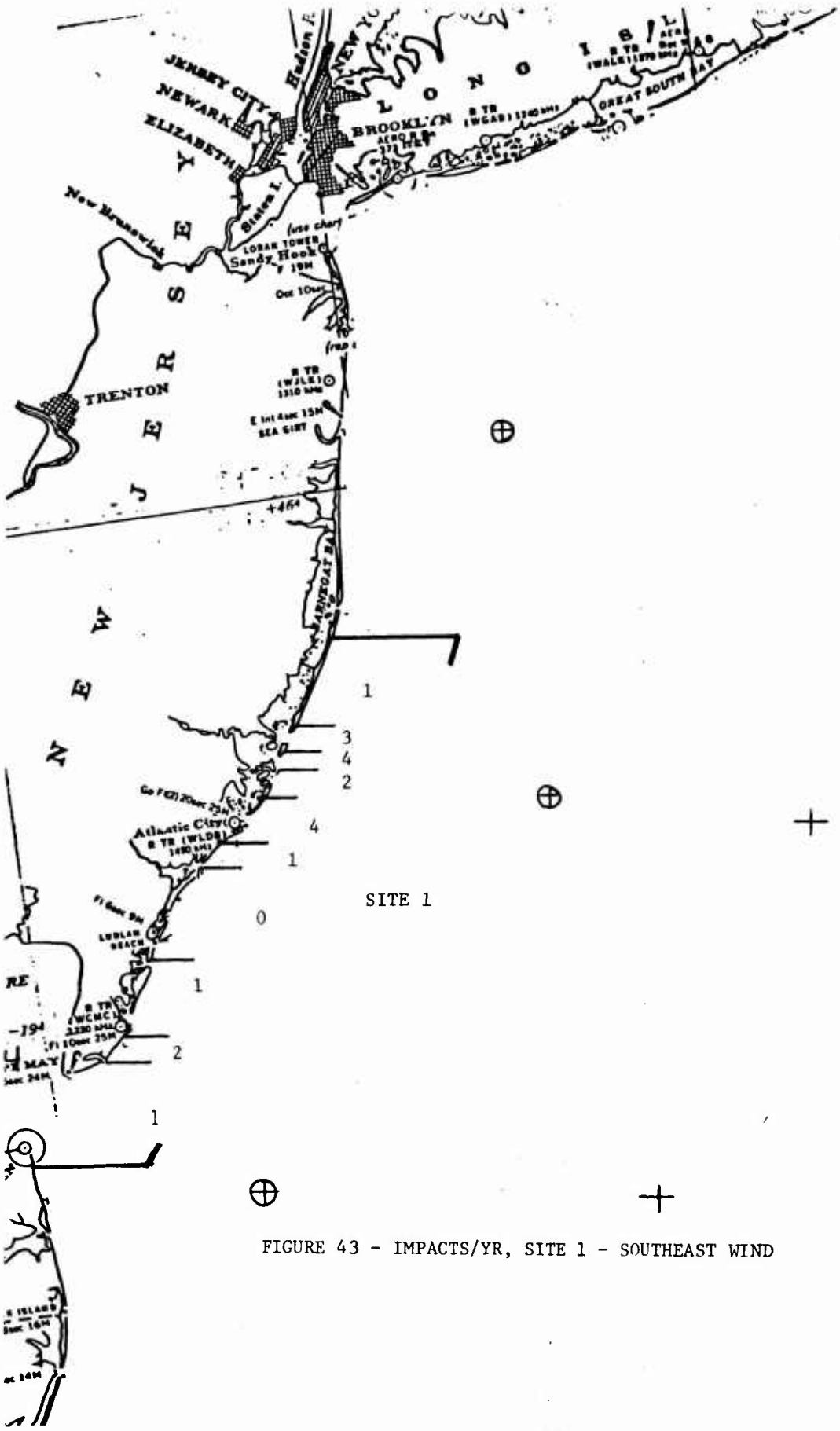



FIGURE 42 - IMPACTS/YR, DWP 3 - SOUTHEAST WIND

DWP 3




SITE 1

FIGURE 43 - IMPACTS/YR, SITE 1 - SOUTHEAST WIND

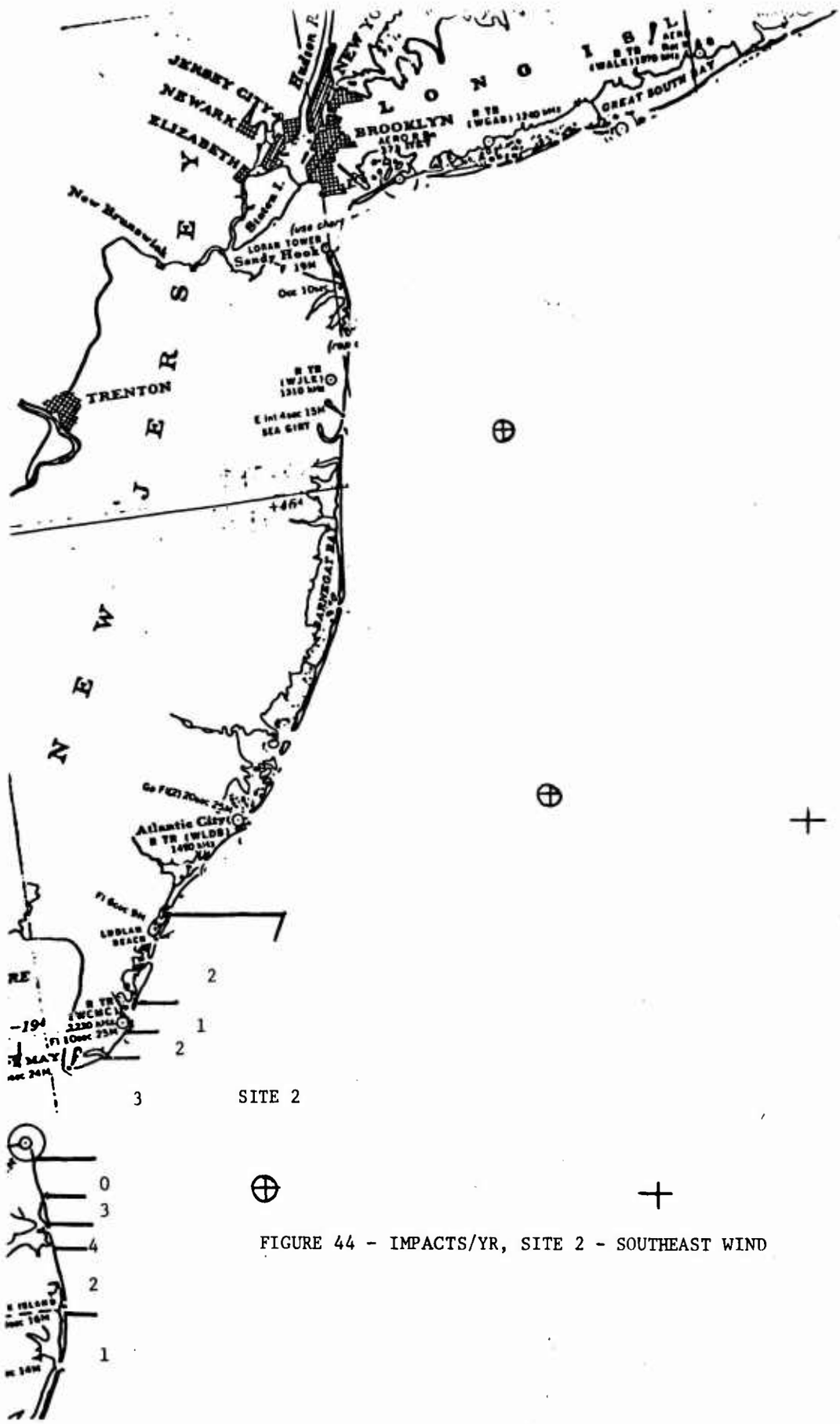



FIGURE 44 - IMPACTS/YR, SITE 2 - SOUTHEAST WIND

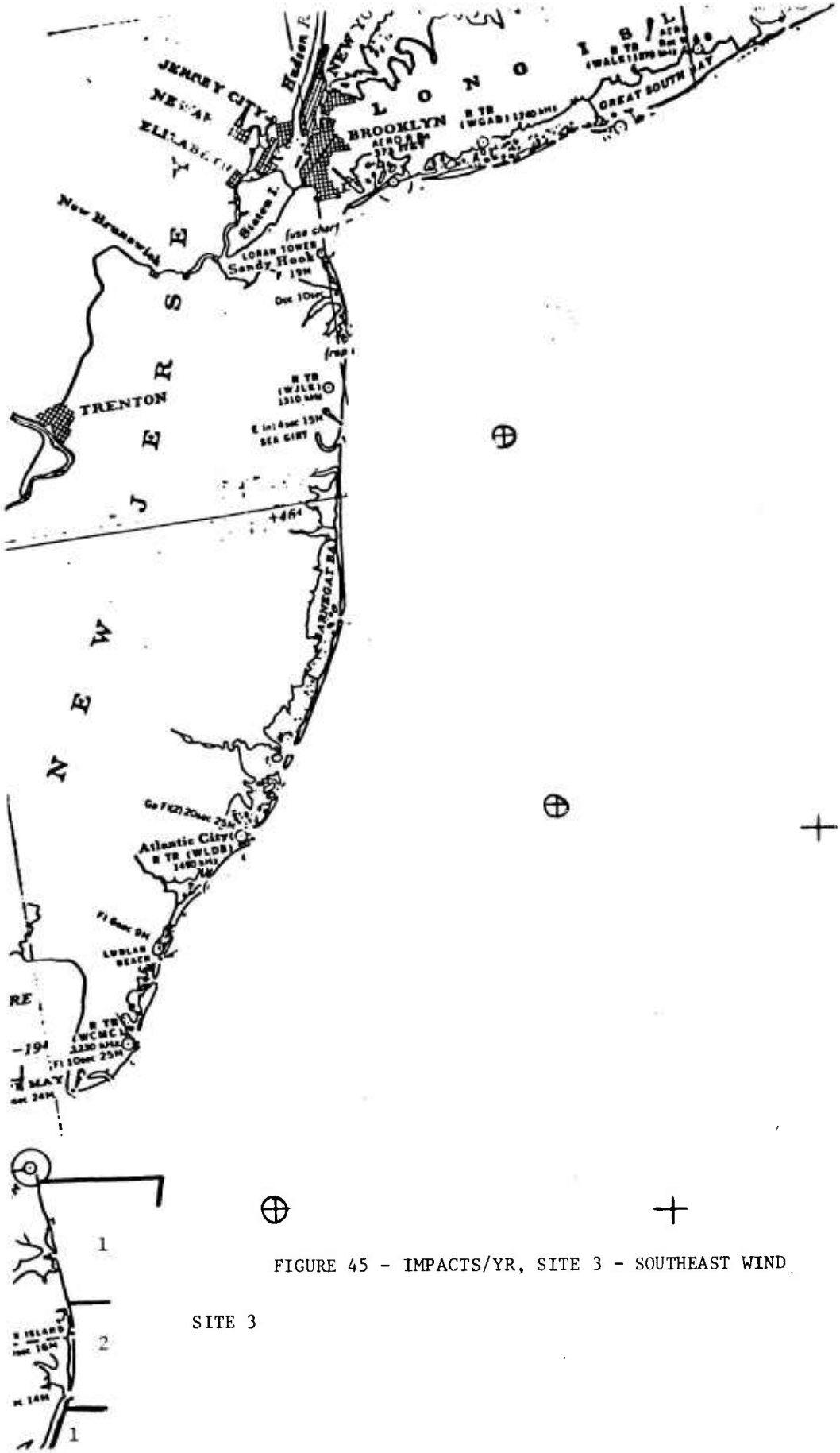



FIGURE 45 - IMPACTS/YR, SITE 3 - SOUTHEAST WIND

SITE 3

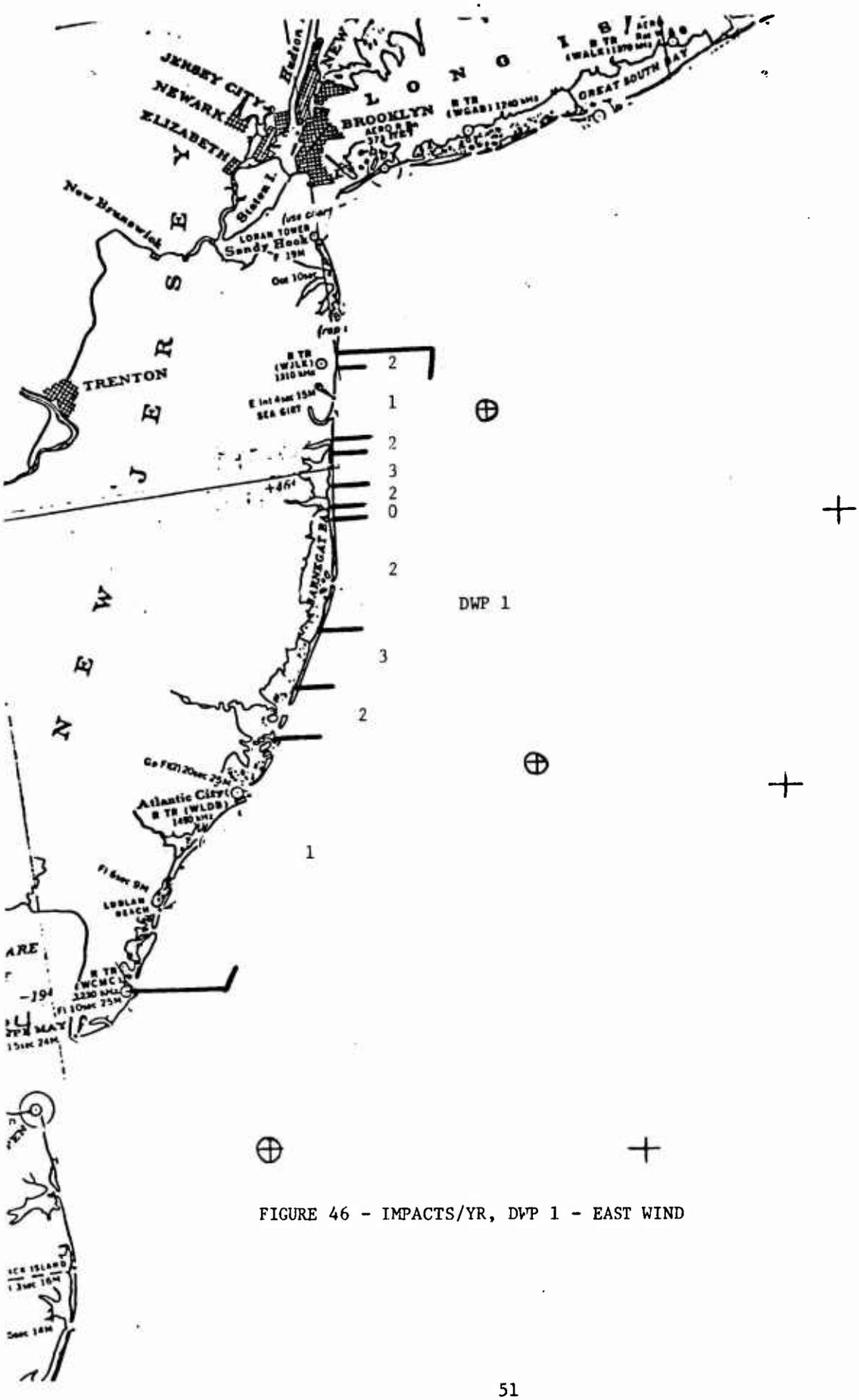



FIGURE 46 - IMPACTS/YR, DWP 1 - EAST WIND

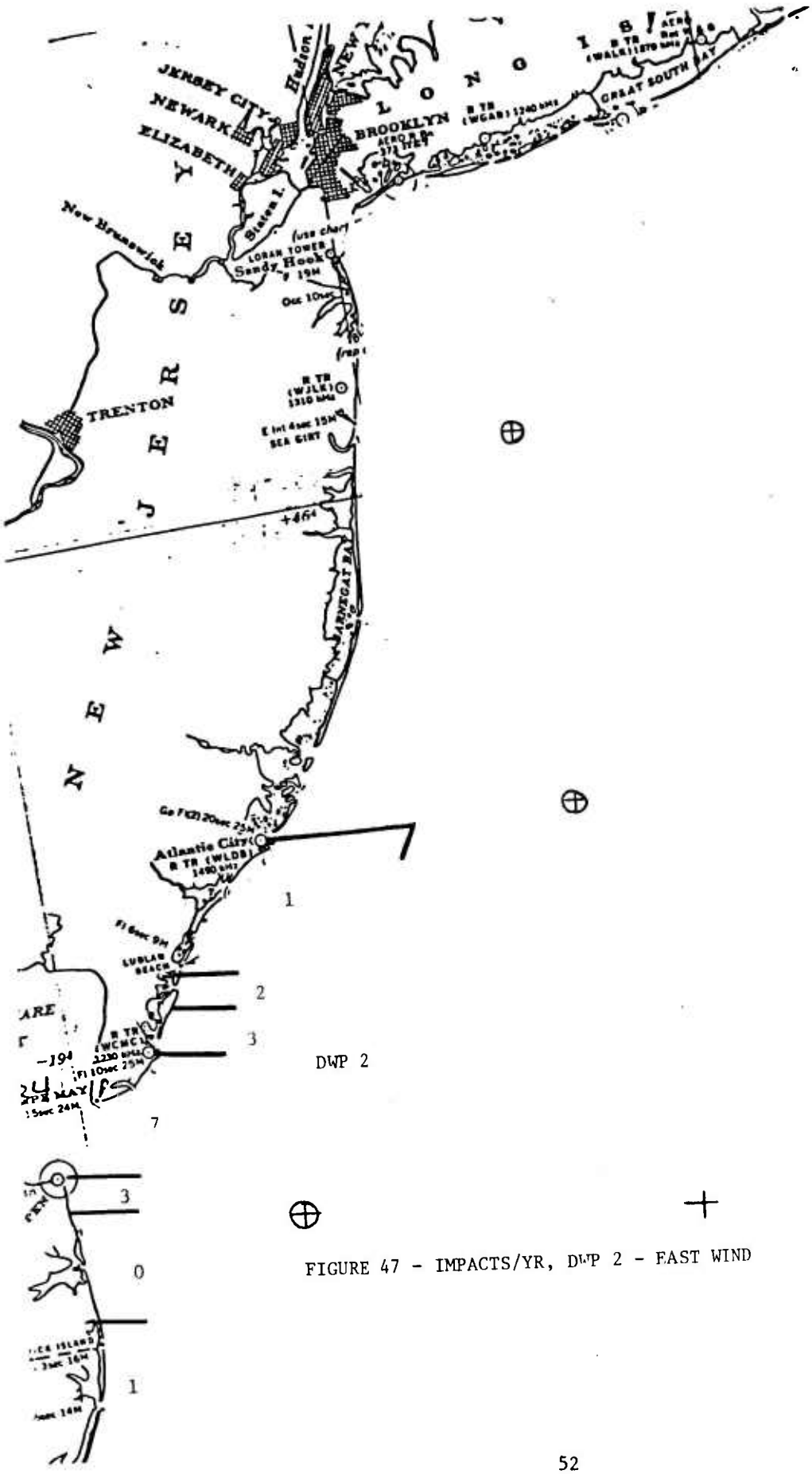



FIGURE 47 - IMPACTS/YR, DWP 2 - EAST WIND

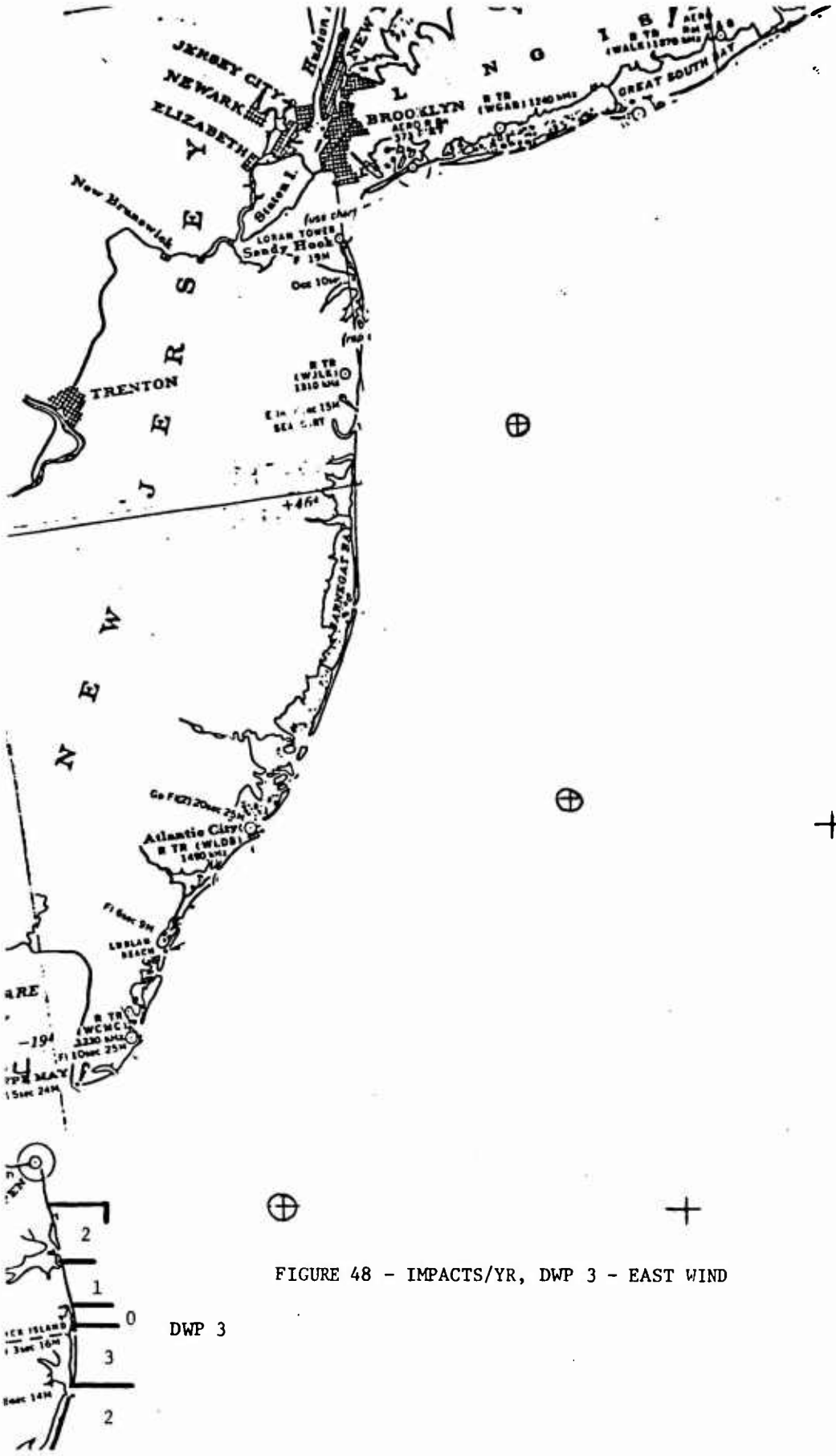



FIGURE 48 - IMPACTS/YR, DWP 3 - EAST WIND

DWP 3

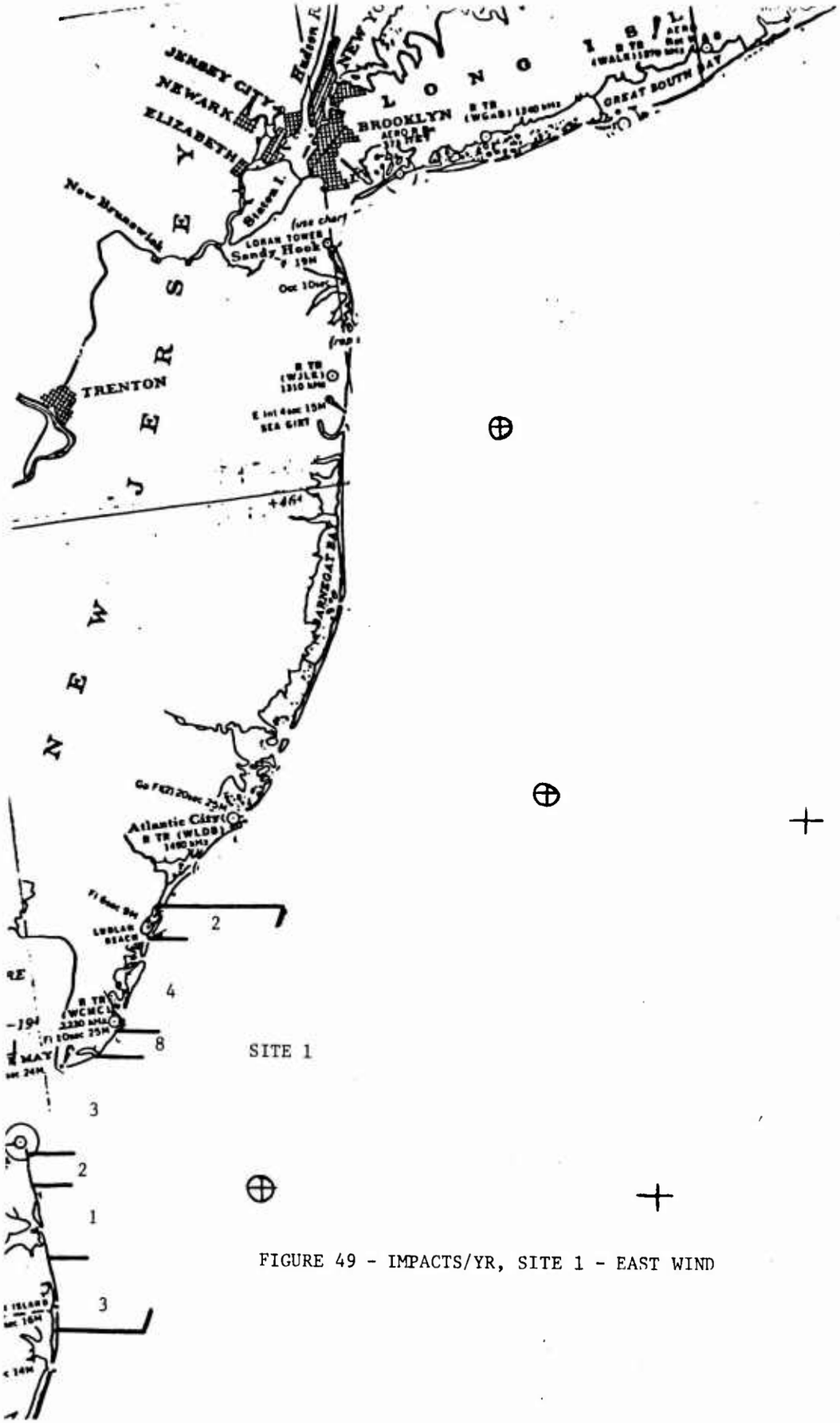



FIGURE 49 - IMPACTS/YR, SITE 1 - EAST WIND

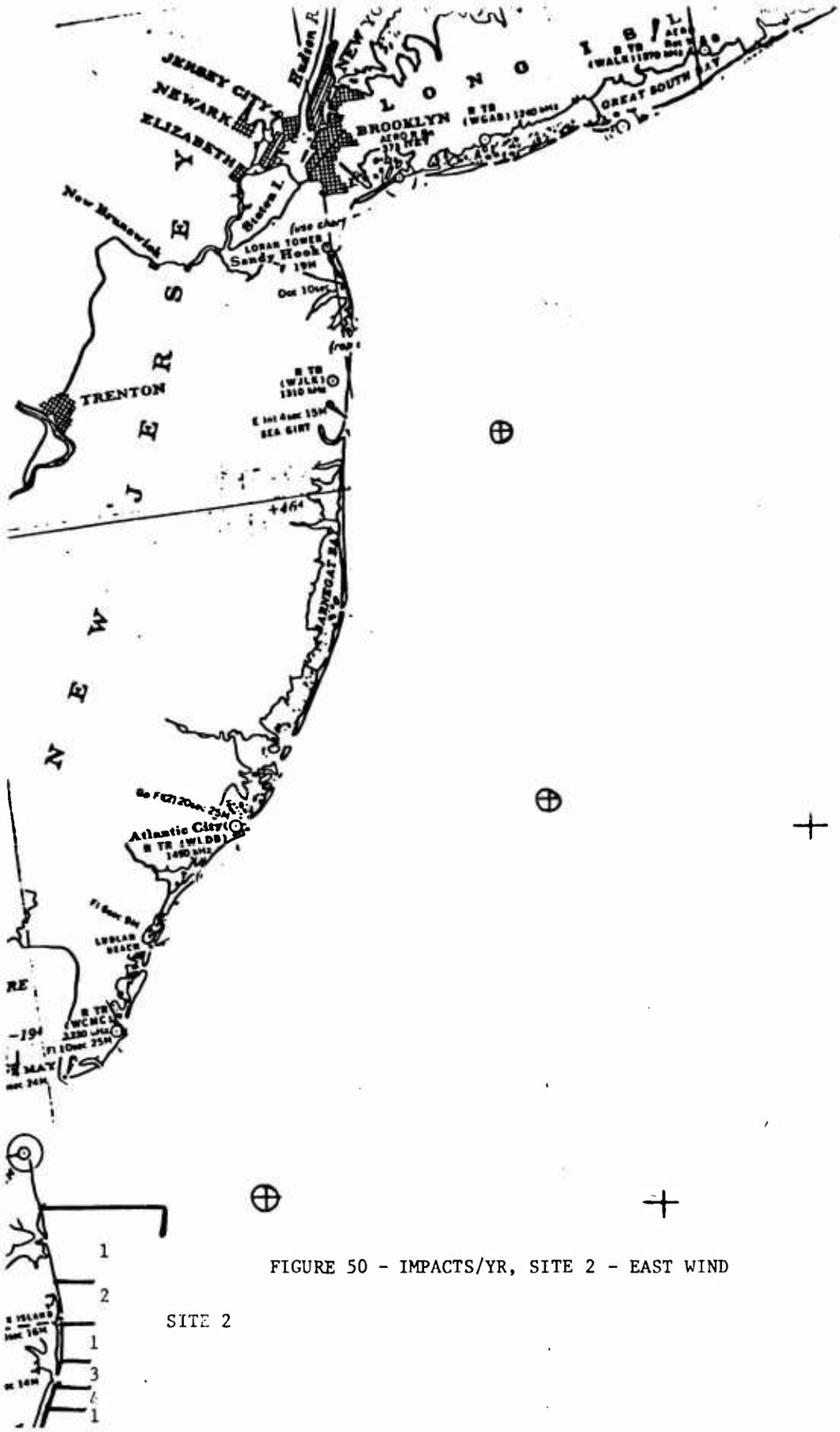



FIGURE 50 - IMPACTS/YR, SITE 2 - EAST WIND

SITE 2

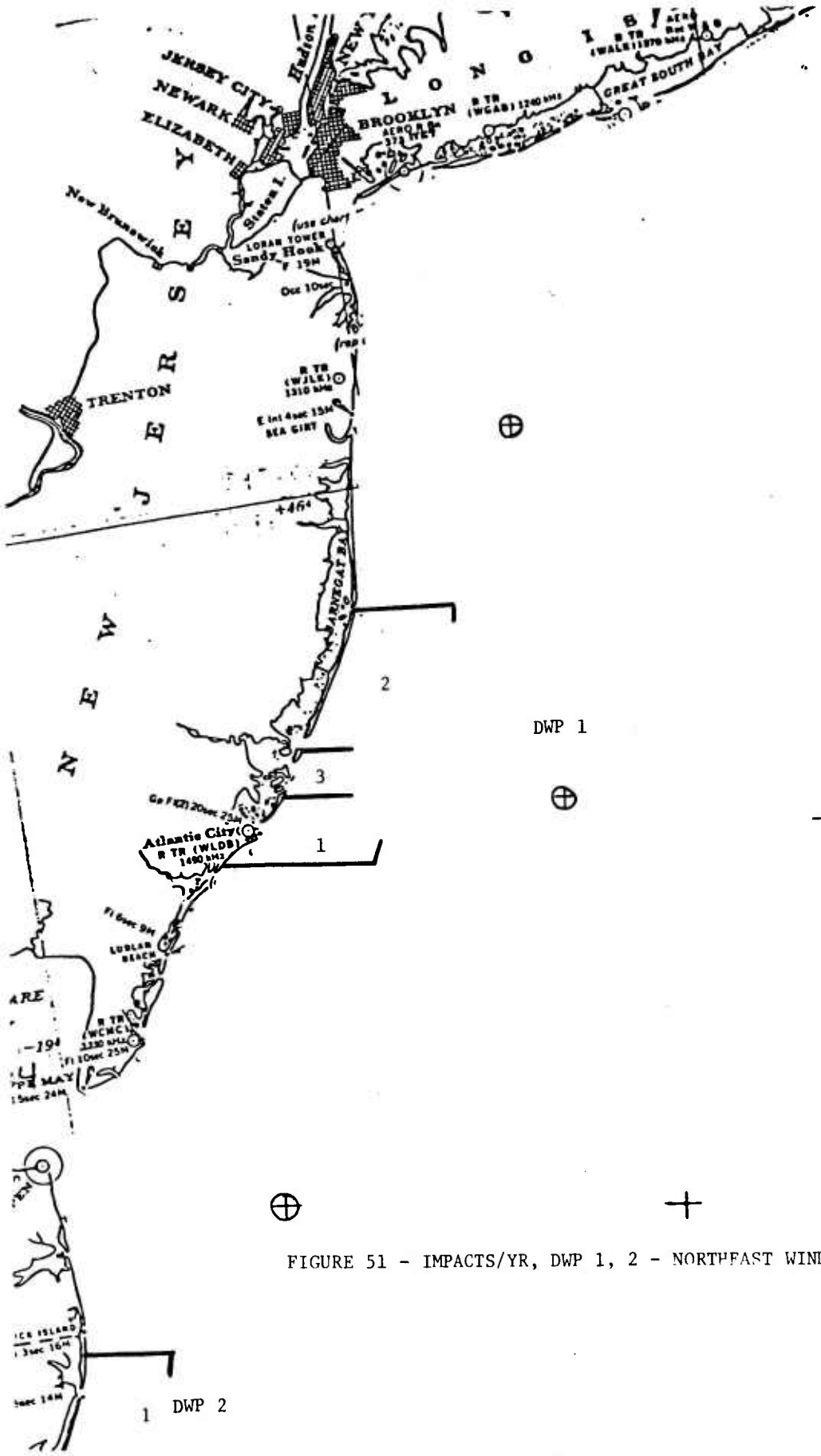



FIGURE 51 - IMPACTS/YR, DWP 1, 2 - NORTHEAST WIND

TABLE 1A

MONTH JANUARY LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| E | 13.9 | 5.7 | 12 | 300 | 4 | 1 day to 8 miles north of Sea Girt (Figure 2) |
| S | 13.3 | 10.2 | 12 | 340 | 7 | 1 day to reach beach, Jersey and Long Island coast (Figure 2) |
| SE | 13.0 | 4.6 | 12 | 340 | 7 | 1 day to reach beach, Jersey Coast, Long Island. (Figure 2) |
| SW | 14.0 | 13.9 | 12 | 340 | 7 | 1 day to reach beach, Jersey Coast, Long Island, and Raritan Beach. (Figure 2) |
| NE | 16.6 | 7.3 | 12 | 260 | 4 | 1 day to beach between Sea Girt and Barnegat (Figure 2) |

TABLE 2A

MONTH JANUARY LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| NE | 16.4 | 8.6 | 14 | 235 | 3 | 2.5-3 days to Southern Delaware Coast (Figure 2) |
| E | 15.1 | 4.8 | 14 | 250 | 3 | 3 days to hit North mouth of Delaware Bay/New Jersey Coast (Figure 2) |
| SE | 12.7 | 3.9 | 14 | 260 | 5 | 3-4 days to hit beach between Atlantic City and Delaware Bay (Figure 2) |

TABLE 3A

MONTH JANUARY LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 14.5 | 8.2 | 14.4 | 290 | 11 | 1 day to Delaware Bay (Figure 3) |
| SE | 13.0 | 4.6 | 14.4 | 280 | 12 | 1 day to Delaware Bay (Figure 3) |
| E | 13.9 | 5.7 | 14.4 | 260 | 12 | 1 day to Ocean City (Figure 3) |
| NE | 16.6 | 7.3 | 14.4 | 220 | 28 | 5 days to entrance of Chesapeake Bay |

TABLE 4A

MONTH JANUARY LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| NE | 16.6 | 7.3 | 14.4 | 225 | 5 | 1 week to Virginia Capes. |
| E | 13.9 | 5.7 | 14.4 | 245 | 5 | 5 days to reach lower New Jersey Coast (Figure 3) |
| SE | 13.0 | 4.6 | 14.4 | 263 | 4 | 4 days to coast between Barnegat Bay and Atlantic City (Little Egg Inlet) (Figure 3) |

TABLE 5A

MONTH JANUARY LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| SE | 12.7 | 3.9 | 14.4 | 260 | 17 | 5 days to Delaware Bay (Figure 4) |
| E | 15.1 | 4.8 | 14.4 | 240 | 27 | 4 days to Ocean City, Maryland (Figure 4) |
| NE | 16.4 | 8.6 | 14.4 | 220 | 28 | 7 days to Chesapeake Bay. |

TABLE 6A

MONTH JANUARY LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| SE | 12.7 | 3.9 | 12.0 | 270 | 15.0 | 5 days to Cape Henlopen (Figure 4) |
| E | 15.1 | 4.8 | 12.0 | 230 | 17.0 | 4 days to Virginia Beach. |

TABLE 7 A

MONTH FEBRUARY LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| E | 13.2 | 5.9 | 9.6 | 330 | 20 | 1 day to North of Barnegat Bay (Figure 5) |
| SE | 12.5 | 5.3 | 9.6 | 275 | 20 | 1 day to Sea Girt (Figure 5) |
| S | 11.8 | 10.0 | 9.6 | 275 | 5 | 3 days to North Jersey Coast (Figure 5) |
| NE | 14.8 | 7.3 | 9.6 | 225 | 17 | 2 days to South Barnegat Bay (Figure 5) |

TABLE 8A

MONTH FEBRUARY LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 14.4 | 8.2 | 12 | 270 | 9.5 | 3 1/2 days to Atlantic City (Figure 5) |
| SE | 13.3 | 5.4 | 12 | 250 | 15 | 3 days to south of Ludlam Beach (Figure 5) |
| E | 14.4 | 7.5 | 12 | 225 | 23 | 3-4 days to south of Cape Henlopen (Figure 5) |
| NE | 16.5 | 9.2 | 12 | 215 | 28 | 3-4 days to Ocean City (Figure 5) |

TABLE 9A

MONTH FEBRUARY LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 14.4 | 8.2 | 16.8 | 260 | 12 | 2-3 days to between Ocean City and Assateague. |
| SE | 13.3 | 5.4 | 16.8 | 240 | 15 | 2-3 days to between Ocean City and Assateague. |
| E | 14.4 | 7.5 | 16.8 | 240 | 15 | 2-3 days to between Ocean City and Assateague. |
| NE | 16.5 | 9.2 | 16.8 | 230 | 17 | 2-3 days to between Ocean City and Assateague. |

TABLE 10A

MONTH FEBRUARY LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.2 | 5.9 | 9.6 | 290 | 8.8 | 1 week to South of Sea Girt (Figure 6) |
| SE | 12.5 | 5.3 | 9.6 | 270 | 14 | 5 days to Barnegat Bay (Figure 6) |
| E | 11.8 | 10.0 | 9.6 | 250 | 19.5 | 5 days to Ludlam Beach (Figure 6) |

TABLE 11A

MONTH FEBRUARY LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 14.4 | 8.2 | 14.4 | 260 | 7 | 12 days to Ludlam Beach (Figure 6) |
| SE | 13.3 | 5.4 | 14.4 | 225 | 15 | 7 days to South of Cape Henlopen (Figure 6) |
| E | 14.4 | 7.5 | 14.4 | 240 | 24 | 4-5 days to Cape Henlopen (Figure 6) |

TABLE 12A

MONTH FEBRUARY LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 14.4 | 8.2 | 16.8 | 265 | 12 | 6 days to Ocean City (Figure 6) |
| SE | 13.3 | 5.4 | 16.8 | 250 | 17.5 | 7 days to Virigina Beach. |
| E | 14.4 | 7.5 | 16.8 | 230 | 19 | 6 days to Cape Henry. |

TABLE 13A

MONTH MARCH LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| SW | 12.2 | 11.6 | 12.0 | 290 | 7 | Moving into North Jersey area (Figure 7) |
| S | 12.2 | 12.1 | 12.0 | N/NW | 9 | Caught in gyre at mouth of Hudson River (Figure 7) |
| SE | 10.4 | 6.8 | 12.0 | N/NW | 9 | Caught in gyre at mouth of Hudson River (Figure 7) |
| E | 13.2 | 9.8 | 12.0 | 260 | 12 | Due West on shoreline in 1 day (Figure 7) |
| NE | 15.9 | 10.0 | 12.0 | 245 | 18 | 1 day to Barnegat (Figure 7) |

TABLE 14A

MONTH MARCH LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.0 | 9.6 | 14.4 | 270 | 8 | 5 days West to Atlantic City (Figure 7) |
| SE | 12.4 | 5.8 | 14.4 | 250 | 15 | 3 days to Ludlam Beach (Figure 7) |
| E | 14.3 | 8.0 | 14.4 | 235 | 21 | 3 days to Delaware Bay (Figure 7) |
| NE | 14.8 | 10.5 | 14.4 | 215 | 28 | 5 days to Assateague. |

TABLE 15A

MONTH MARCH LOCATION DPW 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.0 | 9.6 | 14.4 | 250 | 11.0 | 2 days to Ocean City, Maryland (Figure 3) |
| SE | 12.4 | 5.8 | 14.4 | 250 | 11.0 | 2 days to Ocean City, Maryland (Figure 8) |
| E | 14.3 | 8.0 | 14.4 | 240 | 20.5 | 3 days to North of Assateague. |
| NE | 14.8 | 10.5 | 14.4 | 220 | 24.0 | 5 days to V. Capes area. |

TABLE 16A

MONTH MARCH LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 12.2 | 12.1 | 12 | 280 | 8.5 | 8 days to Barnegat Inlet (Figure 8) |
| SE | 10.4 | 6.8 | 12 | 245 | 14 | 6 days to Atlantic City (Figure 8) |
| E | 13.2 | 9.8 | 12 | 235 | 21.5 | 4 days to Ludlam Beach (Figure 8) |
| NE | 15.9 | 10.0 | 12 | 225 | 25 | In 5 days it will be 22 miles West of Ocean City, Maryland |

TABLE 17A

MONTH MARCH LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.0 | 9.6 | 14.4 | 280 | 8 | 6 days to Little Egg Harbor (Figure 9) |
| SE | 12.4 | 5.8 | 14.4 | 260 | 16.5 | 5 days to Ludlam Beach (Figure 9) |
| E | 14.3 | 8.0 | 14.4 | 230 | 22 | 5 days to Ocean City (Figure 9) |
| NE | 14.8 | 10.5 | 14.4 | 215 | 28 | 1 week to 10 miles off Chesapeake Bay. |

TABLE 18A

MONTH MARCH LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.0 | 9.6 | 12.0 | 230 | 13 | 3 days to Ocean City (Figure 9) |
| SE | 12.4 | 5.8 | 12.0 | 270 | 15.5 | 4+ days to reach Ocean City (Figure 9) |
| E | 14.3 | 8.0 | 12.0 | 220 | 22 | 4 days to Chincoteague |

TABLE 19A

MONTH APRIL LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| E | 13.1 | 9.0 | 14.4 | 220 | 16 | 3-4 days to Atlantic City (Figure 10) |
| NE | 13.5 | 7.9 | 14.4 | SW | 18 | 4 days south of Atlantic City (Figure 10) |

TABLE 20A

MONTH APRIL LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.6 | 13.1 | 14.4 | 270 | 8.5 | 4 days to Atlantic City (Figure 10) |
| SE | 12.0 | 7.5 | 14.4 | 240 | 20 | 3 days off Delaware Bay (Figure 10) |
| E | 13.0 | 8.5 | 14.4 | 230 | 25 | 3 days to Fenwick Island (Delaware-Maryland border)(Figure 10) |
| NE | 14.1 | 9.6 | 14.4 | SW | 22 | 5 days to Assateague. |

TABLE 21A

MONTH APRIL LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.6 | 13.1 | 14.4 | 280 | 10 | 1-2 days into Delaware Bay on South Shore (Figure 11) |
| SE | 12.0 | 7.5 | 14.4 | 250 | 14 | 2 days to Fenwick Island (Figure 11) |
| E | 13.0 | 8.5 | 14.4 | 240 | 19 | 2 days south of Ocean City. |
| NE | 14.1 | 9.6 | 14.4 | 220 | 22 | 2-3 days to Assateague. |

TABLE 22A

MONTH APRIL LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.9 | 18.2 | 14.4 | 290 | 10 | 6 days to Sea Girt (Figure 11) |
| SE | 11.1 | 9.6 | 14.4 | 240 | 16 | 6 days to Ludlam Beach (Figure 11) |
| E | 13.1 | 9.0 | 14.4 | 230 | 20 | 6-7 days to Fenwick Island North of Ocean City (Figure 11) |
| NE | 13.5 | 7.9 | 14.4 | SW | 20 | 8-9 days off Assateague and 10-11 days off Cape Charles. |

TABLE 23A

MONTH APRIL LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.6 | 13.1 | 14.4 | 290 | 10.5 | 6-7 days to Atlantic City (Figure 12) |
| SE | [illegible] | 7.5 | [illegible] | 250 | 15.5 | 7-8 days to Ocean City (Figure 12) |
| E | [illegible] | 8.5 | 14.4 | 230 | 21 | 6 days to Assateague and be caught up in the Gulf Stream. |

TABLE 24A

MONTH MAY LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.2 | 14.4 | 300 | 15 | 1-2 days to reach Northe[illegible]ey Coast (Figure 13) |
| SE | 9.4 | 10.6 | 14.4 | 250 | 17 | 1 day to reach North of Barnegat Bay (Figure 13) |
| E | 10.2 | 10.8 | 14.4 | 230 | 22 | [illegible] day to reach Barnegat Bay (Figure 13) |
| NE | 12.7 | 9.2 | 14.4 | 225 | 21 | [illegible] days South of Barnegat Bay (Figure 13) |

TABLE 25A

MONTH MAY LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.6 | 17.1 | 12 | 325 | 8.5 | 4-5 days to Barnegat Bay (Figure 13) |
| SE | 10.2 | 7.1 | 12 | 250 | 14 | 4 days to Ludlam Beach (Figure 13) |
| E | 11.0 | 9.0 | 12 | 240 | 16 | 3-4 days to Delaware Bay (Figure 13) |
| NE | 13.0 | 12.1 | 12 | 220 | 22 | 6-7 days to North of Cape Charles. |

TABLE 26A

MONTH MAY LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.6 | 17.1 | 13 | 335 | 9 | 2-3 days to Cape May and Delaware Bay (Figure 14) |
| SE | 10.2 | 7.1 | 13 | 225 | 12 | 2-3 days to Ocean City (Figure 14) |
| E | 11.0 | 9.0 | 13 | 220 | 18 | 2-3 days South of Ocean City |
| NE | 13.0 | 12.1 | 13 | 200 | 21 | 5 days to Cape Charles |

TABLE 27A

MONTH MAY LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.2 | 12.0 | 300 | 14 | 5 days to reach Northern Jers- Coast (Figure 14) |
| SE | 9.4 | 10.6 | 12.0 | 260 | 14 | 5-6 days to Little Egg Harbor (Figure 14) |
| E | 10.2 | 10.8 | 12.0 | 250 | 20 | 5-6 days to Delaware Bay (Figure 14) |

TABLE 28A

MONTH MAY LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.6 | 17.1 | 12.0 | 310 | 8 | 8-9 days to Barnegat Bay (Figure 15) |
| SE | 10.2 | 7.1 | 12.0 | 240 | 13 | 7-8 days to South of Cape Henlopen (Figure 15) |

TABLE 29A

MONTH MAY LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| ALL DIRECTIONS | | | | | | NO SPILLS WILL REACH SHORELINE |

TABLE 30A

MONTH JUNE LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 26.6 | 16.8 | 260 | 12 | 1-2 days to Barnegat Inlet (Figure 16) |
| SE | 9.6 | 11.2 | 16.8 | 240 | 15 | 1-2 days to Barnegat Inlet (Figure 16) |
| E | 9.4 | 9.2 | 16.8 | 235 | 20 | 1 day to Barnegat Inlet (Figure 16) |
| NE | 12.3 | 7.3 | 16.8 | 225 | 27 | 3+ days to Ludlam Beach (Figure 16) |

TABLE 31A

MONTH JUNE LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.0 | 13 | 245 | 10 | 5 days to Ludlam Beach/Cape May (Figure 16) |
| SE | 9.1 | 7.1 | 13 | 240 | 14 | 3-4 days to Ludlam Beach/Cape May (Figure 16) |
| E | 10.8 | 8.6 | 13 | 225 | 19 | 3-4 days to Entrance to Delaware Bay (Figure 16) |
| NE | 12.4 | 10.0 | 13 | 210 | 24 | 6-7 days to Cape Charles. |

TABLE 32A

MONTH JUNE LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.0 | 14.4 | 230 | 8 | 3 days to Ocean City (Figure 17) |
| SE | 9.1 | 7.1 | 14.4 | 230 | 14 | 2 days to Ocean City (Figure 17) |
| E | 10.8 | 8.6 | 14.4 | 220 | 22 | 1+ days to South of Ocean City (Figure 17) |
| NE | 12.4 | 10.0 | 14.4 | 210 | 24 | 4 days to Cape Charles. |

TABLE 33A

MONTH JUNE LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 26.6 | 14.4 | 260 | 10 | 6 days South of Barnegat Bay (Figure 17) |
| SE | 9.6 | 11.2 | 14.4 | 240 | 16 | 6-7 days to Ludlam Beach (Figure 17) |
| E | 9.4 | 9.2 | 14.4 | 230 | 21 | 6-7 days to Cape May and Delaware Bay (Figure 17) |

TABLE 34A

MONTH JUNE LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.0 | 12 | 250 | 7 | 10-14 days to Cape May (Figure 18) |
| SE | 9.1 | 7.1 | 12 | 245 | 14 | 6 days to Delaware Bay (Figure 18) |
| E | 10.8 | 8.6 | 12 | 235 | 20 | 6 days to Ocean City (Figure 18) |

TABLE 35A

MONTH JUNE LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.0 | 14 | 240 | 14 | 8 days South of Assateague. |
| SE | 9.1 | 7.1 | 14 | 250 | 16 | 6 days to Assateague. |
| E | 10.8 | 8.6 | 14 | 230 | 23 | 5 days to North of Cape Charles. |

TABLE 36A

MONTH JULY LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.2 | 31.8 | 10.0 | 260 | 4 | 5 days to South of Sea Girt (Figure 19) |
| SE | 8.1 | 11.5 | 10.0 | 250 | 11 | 2 days to North of Barnaget (Figure 19) |
| E | 8.9 | 8.4 | 10.0 | 245 | 14 | 2 days to Barnaget Bay (Figure 19) |
| NE | 10.2 | 5.7 | 10.0 | 225 | 20 | 3-4 days to Absecon Inlet/Atlantic City (Figure 19) |

TABLE 37A

MONTH JULY LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.5 | 9.6 | 240 | 4 | 13-14 days to reach shore at Cape May (Figure 19) |
| SE | 9.2 | 7.3 | 9.6 | 240 | 10 | 5 days to Cape May (Figure 19) |
| E | 9.8 | 7.8 | 9.6 | 225 | 15 | 6 days to Delaware/Maryland border (Figure 19) |
| NE | 10.6 | 9.1 | 9.6 | 210 | 18.5 | 6 days to Ocean City (Figure 19) |

TABLE 38A

MONTH JULY LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.5 | 13.0 | 245 | 7 | 4 days to Delaware/Maryland border (Figure 20) |
| SE | 9.2 | 7.3 | 13.0 | 240 | 15 | 1-2 days to Delaware/Maryland border (Figure 20) |
| E | 9.8 | 7.8 | 13.0 | 230 | 18 | 1-2 days to Ocean City (Figure 20) |
| NE | 10.6 | 9.1 | 13.0 | 215 | 23 | 2 days to South of Ocean City (Figure 20) |

TABLE 39A

MONTH JULY LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.2 | 31.8 | 10.0 | 240 | 3.5 | Very slow movement shoreward. |
| SE | 8.1 | 11.5 | 10.0 | 250 | 9 | 7 days to 35 miles due east of Ludlam Beach |
| E | 8.9 | 8.4 | 10.0 | 245 | 16 | 6 days to 28 miles offshore of Ludlam Beach |

TABLE 40A

MONTH JULY LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.5 | 12.0 | 275 | 4 | Approximately 18 days to reach the shoreline. |
| SE | 9.2 | 7.3 | 12.0 | 250 | 9 | 12-13 days to North of Ocean City (Figure 21) |
| E | 9.8 | 7.8 | 12.0 | 225 | 15 | 9 days to 7 miles south of Ocean City. |

TABLE 41A

MONTH JULY LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.4 | 20.5 | 12.0 | 275 | 10 | 7 days to Cape Henlopen (Figure 21) |
| SE | 9.2 | 7.3 | 12.0 | 260 | 15 | 5 days to Ocean City (Figure 21) |
| E | 9.8 | 7.8 | 12.0 | 240 | 19 | 5 days to North of Assateague. |

TABLE 42A

MONTH AUGUST LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 9.4 | 24.2 | 14.4 | 240 | 10 | 2 days to 5 miles north of Barnaget Inlet (Figure 22) |
| SE | 7.6 | 8.7 | 14.4 | 230 | 15 | 2 days to Barnaget Inlet (Figure 22) |
| E | 8.8 | 9.3 | 14.4 | 220 | 18 | 2 days to 10 miles South of Barnaget Inlet (Figure 22) |
| NE | 11.9 | 10.0 | 14.4 | 213 | 24 | 2 days to Little Egg Inlet (Figure 22) |

TABLE 43A

MONTH AUGUST LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.0 | 16.4 | 12.0 | 270 | 7 | 5 days to Atlantic City, NJ (Figure 22) |
| SE | 9.5 | 7.4 | 12.0 | 255 | 14 | 3 days to Great Egg Inlet (Figure 22) |
| E | 10.3 | 9.1 | 12.0 | 240 | 18 | 3 days to mouth of Delaware Bay (Figure 22) |
| NE | 12.2 | 11.8 | 12.0 | 215 | 22 | 5 days to 14 miles East of Assateague, moving parallel to the coast. |

TABLE 44A

MONTH AUGUST LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.0 | 16.4 | 14.4 | 235 | 8 | 4 days to Ocean City Inlet (Figure 23) |
| SE | 9.5 | 7.4 | 14.4 | 235 | 21 | 2 days to Ocean City Inlet (Figure 23) |
| E | 10.3 | 9.1 | 14.4 | 235 | 16 | 2 days to Ocean City Inlet (Figure 23) |
| NE | 12.2 | 11.8 | 14.4 | 205 | 23 | 4 days skirting the shoreline arriving at Cape Charles. |

TABLE 45A

MONTH AUGUST LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 9.4 | 24.2 | 13.2 | 260 | 9 | 9 days to Little Egg Inlet/Atlantic City area (Figure 23) |
| SE | 7.6 | 8.7 | 13.2 | 250 | 15 | 5-6 days to Atlantic City (Figure 23) |
| E | 8.8 | 9.3 | 13.2 | 230 | 19 | 7 days to Delaware/Maryland Border (Figure 23) |

TABLE 46A

MONTH AUGUST LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.0 | 16.4 | 13.0 | 255 | 7 | 13 days to mouth of Delaware Bay (Figure 24) |
| SE | 9.5 | 7.4 | 13.0 | 250 | 15 | 6-7 days to mouth of Delaware Bay (Figure 24) |
| E | 10.3 | 9.1 | 13.0 | 235 | 21 | 5 days to Ocean City Inlet (Figure 24) |

TABLE 47A

MONTH AUGUST LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.0 | 16.4 | 12.0 | 270 | 6.0 | 12 days to Delaware/Maryland Border (Figure 24) |
| SE | 9.5 | 7.4 | 12.0 | 240 | 13.0 | 8 days to 10 miles south of Assateague. |
| E | 10.3 | 9.1 | 12.0 | 220 | 19.0 | 7 days to Cape Henry area. |

TABLE 48A

MONTH SEPTEMBER LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.1 | 17.7 | 12.0 | 270 | 8 | 3 days to 5 miles South of Sea Girt (Figure 25) |
| SE | 8.7 | 9.3 | 12.0 | 265 | 13 | 2 days to Sea Girt (Figure 25) |
| E | 10.5 | 11.0 | 12.0 | 240 | 20 | 1 day to 5 miles North of Barnaget Inlet (Figure 25) |
| NE | 14.2 | 12.8 | 12.0 | 215 | 25 | 2 days to Little Egg Inlet (Figure 25) |

TABLE 49A

MONTH SEPTEMBER LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.9 | 12.6 | 12.0 | 260 | 8 | 6 days to Ludlam Beach (Figure 25) |
| SE | 10.0 | 7.3 | 12.0 | 245 | 13 | 4 days to Cape May, NJ (Figure 25) |
| E | 12.0 | 11.9 | 12.0 | 230 | 20 | 4 days to 5 miles North of Delaware/Maryland Border (Figure 25) |
| NE | 14.4 | 16.5 | 12.0 | 200 | 25 | 6 days to 25 miles off of Cape Charles moving parallel to the coastline. |

TABLE 50A

MONTH SEPTEMBER LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.9 | 12.6 | 14.4 | 245 | 8 | 3-4 days to Delaware/Maryland Border (Figure 26) |
| SE | 10.0 | 7.3 | 14.4 | 240 | 15 | 2 days to Ocean City Inlet (Figure 26) |
| E | 12.0 | 11.9 | 14.4 | 235 | 22 | 1-2 days to south of Ocean City Inlet (Figure 26) |
| NE | 14.4 | 16.5 | 14.4 | 215 | 27 | 4 days to Cape Charles area. |

TABLE 51A

MONTH SEPTEMBER LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.1 | 17.7 | 12.0 | 240 | 7 | 15 days to 10 miles South of Atlantic City (Figure 26) |
| SE | 8.7 | 9.3 | 12.0 | 250 | 14 | 6 days to Atlantic City (Figure 26) |
| E | 10.5 | 11.0 | 12.0 | 235 | 19 | 6 days to mouth of Delaware Bay (Figure 26) |

TABLE 52A

MONTH SEPTEMBER LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.9 | 12.6 | 12.0 | 250 | 6.5 | 16 days to Cape Henlopen (Figure 27) |
| SE | 10.0 | 7.3 | 12.0 | 245 | 13.5 | 7-8 days to mouth of Delaware Bay (Figure 27) |
| E | 12.0 | 11.9 | 12.0 | 235 | 18 | 6 days to Ocean City Inlet (Figure 27) |

TABLE 53A

MONTH SEPTEMBER LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 10.9 | 12.6 | 14.4 | 250 | 9.0 | 10 days to 5 miles North of Assateague. |
| SE | 10.0 | 7.3 | 14.4 | 245 | 15.0 | 7 days to 15 miles South of Assateague. |
| E | 12.0 | 11.9 | 14.4 | 240 | 22.0 | 6 days to Cape Charles. |
| NE | 14.4 | 16.5 | 14.4 | 220 | 27.0 | 6-7 days to Currituck Beach. |

TABLE 54A

MONTH OCTOBER LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.0 | 13.1 | 13.0 | 275 | 10.0 | 2 days to Sea Girt (Figure 28) |
| SE | 10.6 | 8.8 | 13.0 | 240 | 11.5 | 2 days to 10 miles North of Barnaget Inlet (Figure 28) |
| E | 10.2 | 8.5 | 13.0 | 225 | 18 | 2 days to 8 miles South of Barnaget Inlet (Figure 28) |
| NE | 15.6 | 12.3 | 13.0 | 220 | 25 | 2 days to Little Egg Inlet (Figure 28) |

TABLE 55A

MONTH OCTOBER LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.8 | 9.0 | 14.4 | 260 | 11 | 4 days to Great Egg Inlet (Figure 28) |
| SE | 11.3 | 6.7 | 14.4 | 250 | 17 | 3 days to Ludlam Beach (Figure 28) |
| E | 13.3 | 10.4 | 14.4 | 240 | 23 | 3 days to the mouth of Delaware Bay (Figure 28) |
| NE | 15.8 | 16.4 | 14.4 | 220 | 26.7 | 4 days to 10 miles North of Assateague. |

TABLE 56A

MONTH OCTOBER LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.8 | 9.0 | 15.6 | 235 | 9 | 3-4 days to Ocean City Inlet (Figure 29) |
| SE | 11.3 | 6.7 | 15.6 | 230 | 15 | 2 days to Ocean City Inlet (Figure 29) |
| E | 13.3 | 10.4 | 15.6 | 220 | 21 | 2 days to 15 miles South of Ocean City Inlet. |
| NE | 15.8 | 16.4 | 15.6 | 210 | 28 | 4-5 days to mouth of Chesapeake Bay. |

TABLE 57A

MONTH OCTOBER LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.0 | 13.1 | 12.5 | 270 | 10 | 6-7 days to 5 miles North of Barnaget Inlet (Figure 29) |
| SE | 10.6 | 8.8 | 12.5 | 255 | 15 | 5 days to Little Egg Inlet (Figure 29) |
| E | 10.2 | 8.5 | 12.5 | 245 | 19 | 6 days to Cape May, NJ (Figure 29) |

TABLE 58A

MONTH OCTOBER LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 11.8 | 9.0 | 14.4 | 260 | 8 | 10-11 days to 5 miles South of Ludlam Beach (Figure 30) |
| SE | 11.3 | 6.7 | 14.4 | 245 | 16 | 6 days to 10 miles north of Delaware/Maryland Border (Figure 30) |
| E | 13.3 | 10.4 | 14.4 | 230 | 23.5 | 4-5 days to just South of Ocean City Inlet (Figure 30) |

TABLE 59A

MONTH OCTOBER LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| SE | 11.3 | 6.7 | 16.8 | 235 | 17 | 8 days to Cape Charles. |
| E | 13.3 | 10.4 | 16.8 | 230 | 25 | 6 days to 5 miles off Chesapeake Bay. |

TABLE 60A

MONTH NOVEMBER LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.6 | 14.1 | 12 | 270 | 5 | 3-4 days to Sea Girt (Figure 31) |
| SE | 10.7 | 5.3 | 12 | 230 | 7 | 6 days to 5 miles north of Barnegat Inlet (Figure 31) |
| E | 14.5 | 5.0 | 12 | 225 | 16 | 2 days to 5 miles South of Barnaget Inlet (Figure 31) |
| NE | 17.0 | 8.7 | 12 | 210 | 24 | 4 days to 19 miles off the mouth of Delaware Bay. |

TABLE 61A

MONTH NOVEMBER LOCATION DWP 2 .

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 14.4 | 10.3 | 12 | 285 | 6 | 5 days to Little Egg Inlet (Figure 31) |
| SE | 12.6 | 6.0 | 12 | 245 | 15 | 4 days to Cape May, NJ (Figure 31) |
| E | 13.6 | 6.5 | 12 | 235 | 20 | 3-4 days to 10 miles South of Cape Henlopen (Figure 31) |
| NE | 14.9 | 10.9 | 12 | 220 | 23 | 7 days to Cape Charles. |

TABLE 62A

MONTH NOVEMBER LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 14.4 | 10.3 | 14.4 | 245 | 5 | 5 days to Delaware/Maryland Border (Figure 32) |
| SE | 12.6 | 6.0 | 14.4 | 235 | 15 | 2 days to 5 miles north of Ocean City Inlet (Figure 32) |
| E | 13.6 | 6.5 | 14.4 | 230 | 21 | 2 days to 10 miles south of Ocean City Inlet |

TABLE 63A

MONTH NOVEMBER LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.6 | 14.1 | 14.4 | 270 | 10 | 7 days to Barnaget Inlet (Figure 32) |
| SE | 10.7 | 5.3 | 14.4 | 215 | 18 | 6 days to mouth of Delaware Bay (Figure 32) |
| E | 14.5 | 5.0 | 14.4 | 210 | 23 | 6 days to Delaware/Maryland Border (Figure 32) |

TABLE 64A

MONTH NOVEMBER LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 14.4 | 10.3 | 14.4 | 265 | 7 | 11 days to Ludlam Beach (Figure 33) |
| SE | 12.6 | 6.0 | 14.4 | 240 | 14 | 7-8 days to Delaware/Maryland Border (Figure 33) |
| E | 13.6 | 6.5 | 14.4 | 235 | 23 | 5 days to 10 miles south of Ocean City Inlet (Figure 33) |

TABLE 65A

MONTH NOVEMBER LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| SE | 12.6 | 10.3 | 14.4 | 245 | 17 | 6 days to Assateague. |
| E | 13.6 | 6.5 | 14.4 | 230 | 21 | 7 days to the mouth of Chesapeake Bay. |

TABLE 66A

MONTH DECEMBER LOCATION DWP 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 12.6 | 9.0 | 12 | 240 | 4 | 5 days to 12 miles north of Barnaget Inlet (Figure 34) |
| SE | 12.9 | 4.9 | 12 | 235 | 10 | 2 days to 5 miles North of Barnaget Inlet (Figure 34) |
| E | 13.3 | 4.6 | 12 | 225 | 18 | 1 1/2 days to Barnaget Inlet (Figure 34) |
| NE | 14.5 | 10.2 | 12 | 210 | 24 | 4 days to 7 miles off mouth of Delaware Bay. |

TABLE 67A

MONTH DECEMBER LOCATION DWP 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.8 | 7.1 | 12.0 | 285 | 7 | 5 days to Little Egg Inlet (Figure 34) |
| SE | 13.5 | 3.8 | 12.0 | 260 | 16 | 3 days to 5 miles North of Ludlam Beach (Figure 34) |
| E | 14.1 | 5.2 | 12.0 | 240 | 21 | 3 days to mouth of Delaware Bay (Figure 34) |
| NE | 15 | 7.0 | 12.0 | 225 | 26 | 4 days to 5 miles South of Ocean City Inlet |

TABLE 68A

MONTH DECEMBER LOCATION DWP 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.8 | 7.1 | 12.0 | 285 | 8 | 4 days to Cape Henlopen (Figure 35) |
| SE | 13.5 | 3.8 | 12.0 | 260 | 14 | 2 days to 5 miles north of Delaware/ Maryland Border (Figure 35) |
| E | 14.1 | 5.2 | 12.0 | 235 | 18 | 2 days to 4 miles South of Ocean City Inlet (Figure 35) |
| NE | 15.0 | 7.0 | 12.0 | 215 | 24 | 5 days to mouth of Chesepeake Bay. |

TABLE 69A

MONTH DECEMBER LOCATION SITE 1

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 12.6 | 9.0 | 12.0 | 290 | 8 | 8 days to Sea Girt (Figure 35) |
| SE | 12.9 | 4.9 | 12.0 | 255 | 17 | 4-5 days to Little Egg Inlet (Figure 35) |
| E | 13.3 | 4.6 | 12.0 | 240 | 22 | 5+ days to mouth of Delaware Bay (Figure 35) |

TABLE 70A

MONTH DECEMBER LOCATION SITE 2

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.8 | 7.1 | 14.4 | 270 | 7 | 9 days to 5 miles South of Atlantic City (Figure 36) |
| SE | 13.5 | 3.8 | 14.4 | 255 | 17 | 5-6 days to Cape May (Figure 36) |
| E | 14.1 | 5.2 | 14.4 | 240 | 27 | 4-5 days to 10 miles South of Ocean City Inlet. |

TABLE 71A

MONTH DECEMBER LOCATION SITE 3

| WIND DIR. | AVG. SPEED (KTS) | % TIME WIND BLOWS FROM GIVEN DIRECTION | CURRENT SPEED (Mi/Day) | OIL SPILL MOVEMENT DIRECTION | OIL SPILL MOVEMENT SPEED (Mi/Day) | FATE OF SPILL |
|---|---|---|---|---|---|---|
| S | 13.8 | 7.1 | 14.4 | 255 | 5 | 16.5 days to 10 miles South of Ocean City Inlet. |

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U. S. GOVERNMENT PRINTING OFFICE 1975—602-123/95