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# RESULTS OF PADDY'S RUN SEDIMENT SAMPLING - FEED MATERIALS PRODUCTION CENTER (FMPC)

04/12/89

DOE-885-89
DOE-FSO/USEPA
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LETTER

[redacted]

**Department of Energy**
**FMPC Site Office**
P.O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 738-6319

CC: Yr. Peterm.
2440

April 12, 1989
DOE-885-89

Mr. Basil Constantelos
U.S. Environmental Protection Agency
Region V-5H-12
230 South Dearborn Street
Chicago, IL 60604

Dear Mr. Constantelos:

**RESULTS OF PADDY'S RUN SEDIMENT SAMPLING - FEED MATERIALS PRODUCTION CENTER (FMPC)**

Reference: Myrich, T. E., B. A. Berven, and F. F. Haywood, "Determination of Concentrations of Selected Radionuclides in Surface Soil in the U.S.", Health Physics, 45(3), 1983, pp. 631-642.

During the February 28, 1989 Technical Information Exchange meeting, U.S. EPA requested information on the current radiological conditions of the sediment in Paddy's Run and the Storm Sewer Outfall Ditch (SSOD) at the FMPC. Attached are the results of our evaluation.

We reviewed sediment sampling results for Paddy's Run and the SSOD and found that while sampling has been performed in these areas for several years, the most extensive sampling was performed in recent years.

The sediment sampling data is summarized in the following attachments, which are further explained in subsequent paragraphs:

Attachment I - Fernald Litigation Support sampling performed by IT Corporation, 1986

Attachment II - FMPC RI/FS Sampling Results, 1988

Attachment III - FMPC Environmental Monitoring Report Data on Paddy's Run for 1987 and 1988

Attachment IV - FMPC Environmental Monitoring Report Data on Paddy's Run for 1987 and 1988 (alternate format and plots)

Attachment V - FMPC Environmental Monitoring Report Data on the SSOD for 1987 and 1988

Attachment VI - FMPC site maps showing Environmental Monitoring Report data for 1987 and 1988

Attachment I summarizes data on Paddy's Run both onsite and off-site and the onsite SSOD, which was obtained through a sampling program performed at the FMPC in 1986 as part of the Fernald Litigation Support. The program included sampling at 6 locations, of which 5 locations were in Paddy's Run and 1 was in the SSOD. Sediment sampling results from Paddy's Run show total uranium concentrations ranging from 0.70 pCi/g to 0.96 pCi/g. The total uranium concentration in the sediment sample from the SSOD was 5.47 pCi/g.

As part of the ongoing Remedial Investigation at the FMPC, sediment sampling conducted onsite and off-site has consisted of ten samples collected at 6 locations, and this data is summarized in Attachment II. One sample was collected at each of the locations (4 along Paddy's Run, 2 along the SSOD) in June, 1988. The 4 Paddy's Run locations were re-sampled in August, 1988. The data show concentrations of total uranium in the Paddy's Run sediment samples ranging from 0.7 pCi/g to 2.7 pCi/g. Total uranium concentrations in the SSOD sediment samples were 5.5 pCi/g and 9.3 pCi/g. These data are in agreement with the 1986 results presented in Attachment I.

The most comprehensive sediment sampling in Paddy's Run and the SSOD has been performed as part of the FMPC Annual Environmental Monitoring Programs for 9187 and 1988. The results for these programs are presented in Attachment III. The sample ID indicates the sampling location along Paddy's Run and the SSOD. The "E", "M" and "W" at the end of the ID represent "East", "Middle" and "West", respectively, for three samples taken across the streams at each location. Approximate state-plane coordinates have been determined for each of these locations, and are included on this attachment as well as the Attachment VI site maps.

The Environmental Monitoring Program sediment sampling results for 1987 and 1988 are presented again in Attachment IV in a different format, from which data was plotted for the figures in the last pages of Attachment IV. As indicated in the footnote to Attachment IV, location 0 is the confluence of Paddy's Run and the SSOD. The FMPC property boundary is approximately 200 meters below the confluence, along Paddy's Run. All sediment samples collected on Paddy's Run above the confluence and onsite have total uranium concentrations less than 6 pCi/g; sediment samples collected along the entire length of Paddy's Run (both onsite and off-site) have concentrations less than 14 pCi/g, with the exception of one sample at the confluence point with a concentration of 38.50 pCi/g.

In general, sediment samples collected in the center of Paddy's Run have lower total uranium concentrations than samples collected from either bank. Concentrations of total uranium in sediment in Paddy's Run decrease with distance from the FMPC site boundary. With few exceptions, concentrations in Paddy's Run sediment off-site are within the range of natural background concentrations of total uranium in soil for Ohio (approximately 1.2 - 4.4 pCi/g, per attached referenced document). We are not aware of a current standard for total uranium concentrations in sediment samples.

Sediment sampling results collected along the SSOD for the FMPC Environmental Monitoring Program for 1987 and 1988 are presented in Attachment V. These data are plotted in a similar fashion to the Paddy's Run data, except that all values are upstream of the confluence and onsite. One sample collected from the east bank 700 meters upstream, exceeded a total uranium concentration of 23 pCi/g.

In summary, the data collected to date indicate there is no significant uranium contamination along Paddy's Run. Concentrations of total uranium in sediment are higher along the SSOD (ranging from 0.82 pCi/g to 65.41 pCi/g) than Paddy's Run, but off-site values along Paddy's Run do not exceed 9 pCi/g.

If you have any questions or require additional information, please contact Mary Stone, of my staff, at FTS 774-6656.

Sincerely,

Ray Hansen for

James A. Reafsnyder
FMPC Site Manager

DP-84:Stone

Attachments: As stated

cc w/attachments:
M. Wilson, DP-84, FMPC
C. McCord, USEPA-5
G. Mitchell, OEPA-Dayton
C. R. Conner, WMCO
L. August, GeoTrans

cc w/attachments (except Attachment VI maps):
L. Sparks, SE-31, ORO

# ATTACHMENT I

## SEDIMENT SAMPLING ALONG PADDY'S RUN & THE FMPC STORM SEWER OUTFALL DITCH 1986 - IT CORPORATION

| SAMPLE ID ** | U-234* | U-235 | U-238 | U-SUM | DATE | LOCATION | |
|---|---|---|---|---|---|---|---|
| FLSSW-D1 | 2.41 | 0.19 | 2.87 | 5.47 | 1986 | 476800 | 1379850 |
| FLSSW-P1 | N/A | N/A | N/A | 0.82 | 1986 | 487200 | 1377500 |
| FLSSW-P2 *** | 0.35 | 0.02 | 0.39 | 0.76 | 1986 | 477100 | 1379400 |
| FLSSW-P3 | N/A | N/A | N/A | 0.96 | 1986 | 476300 | 1379500 |
| FLSSW-P4 *** | N/A | N/A | N/A | 0.84 | 1986 | 472250 | 1378100 |
| FLSSW-P5 | N/A | N/A | N/A | 0.70 | 1986 | 468200 | 1380000 |

* Concentrations in pCi/g
** Suffix "D": Sample collected along the Storm Sewer Outfall Ditch
Suffix "P": Sample collected along Paddy's Run
*** Average of two samples from the same location.

ATTACHMENT II

SEDIMENT SAMPLING ALONG PADDY'S RUN &
THE FMPC STORM SEWER OUTFALL DITCH
1988 - RI/FS

| SAMPLE ID | U-234* | U-235 | U-238 | U-SUM | DATE | LOCATION | |
|---|---|---|---|---|---|---|---|
| 9035 | N/A | N/A | N/A | 1.3 | 1988 | 476275 | 1379375 |
| 9036 | N/A | N/A | N/A | 2.0 | 1988 | 484000 | 1377225 |
| 9037 | N/A | N/A | N/A | 1.3 | 1988 | 476825 | 1379550 |
| 9038 | N/A | N/A | N/A | 2.0 | 1988 | 479700 | 1377975 |
| 9042 | 3.8 | 0.9 | 4.6 | 9.3 | 1988 | 477065 | 1380110 |
| 9043 | 2.7 | <0.6 | 2.8 | 5.5 | 1988 | 476800 | 1379575 |
| 9101 | N/A | N/A | N/A | 0.7 | 1988 | 484000 | 1377225 |
| 9102 | N/A | N/A | N/A | 2.7 | 1988 | 479700 | 1377975 |
| 9103 | N/A | N/A | N/A | 0.7 | 1988 | 476825 | 1379550 |
| 9104 | N/A | N/A | N/A | 1.3 | 1988 | 476275 | 1379375 |

*Concentrations in pCi/g

# ATTACHMENT III

## SEDIMENT SAMPLING ALONG PADDY'S RUN & THE FMPC STORM SEWER OUTFALL DITCH
## 1987 & 1988 WMCO ANNUAL ENVIRONMENTAL MONITORING REPORT

### EXPLANATION OF SAMPLE ID NUMBERS

#### 1987

| | | |
|---|---|---|
| LOCATION 0 | : | CONFLUENCE OF PADDY'S RUN AND THE FMPC STORM SEWER OUTFALL DITCH (SSOD) |
| PREFIX "PRS" | : | SAMPLES COLLECTED ALONG PADDY'S RUN SOUTH OF LOCATION 0 TOWARD THE GREAT MIAMI RIVER (GMR) |
| PREFIX "PR" | : | SAMPLES COLLECTED ALONG PADDY'S RUN NORTH OF LOCATION 0 TOWARD THE FMPC |
| PREFIX "SS" | : | SAMPLES COLLECTED ALONG THE SSOD TOWARD THE FMPC |
| SUFFIX "E" | : | SAMPLES COLLECTED ALONG THE EAST BANK OF THE STREAM |
| SUFFIX "M" | : | SAMPLES COLLECTED MID-STREAM |
| SUFFIX "W" | : | SAMPLES COLLECTED ALONG THE WEST BANK OF THE STREAM |
| NUMBER | : | REPRESENTS THE DISTANCE (METERS) FROM LOCATION 0 |

#### 1988

| | | |
|---|---|---|
| LOCATION 0 | : | CONFLUENCE OF PADDY'S RUN AND THE FMPC SSOD |
| PREFIX "PRS" | : | SAMPLES COLLECTED ALONG PADDY'S RUN SOUTH OF LOCATION 0 TOWARD THE GMR |
| PREFIX "PRN" | : | SAMPLES COLLECTED ALONG PADDY'S RUN NORTH OF LOCATION 0 TOWARD THE FMPC |
| PREFIX "SSO" | : | SAMPLES COLLECTED ALONG THE SSOD TOWARD THE FMPC |
| SUFFIX "E" | : | SAMPLES COLLECTED ALONG THE EAST BANK OF PADDY'S RUN |
| SUFFIX "S" | : | SAMPLES COLLECTED ALONG THE EAST BANK OF THE SSOD |
| SUFFIX "M" | : | SAMPLES COLLECTED MID-STREAM |
| SUFFIX "W" | : | SAMPLES COLLECTED ALONG THE WEST BANK OF PADDY'S RUN |
| SUFFIX "N" | : | SAMPLES COLLECTED ALONG THE WEST BANK OF THE SSOD |
| NUMBER | : | REPRESENTS THE DISTANCE (METERS) FROM LOCATION 0 |

ATTACHMENT III - CONT'D

SEDIMENT SAMPLING ALONG PADDY'S RUN AND
THE FMPC STORM SEWER OUTFALL DITCH
1987 & 1988 WMCO
ANNUAL ENVIRONMENTAL MONITORING REPORT

| SAMPLE ID | U-SUM (pCi/g) | SAMPLE COORDINATES | | DATE |
|---|---|---|---|---|
| PRS-0100E | 1.49 | 476400 | 1379525 | 1987 |
| PRS-0100M | 0.84 | 476400 | 1379525 | 1987 |
| PRS-0100W | 2.43 | 476400 | 1379525 | 1987 |
| PRS-0200E | 1.02 | 476175 | 1379300 | 1987 |
| PRS-0200M | 1.13 | 476175 | 1379300 | 1987 |
| PRS-0200W | 13.24 | 476175 | 1379300 | 1987 |
| PRS-0300E | 8.66 | 475950 | 1379075 | 1987 |
| PRS-0300M | 1.07 | 475950 | 1379075 | 1987 |
| PRS-0300W | 1.33 | 475950 | 1379075 | 1987 |
| PRS-0500E | 1.33 | 475425 | 1379025 | 1987 |
| PRS-0500M | 1.25 | 475425 | 1379025 | 1987 |
| PRS-0500W | 2.22 | 475425 | 1379025 | 1987 |
| PRS-0700E | 1.94 | 474850 | 1379175 | 1987 |
| PRS-0700M | 0.92 | 474850 | 1379175 | 1987 |
| PRS-0700W | 4.90 | 474850 | 1379175 | 1987 |
| PRS-0900E | 3.41 | 474275 | 1379450 | 1987 |
| PRS-0900M | 1.32 | 474275 | 1379450 | 1987 |
| PRS-0900W | 0.73 | 474275 | 1379450 | 1987 |
| PRS-1100E | 3.30 | 473925 | 1379050 | 1987 |
| PRS-1100M | 0.81 | 473925 | 1379050 | 1987 |
| PRS-1100W | 1.31 | 473925 | 1379050 | 1987 |
| PRS-1300E | 0.59 | 473475 | 1378725 | 1987 |
| PRS-1300M | 0.77 | 473475 | 1378725 | 1987 |
| PRS-1300W | 1.49 | 473475 | 1378725 | 1987 |
| PRS-1500E | 2.02 | 472900 | 1378800 | 1987 |
| PRS-1500M | 0.93 | 472900 | 1378800 | 1987 |
| PRS-1500W | 3.89 | 472900 | 1378800 | 1987 |
| PRS-1700E | 1.08 | 472225 | 1378725 | 1987 |
| PRS-1700M | 0.78 | 472225 | 1378725 | 1987 |
| PRS-1700W | 1.14 | 472225 | 1378725 | 1987 |
| PRS-1900E | 1.05 | 471700 | 1378950 | 1987 |
| PRS-1900M | 0.98 | 471700 | 1378950 | 1987 |
| PRS-1900W | 1.16 | 471700 | 1378950 | 1987 |
| PRS-2100E | 1.46 | 471400 | 1379500 | 1987 |
| PRS-2100M | 1.05 | 471400 | 1379500 | 1987 |
| PRS-2100W | 0.99 | 471400 | 1379500 | 1987 |
| PRS-2300E | 1.20 | 470850 | 1379775 | 1987 |
| PRS-2300M | 1.06 | 470850 | 1379775 | 1987 |
| PRS-2300W | 1.09 | 470850 | 1379775 | 1987 |
| PRS-2500E | 1.26 | 470425 | 1380200 | 1987 |
| PRS-2500M | 0.87 | 470425 | 1380200 | 1987 |
| PRS-2500W | 2.07 | 470425 | 1380200 | 1987 |
| PRS-2700E | 1.44 | 470125 | 1380250 | 1987 |
| PRS-2700M | 0.95 | 470125 | 1380250 | 1987 |
| PRS-2700W | 1.16 | 470125 | 1380250 | 1987 |

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SEDIMENT SAMPLING ALONG PADDY'S RUN AND
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1987 & 1988 WMCO
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| SAMPLE ID | U-SUM (pCi/g) | SAMPLE COORDINATES | | DATE |
|---|---|---|---|---|
| PRS-2900E | 1.33 | 469575 | 1380050 | 1987 |
| PRS-2900M | 1.15 | 469575 | 1380050 | 1987 |
| PRS-2900W | 0.53 | 469575 | 1380050 | 1987 |
| PR-0000E | 1.55 | 476695 | 1379530 | 1987 |
| PR-0000E | 7.49 | 476695 | 1379530 | 1987 |
| PR-0000M | 1.04 | 476695 | 1379530 | 1987 |
| PR-0000M | 2.08 | 476695 | 1379530 | 1987 |
| PR-0000W | 38.50 | 476695 | 1379530 | 1987 |
| PR-0000W | 1.21 | 476695 | 1379530 | 1987 |
| PR-0100E | 3.32 | 476900 | 1379200 | 1987 |
| PR-0100M | 1.28 | 476900 | 1379200 | 1987 |
| PR-0100W | 1.12 | 476900 | 1379200 | 1987 |
| PR-0200E | 0.67 | 477100 | 1379050 | 1987 |
| PR-0200M | 0.79 | 477100 | 1379050 | 1987 |
| PR-0200W | 0.96 | 477100 | 1379050 | 1987 |
| PR-0300E | 0.51 | 477200 | 1378800 | 1987 |
| PR-0300M | 0.87 | 477200 | 1378800 | 1987 |
| PR-0300W | 1.60 | 477200 | 1378800 | 1987 |
| PR-0400E | 0.82 | 477500 | 1378800 | 1987 |
| PR-0400M | 0.81 | 477500 | 1378800 | 1987 |
| PR-0400W | 1.39 | 477500 | 1378800 | 1987 |
| PR-0500E | 1.43 | 477800 | 1378850 | 1987 |
| PR-0500M | 0.87 | 477800 | 1378850 | 1987 |
| PR-0500W | 0.91 | 477800 | 1378850 | 1987 |
| PR-0600E | 1.18 | 478000 | 1378750 | 1987 |
| PR-0600M | 0.70 | 478000 | 1378750 | 1987 |
| PR-0600W | 2.28 | 478000 | 1378750 | 1987 |
| PR-0700E | 1.26 | 478225 | 1378550 | 1987 |
| PR-0700M | 0.84 | 478225 | 1378550 | 1987 |
| PR-0700W | 1.90 | 478225 | 1378550 | 1987 |
| PR-0800E | 1.55 | 478250 | 1378250 | 1987 |
| PR-0800M | 0.97 | 478250 | 1378250 | 1987 |
| PR-0800W | 1.59 | 478250 | 1378250 | 1987 |
| PR-0900E | 1.38 | 478250 | 1378050 | 1987 |
| PR-0900M | 1.09 | 478250 | 1378050 | 1987 |
| PR-0900W | 1.42 | 478250 | 1378050 | 1987 |
| PR-1000E | 2.48 | 478475 | 1378100 | 1987 |
| PR-1000M | 1.28 | 478475 | 1378100 | 1987 |
| PR-1000W | 1.20 | 478475 | 1378100 | 1987 |
| PR-1100E | 1.54 | 478700 | 1378300 | 1987 |
| PR-1100M | 0.80 | 478700 | 1378300 | 1987 |
| PR-1100W | 2.05 | 478700 | 1378300 | 1987 |
| PR-1200E | 1.34 | 479025 | 1378225 | 1987 |
| PR-1200M | 1.18 | 479025 | 1378225 | 1987 |
| PR-1200W | 5.15 | 479025 | 1378225 | 1987 |

ATTACHMENT III - CONT'D

SEDIMENT SAMPLING ALONG PADDY'S RUN AND
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1987 & 1988 WMCO
ANNUAL ENVIRONMENTAL MONITORING REPORT

| SAMPLE ID | U-SUM (pCi/g) | SAMPLE COORDINATES | | DATE |
|---|---|---|---|---|
| PR-1300E | 0.85 | 479300 | 1377990 | 1987 |
| PR-1300M | 1.04 | 479300 | 1377990 | 1987 |
| PR-1300W | 1.94 | 479300 | 1377990 | 1987 |
| PR-1400E | 1.75 | 479650 | 1377925 | 1987 |
| PR-1400M | 0.91 | 479650 | 1377925 | 1987 |
| PR-1400W | 1.01 | 479650 | 1377925 | 1987 |
| PR-1500E | 1.45 | 479900 | 1378050 | 1987 |
| PR-1500M | 0.97 | 479900 | 1378050 | 1987 |
| PR-1500W | 1.15 | 479900 | 1378050 | 1987 |
| PR-1600E | 1.38 | 480200 | 1378075 | 1987 |
| PR-1600M | 1.21 | 480200 | 1378075 | 1987 |
| PR-1600W | 1.03 | 480200 | 1378075 | 1987 |
| PR-1700E | 3.77 | 480525 | 1378225 | 1987 |
| PR-1700M | 0.70 | 480525 | 1378225 | 1987 |
| PR-1700W | 1.22 | 480525 | 1378225 | 1987 |
| PR-1800E | 0.97 | 480800 | 1378100 | 1987 |
| PR-1800M | 0.96 | 480800 | 1378100 | 1987 |
| PR-1800W | 1.18 | 480800 | 1378100 | 1987 |
| PR-1900E | 0.90 | 480990 | 1377875 | 1987 |
| PR-1900M | 0.67 | 480990 | 1377875 | 1987 |
| PR-1900W | 1.25 | 480990 | 1377875 | 1987 |
| PR-2000E | 0.78 | 481300 | 1377750 | 1987 |
| PR-2000M | 0.68 | 481300 | 1377750 | 1987 |
| PR-2000W | 0.74 | 481300 | 1377750 | 1987 |
| PR-2100E | 1.83 | 481625 | 1377640 | 1987 |
| PR-2100M | 0.44 | 481625 | 1377640 | 1987 |
| PR-2100W | 0.62 | 481625 | 1377640 | 1987 |
| PR-2200E | 4.80 | 481900 | 1377725 | 1987 |
| PR-2200M | 0.73 | 481900 | 1377725 | 1987 |
| PR-2200W | 1.23 | 481900 | 1377725 | 1987 |
| PR-2300E | 0.70 | 482150 | 1377525 | 1987 |
| PR-2300M | 0.62 | 482150 | 1377525 | 1987 |
| PR-2300W | 1.39 | 482150 | 1377525 | 1987 |
| PR-2430E | 1.41 | 482600 | 1377350 | 1987 |
| PR-2430M | 0.55 | 482600 | 1377350 | 1987 |
| PR-2430W | 1.40 | 482600 | 1377350 | 1987 |
| SS-0000E | 7.06 | 476695 | 1379530 | 1987 |
| SS-0000M | 3.07 | 476695 | 1379530 | 1987 |
| SS-0000W | 5.67 | 476695 | 1379530 | 1987 |
| SS-0090E | 4.52 | 476850 | 1379790 | 1987 |
| SS-0090M | 2.52 | 476850 | 1379790 | 1987 |
| SS-0090W | 4.67 | 476850 | 1379790 | 1987 |
| SS-0200E | 5.21 | 476990 | 1380125 | 1987 |
| SS-0200M | 0.82 | 476990 | 1380125 | 1987 |
| SS-0200W | 3.45 | 476990 | 1380125 | 1987 |

SEDIMENT SAMPLING ALONG PADDY'S RUN AND
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1987 & 1988 WMCO
ANNUAL ENVIRONMENTAL MONITORING REPORT

| SAMPLE ID | U-SUM (pCi/g) | SAMPLE COORDINATES | | DATE |
|---|---|---|---|---|
| SS-0300E | 3.66 | 477250 | 1380300 | 1987 |
| SS-0300M | 3.36 | 477250 | 1380300 | 1987 |
| SS-0300W | 4.61 | 477250 | 1380300 | 1987 |
| SS-0400E | 3.79 | 477450 | 1380225 | 1987 |
| SS-0400M | 2.85 | 477450 | 1380225 | 1987 |
| SS-0400W | 7.58 | 477450 | 1380225 | 1987 |
| SS-0500E | 20.61 | 477575 | 1380500 | 1987 |
| SS-0500M | 3.40 | 477575 | 1380500 | 1987 |
| SS-0500W | 1.86 | 477575 | 1380500 | 1987 |
| SS-0600E | 20.29 | 477725 | 1380700 | 1987 |
| SS-0600M | 14.77 | 477725 | 1380700 | 1987 |
| SS-0600W | 13.97 | 477725 | 1380700 | 1987 |
| SS-0700E | 14.51 | 478025 | 1380825 | 1987 |
| SS-0700M | 3.31 | 478025 | 1380825 | 1987 |
| SS-0700W | 12.64 | 478025 | 1380825 | 1987 |
| SS-0800E | 6.40 | 478200 | 1380990 | 1987 |
| SS-0800M | 7.47 | 478200 | 1380990 | 1987 |
| SS-0800W | 5.44 | 478200 | 1380990 | 1987 |
| SS-0875E | 2.06 | 478140 | 1381210 | 1987 |
| SS-0875M | 21.49 | 478140 | 1381210 | 1987 |
| SS-0875W | 5.77 | 478140 | 1381210 | 1987 |
| PRN-0100E | 1.29 | 476900 | 1379200 | 1988 |
| PRN-0100M | 0.77 | 476900 | 1379200 | 1988 |
| PRN-0100W | 0.98 | 476900 | 1379200 | 1988 |
| PRN-0200E | 1.05 | 477100 | 1379050 | 1988 |
| PRN-0200M | 1.02 | 477100 | 1379050 | 1988 |
| PRN-0200W | 0.88 | 477100 | 1379050 | 1988 |
| PRN-0300E | 1.95 | 477200 | 1378800 | 1988 |
| PRN-0300M | 0.43 | 477200 | 1378800 | 1988 |
| PRN-0300W | 0.85 | 477200 | 1378800 | 1988 |
| PRN-0400E | 1.90 | 477500 | 1378800 | 1988 |
| PRN-0400M | 0.74 | 477500 | 1378800 | 1988 |
| PRN-0400W | 1.96 | 477500 | 1378800 | 1988 |
| PRN-0500E | 1.25 | 477800 | 1378850 | 1988 |
| PRN-0500M | 1.18 | 477800 | 1378850 | 1988 |
| PRN-0500W | 1.04 | 477800 | 1378850 | 1988 |
| PRN-0600E | 1.10 | 478000 | 1378750 | 1988 |
| PRN-0600M | 0.71 | 478000 | 1378750 | 1988 |
| PRN-0600W | 0.96 | 478000 | 1378750 | 1988 |
| PRN-0700E | 1.45 | 478225 | 1378550 | 1988 |
| PRN-0700M | 0.78 | 478225 | 1378550 | 1988 |
| PRN-0700W | 1.56 | 478225 | 1378550 | 1988 |
| PRN-0800E | 1.20 | 478250 | 1378250 | 1988 |
| PRN-0800M | 0.81 | 478250 | 1378250 | 1988 |
| PRN-0800W | 1.61 | 478250 | 1378250 | 1988 |

ATTACHMENT III - CONT'D

SEDIMENT SAMPLING ALONG PADDY'S RUN AND
THE FMPC STORM SEWER OUTFALL DITCH
1987 & 1988 WMCO
ANNUAL ENVIRONMENTAL MONITORING REPORT

| SAMPLE ID | U-SUM (pCi/g) | SAMPLE COORDINATES | | DATE |
|---|---|---|---|---|
| PRN-0900E | 2.05 | 478250 | 1378050 | 1988 |
| PRN-0900M | 1.41 | 478250 | 1378050 | 1988 |
| PRN-0900W | 1.08 | 478250 | 1378050 | 1988 |
| PRN-1000E | 1.79 | 478475 | 1378100 | 1988 |
| PRN-1000M | 1.21 | 478475 | 1378100 | 1988 |
| PRN-1000W | 1.66 | 478475 | 1378100 | 1988 |
| PRN-1100E | 1.11 | 478700 | 1378300 | 1988 |
| PRN-1100M | 1.20 | 478700 | 1378300 | 1988 |
| PRN-1100W | 0.97 | 478700 | 1378300 | 1988 |
| PRN-1200E | 2.14 | 479025 | 1378225 | 1988 |
| PRN-1200M | 0.97 | 479025 | 1378225 | 1988 |
| PRN-1200W | 1.22 | 479025 | 1378225 | 1988 |
| PRN-1300E | 1.12 | 479300 | 1377990 | 1988 |
| PRN-1300M | 1.65 | 479300 | 1377990 | 1988 |
| PRN-1300W | 1.74 | 479300 | 1377990 | 1988 |
| PRN-1400E | 1.45 | 479650 | 1377925 | 1988 |
| PRN-1400M | 1.33 | 479650 | 1377925 | 1988 |
| PRN-1400W | 1.26 | 479650 | 1377925 | 1988 |
| PRN-1500E | 1.52 | 479900 | 1378050 | 1988 |
| PRN-1500M | 0.89 | 479900 | 1378050 | 1988 |
| PRN-1500W | 1.58 | 479900 | 1378050 | 1988 |
| PRN-1600E | 2.89 | 480200 | 1378075 | 1988 |
| PRN-1600M | 1.03 | 480200 | 1378075 | 1988 |
| PRN-1600W | 1.62 | 480200 | 1378075 | 1988 |
| PRN-1700E | 1.06 | 480525 | 1378225 | 1988 |
| PRN-1700M | 0.87 | 480525 | 1378225 | 1988 |
| PRN-1700W | 0.93 | 480525 | 1378225 | 1988 |
| PRN-1800E | 0.96 | 480800 | 1378100 | 1988 |
| PRN-1800M | 0.62 | 480800 | 1378100 | 1988 |
| PRN-1800W | 1.07 | 480800 | 1378100 | 1988 |
| PRN-1900E | 0.92 | 480990 | 1377875 | 1988 |
| PRN-1900M | 0.72 | 480990 | 1377875 | 1988 |
| PRN-1900W | 0.90 | 480990 | 1377875 | 1988 |
| PRN-2000E | 1.05 | 481300 | 1377750 | 1988 |
| PRN-2000M | 0.66 | 481300 | 1377750 | 1988 |
| PRN-2000W | 0.81 | 481300 | 1377750 | 1988 |
| PRN-2100E | 1.48 | 481625 | 1377640 | 1988 |
| PRN-2100M | 0.62 | 481625 | 1377640 | 1988 |
| PRN-2100W | 0.73 | 481625 | 1377640 | 1988 |
| PRN-2200E | 0.86 | 481900 | 1377725 | 1988 |
| PRN-2200M | 1.35 | 481900 | 1377725 | 1988 |
| PRN-2200W | 1.06 | 481900 | 1377725 | 1988 |
| PRN-2300E | 1.01 | 482150 | 1377525 | 1988 |
| PRN-2300M | 0.63 | 482150 | 1377525 | 1988 |
| PRN-2300W | 0.90 | 482150 | 1377525 | 1988 |

SEDIMENT SAMPLING ALONG PADDY'S RUN AND
THE FMPC STORM SEWER OUTFALL DITCH
1987 & 1988 WMCO
ANNUAL ENVIRONMENTAL MONITORING REPORT

| SAMPLE ID | U-SUM (pCi/g) | SAMPLE COORDINATES | | DATE |
|---|---|---|---|---|
| PRN-2350E | 0.77 | 482275 | 1377400 | 1988 |
| PRN-2350M | 1.04 | 482275 | 1377400 | 1988 |
| PRN-2350W | 1.15 | 482275 | 1377400 | 1988 |
| PRS-0000E | 6.06 | 476695 | 1379530 | 1988 |
| PRS-0000M | 0.82 | 476695 | 1379530 | 1988 |
| PRS-0000W | 1.20 | 476695 | 1379530 | 1988 |
| PRS-0100E | 1.76 | 476400 | 1379525 | 1988 |
| PRS-0100M | 1.00 | 476400 | 1379525 | 1988 |
| PRS-0100W | 0.83 | 476400 | 1379525 | 1988 |
| PRS-0200E | 1.29 | 476175 | 1379300 | 1988 |
| PRS-0200M | 0.97 | 476175 | 1379300 | 1988 |
| PRS-0200W | 0.96 | 476175 | 1379300 | 1988 |
| PRS-0400E | 0.90 | 475700 | 1378900 | 1988 |
| PRS-0400M | 1.27 | 475700 | 1378900 | 1988 |
| PRS-0400W | 3.08 | 475700 | 1378900 | 1988 |
| PRS-0600E | 1.07 | 475125 | 1379175 | 1988 |
| PRS-0600M | 2.00 | 475125 | 1379175 | 1988 |
| PRS-0600W | 1.69 | 475125 | 1379175 | 1988 |
| PRS-0800E | 1.32 | 474550 | 1379250 | 1988 |
| PRS-0800M | 1.22 | 474550 | 1379250 | 1988 |
| PRS-0800W | 1.29 | 474550 | 1379250 | 1988 |
| PRS-1000E | 5.63 | 474050 | 1379225 | 1988 |
| PRS-1000M | 1.13 | 474050 | 1379225 | 1988 |
| PRS-1000W | 1.13 | 474050 | 1379225 | 1988 |
| PRS-1200E | 1.00 | 473725 | 1378840 | 1988 |
| PRS-1200M | 1.06 | 473725 | 1378840 | 1988 |
| PRS-1200W | 1.27 | 473725 | 1378840 | 1988 |
| PRS-1400E | 1.67 | 473175 | 1378850 | 1988 |
| PRS-1400M | 1.05 | 473175 | 1378850 | 1988 |
| PRS-1400W | 1.72 | 473175 | 1378850 | 1988 |
| PRS-1600E | 0.87 | 472525 | 1378775 | 1988 |
| PRS-1600M | 1.24 | 472525 | 1378775 | 1988 |
| PRS-1600W | 2.27 | 472525 | 1378775 | 1988 |
| PRS-1800E | 1.05 | 471950 | 1378800 | 1988 |
| PRS-1800M | 1.02 | 471950 | 1378800 | 1988 |
| PRS-1800W | 0.81 | 471950 | 1378800 | 1988 |
| PRS-2000E | 4.08 | 471510 | 1379200 | 1988 |
| PRS-2000M | 1.02 | 471510 | 1379200 | 1988 |
| PRS-2000W | 1.36 | 471510 | 1379200 | 1988 |
| PRS-2200E | 1.13 | 471060 | 1379540 | 1988 |
| PRS-2200M | 1.00 | 471060 | 1379540 | 1988 |
| PRS-2200W | 1.00 | 471060 | 1379540 | 1988 |
| PRS-2400E | 1.43 | 470625 | 1379975 | 1988 |
| PRS-2400M | 1.00 | 470625 | 1379975 | 1988 |
| PRS-2400W | 1.87 | 470625 | 1379975 | 1988 |

ATTACHMENT III - CONT'D

SEDIMENT SAMPLING ALONG PADDY'S RUN AND
THE FMPC STORM SEWER OUTFALL DITCH
1987 & 1988 WMCO
ANNUAL ENVIRONMENTAL MONITORING REPORT

| SAMPLE ID | U-SUM (pCi/g) | SAMPLE COORDINATES | | DATE |
|---|---|---|---|---|
| PRS-2600E | 1.79 | 470125 | 1380225 | 1988 |
| PRS-2600M | 1.08 | 470125 | 1380225 | 1988 |
| PRS-2600W | 1.11 | 470125 | 1380225 | 1988 |
| PRS-2800E | 1.05 | 469475 | 1380040 | 1988 |
| PRS-2800M | 1.26 | 469475 | 1380040 | 1988 |
| PRS-2800W | 1.05 | 469475 | 1380040 | 1988 |
| PRS-3000E | 1.05 | 468975 | 1379950 | 1988 |
| PRS-3000M | 0.93 | 468975 | 1379950 | 1988 |
| PRS-3000W | 2.38 | 468975 | 1379950 | 1988 |
| PRS-3200E | 0.63 | 468375 | 1380000 | 1988 |
| PRS-3200M | 0.85 | 468375 | 1380000 | 1988 |
| PRS-3200W | 1.18 | 468375 | 1380000 | 1988 |
| SSO-0000M | 3.05 | 476695 | 1379530 | 1988 |
| SSO-0000N | 5.37 | 476695 | 1379530 | 1988 |
| SSO-0000S | 4.55 | 476695 | 1379530 | 1988 |
| SSO-0100M | 2.32 | 476890 | 1379800 | 1988 |
| SSO-0100N | 13.70 | 476890 | 1379800 | 1988 |
| SSO-0100S | 16.63 | 476890 | 1379800 | 1988 |
| SSO-0200M | 4.08 | 476990 | 1380125 | 1988 |
| SSO-0200N | 5.11 | 476990 | 1380125 | 1988 |
| SSO-0200S | 14.13 | 476990 | 1380125 | 1988 |
| SSO-0300M | 3.95 | 477250 | 1380300 | 1988 |
| SSO-0300N | 5.33 | 477250 | 1380300 | 1988 |
| SSO-0300S | 11.59 | 477250 | 1380300 | 1988 |
| SSO-0400M | 3.45 | 477450 | 1380225 | 1988 |
| SSO-0400N | 1.73 | 477450 | 1380225 | 1988 |
| SSO-0400S | 5.61 | 477450 | 1380225 | 1988 |
| SSO-0500M | 5.94 | 477575 | 1380500 | 1988 |
| SSO-0500N | 22.73 | 477575 | 1380500 | 1988 |
| SSO-0500S | 8.69 | 477575 | 1380500 | 1988 |
| SSO-0600M | 4.53 | 477725 | 1380700 | 1988 |
| SSO-0600N | 15.96 | 477725 | 1380700 | 1988 |
| SSO-0600S | 10.99 | 477725 | 1380700 | 1988 |
| SSO-0700M | 8.28 | 478025 | 1380825 | 1988 |
| SSO-0700N | 12.66 | 478025 | 1380825 | 1988 |
| SSO-0700S | 65.41 | 478025 | 1380825 | 1988 |
| SSO-0750M | 6.91 | 478150 | 1380850 | 1988 |
| SSO-0750N | 14.04 | 478150 | 1380850 | 1988 |
| SSO-0750S | 4.76 | 478150 | 1380850 | 1988 |

# ATTACHMENT IV

## SEDIMENT SAMPLING ALONG PADDY'S RUN

| 1987 | | | 1988 | | |
|---|---|---|---|---|---|
| DISTANCE FROM 0 (meters)* | LOCATION W/REF TO STREAM | TOTAL U CONC (pCi/g) | DISTANCE FROM 0 (meters)* | LOCATION W/REF TO STREAM | TOTAL U CONC (pCi/g) |
| -2430 | E | 1.41 | -2350 | E | 0.77 |
| -2300 | E | 0.70 | -2300 | E | 1.01 |
| -2200 | E | 4.80 | -2200 | E | 0.86 |
| -2100 | E | 1.83 | -2100 | E | 1.48 |
| -2000 | E | 0.78 | -2000 | E | 1.05 |
| -1900 | E | 0.90 | -1900 | E | 0.92 |
| -1800 | E | 0.97 | -1800 | E | 0.96 |
| -1700 | E | 3.77 | -1700 | E | 1.06 |
| -1600 | E | 1.38 | -1600 | E | 2.89 |
| -1500 | E | 1.45 | -1500 | E | 1.52 |
| -1400 | E | 1.75 | -1400 | E | 1.45 |
| -1300 | E | 0.85 | -1300 | E | 1.12 |
| -1200 | E | 1.34 | -1200 | E | 2.14 |
| -1100 | E | 1.54 | -1100 | E | 1.11 |
| -1000 | E | 2.48 | -1000 | E | 1.79 |
| -900 | E | 1.38 | -900 | E | 2.05 |
| -800 | E | 1.55 | -800 | E | 1.20 |
| -700 | E | 1.26 | -700 | E | 1.45 |
| -600 | E | 1.18 | -600 | E | 1.10 |
| -500 | E | 1.43 | -500 | E | 1.25 |
| -400 | E | 0.82 | -400 | E | 1.90 |
| -300 | E | 0.51 | -300 | E | 1.95 |
| -200 | E | 0.67 | -200 | E | 1.05 |
| -100 | E | 3.32 | -100 | E | 1.29 |
| 0 | E | 1.55 | 0 | E | 6.06 |
| 100 | E | 1.49 | 100 | E | 1.76 |
| 200 | E | 1.02 | 200 | E | 1.29 |
| 300 | E | 8.66 | 400 | E | 0.90 |
| 500 | E | 1.33 | 600 | E | 1.07 |
| 700 | E | 1.94 | 800 | E | 1.32 |
| 900 | E | 3.41 | 1000 | E | 5.63 |
| 1100 | E | 3.30 | 1200 | E | 1.00 |
| 1300 | E | 0.59 | 1400 | E | 1.67 |
| 1500 | E | 2.02 | 1600 | E | 0.87 |
| 1700 | E | 1.08 | 1800 | E | 1.05 |
| 1900 | E | 1.05 | 2000 | E | 4.08 |
| 2100 | E | 1.46 | 2200 | E | 1.13 |
| 2300 | E | 1.20 | 2400 | E | 1.43 |
| 2500 | E | 1.26 | 2600 | E | 1.79 |
| 2700 | E | 1.44 | 2800 | E | 1.05 |
| 2900 | E | 1.33 | 3000 | E | 1.05 |
| | | | 3200 | E | 0.63 |

* Location 0 is the confluence of Paddy's Run and the FMPC Storm Sewer Outfall Ditch
Negative #s are upstream/positive #s are downstream from location 0

## SEDIMENT SAMPLING ALONG PADDY'S RUN

| 1987 | | | 1988 | | |
|---|---|---|---|---|---|
| DISTANCE FROM 0 (meters)* | LOCATION W/REF TO STREAM | TOTAL U CONC (pCi/g) | DISTANCE FROM 0 (meters)* | LOCATION W/REF TO STREAM | TOTAL U CONC (pCi/g) |
| -2430 | M | 0.55 | -2350 | M | 1.04 |
| -2300 | M | 0.62 | -2300 | M | 0.63 |
| -2200 | M | 0.73 | -2200 | M | 1.35 |
| -2100 | M | 0.44 | -2100 | M | 0.62 |
| -2000 | M | 0.68 | -2000 | M | 0.66 |
| -1900 | M | 0.67 | -1900 | M | 0.72 |
| -1800 | M | 0.96 | -1800 | M | 0.62 |
| -1700 | M | 0.70 | -1700 | M | 0.87 |
| -1600 | M | 1.21 | -1600 | M | 1.03 |
| -1500 | M | 0.97 | -1500 | M | 0.89 |
| -1400 | M | 0.91 | -1400 | M | 1.33 |
| -1300 | M | 1.04 | -1300 | M | 1.65 |
| -1200 | M | 1.18 | -1200 | M | 0.97 |
| -1100 | M | 0.80 | -1100 | M | 1.20 |
| -1000 | M | 1.28 | -1000 | M | 1.21 |
| -900 | M | 1.09 | -900 | M | 1.41 |
| -800 | M | 0.97 | -800 | M | 0.81 |
| -700 | M | 0.84 | -700 | M | 0.78 |
| -600 | M | 0.70 | -600 | M | 0.71 |
| -500 | M | 0.87 | -500 | M | 1.18 |
| -400 | M | 0.81 | -400 | M | 0.74 |
| -300 | M | 0.87 | -300 | M | 0.43 |
| -200 | M | 0.79 | -200 | M | 1.02 |
| -100 | M | 1.28 | -100 | M | 0.77 |
| 0 | M | 1.04 | 0 | M | 0.82 |
| 100 | M | 0.84 | 100 | M | 1.00 |
| 200 | M | 1.13 | 200 | M | 0.97 |
| 300 | M | 1.07 | 400 | M | 1.27 |
| 500 | M | 1.25 | 600 | M | 2.00 |
| 700 | M | 0.92 | 800 | M | 1.22 |
| 900 | M | 1.32 | 1000 | M | 1.13 |
| 1100 | M | 0.81 | 1200 | M | 1.06 |
| 1300 | M | 0.77 | 1400 | M | 1.05 |
| 1500 | M | 0.93 | 1600 | M | 1.24 |
| 1700 | M | 0.78 | 1800 | M | 1.02 |
| 1900 | M | 0.98 | 2000 | M | 1.02 |
| 2100 | M | 1.05 | 2200 | M | 1.00 |
| 2300 | M | 1.06 | 2400 | M | 1.00 |
| 2500 | M | 0.87 | 2600 | M | 1.08 |
| 2700 | M | 0.95 | 2800 | M | 1.26 |
| 2900 | M | 1.15 | 3000 | M | 0.93 |
| | | | 3200 | M | 0.85 |

* Location 0 is the confluence of Paddy's Run and the FMPC Storm Sewer Outfall Ditch
Negative #s are upstream/positive #s are downstream from location 0

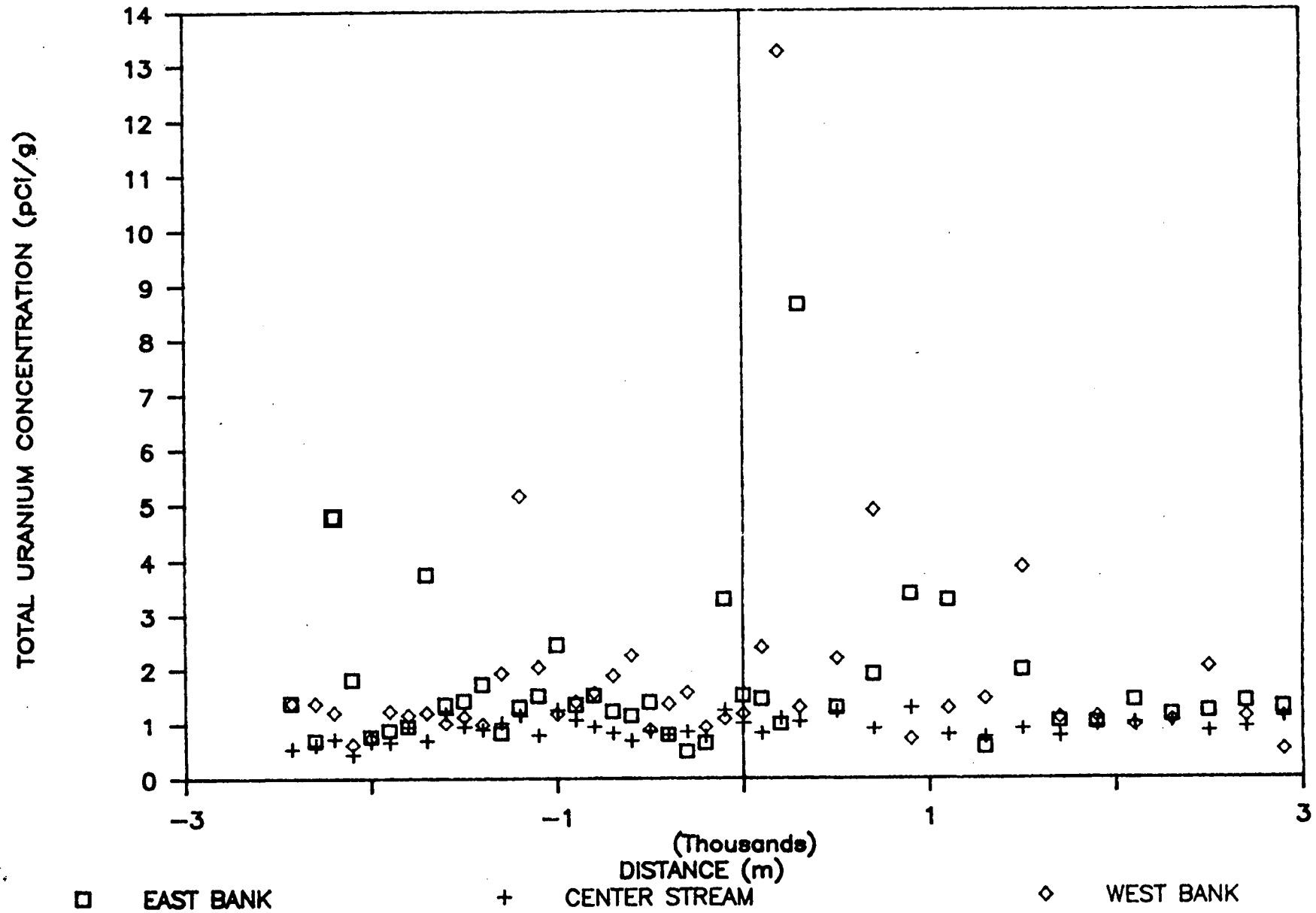
## SEDIMENT SAMPLING ALONG PADDY'S RUN

| 1987 | | | 1988 | | |
|---|---|---|---|---|---|
| DISTANCE FROM 0 (meters)* | LOCATION W/REF TO STREAM | TOTAL U CONC (pCi/g) | DISTANCE FROM 0 (meters)* | LOCATION W/REF TO STREAM | TOTAL U CONC (pCi/g) |
| -2430 | W | 1.40 | -2350 | W | 1.15 |
| -2300 | W | 1.39 | -2300 | W | 0.90 |
| -2200 | W | 1.23 | -2200 | W | 1.06 |
| -2100 | W | 0.62 | -2100 | W | 0.73 |
| -2000 | W | 0.74 | -2000 | W | 0.81 |
| -1900 | W | 1.25 | -1900 | W | 0.90 |
| -1800 | W | 1.18 | -1800 | W | 1.07 |
| -1700 | W | 1.22 | -1700 | W | 0.93 |
| -1600 | W | 1.03 | -1600 | W | 1.62 |
| -1500 | W | 1.15 | -1500 | W | 1.58 |
| -1400 | W | 1.01 | -1400 | W | 1.26 |
| -1300 | W | 1.94 | -1300 | W | 1.74 |
| -1200 | W | 5.15 | -1200 | W | 1.22 |
| -1100 | W | 2.05 | -1100 | W | 0.97 |
| -1000 | W | 1.20 | -1000 | W | 1.66 |
| -900 | W | 1.42 | -900 | W | 1.08 |
| -800 | W | 1.59 | -800 | W | 1.61 |
| -700 | W | 1.90 | -700 | W | 1.56 |
| -600 | W | 2.28 | -600 | W | 0.96 |
| -500 | W | 0.91 | -500 | W | 1.04 |
| -400 | W | 1.39 | -400 | W | 1.96 |
| -300 | W | 1.60 | -300 | W | 0.85 |
| -200 | W | 0.96 | -200 | W | 0.88 |
| -100 | W | 1.12 | -100 | W | 0.98 |
| 0 | W | 1.21 | 0 | W | 1.20 |
| 100 | W | 2.43 | 100 | W | 0.83 |
| 200 | W | 13.24 | 200 | W | 0.96 |
| 300 | W | 1.33 | 400 | W | 3.08 |
| 500 | W | 2.22 | 600 | W | 1.69 |
| 700 | W | 4.90 | 800 | W | 1.29 |
| 900 | W | 0.73 | 1000 | W | 1.13 |
| 1100 | W | 1.31 | 1200 | W | 1.27 |
| 1300 | W | 1.49 | 1400 | W | 1.72 |
| 1500 | W | 3.89 | 1600 | W | 2.27 |
| 1700 | W | 1.14 | 1800 | W | 0.81 |
| 1900 | W | 1.16 | 2000 | W | 1.36 |
| 2100 | W | 0.99 | 2200 | W | 0.46 |
| 2300 | W | 1.09 | 2400 | W | 1.87 |
| 2500 | W | 2.07 | 2600 | W | 1.11 |
| 2700 | W | 1.16 | 2800 | W | 1.05 |
| 2900 | W | 0.53 | 3000 | W | 2.38 |
| | | | 3200 | W | 1.18 |

* Location 0 is the confluence of Paddy's Run and the FMPC Storm Sewer Outfall Ditch
Negative #s are upstream/positive #s are downstream from location 0

# PADDY'S RUN SEDIMENT SAMPLING

1987 DATA

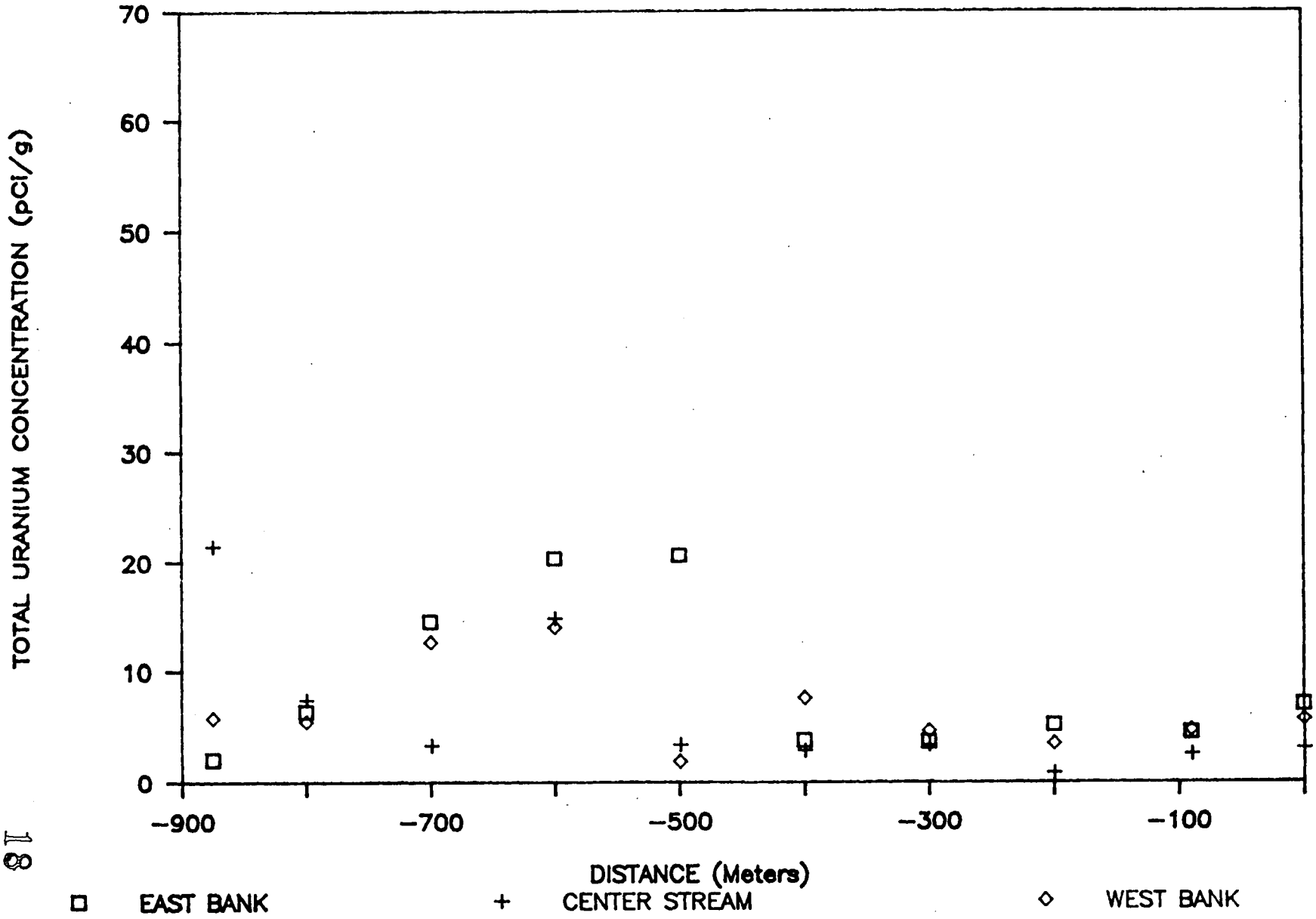



2440

17

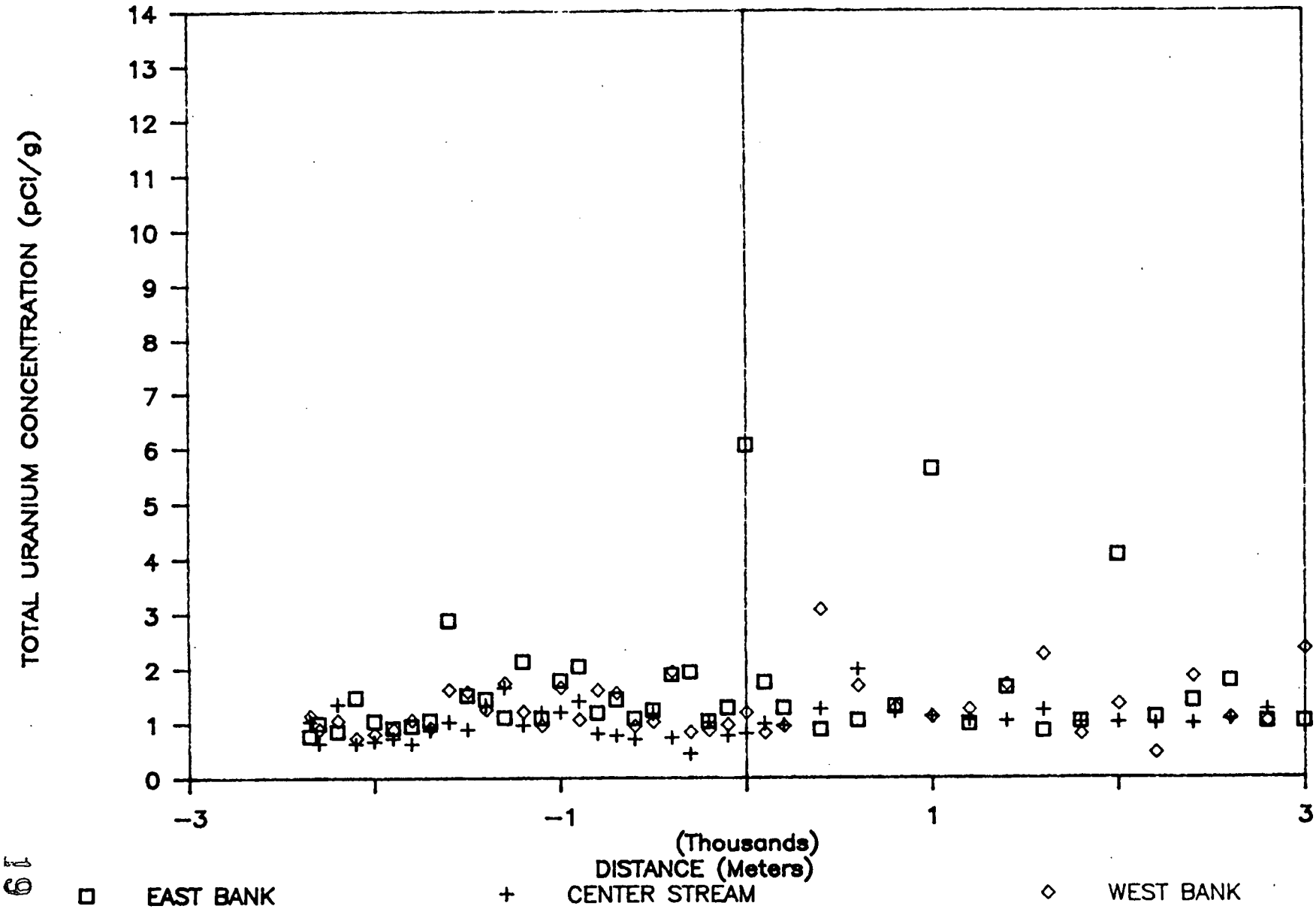
# FMPC STORM SEWER OUTFALL DITCH

1987 Sediment Sampling Data



# PADDY'S RUN SEDIMENT SAMPLING

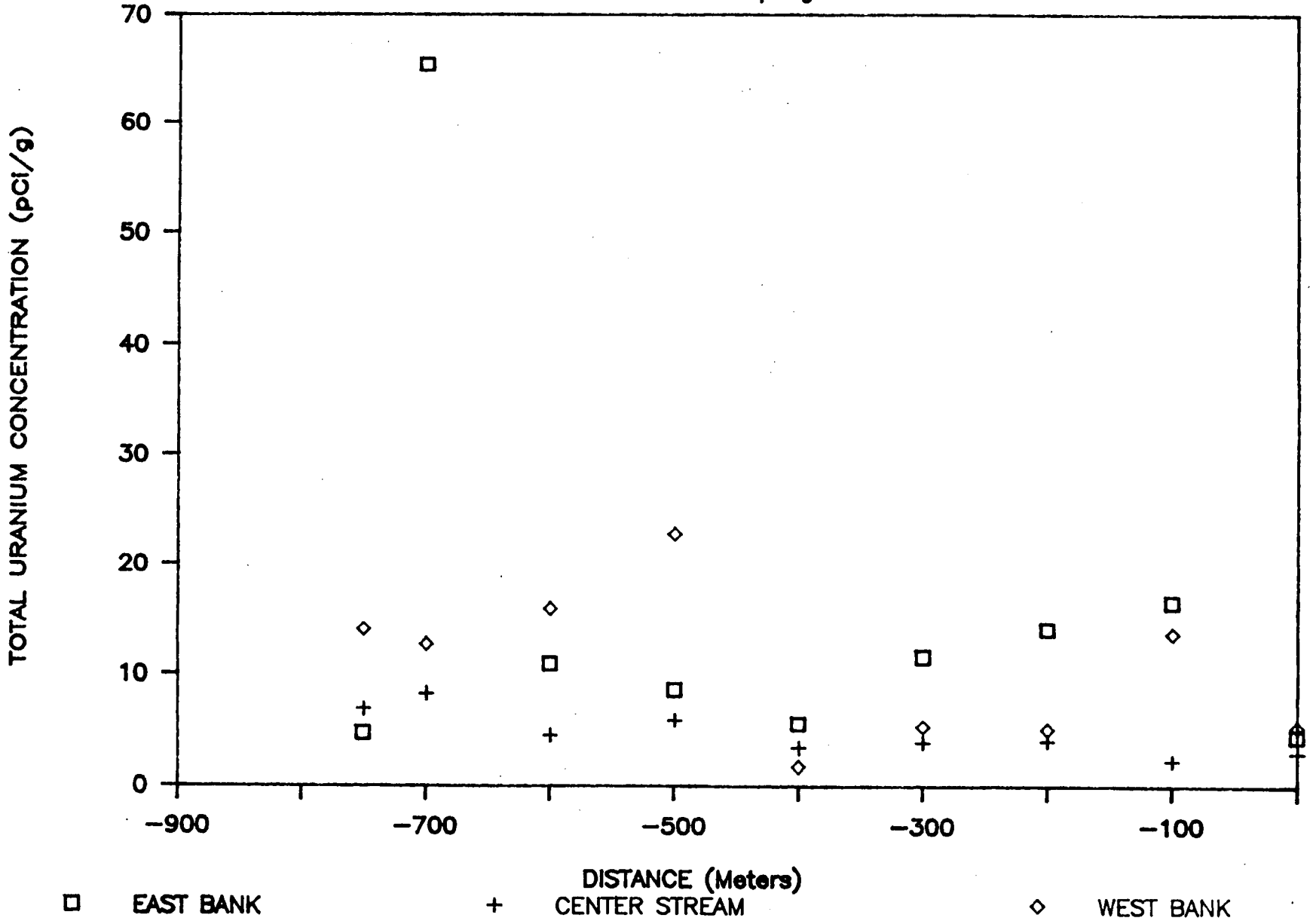
1988 DATA




2440

# FMPC STORM SEWER OUTFALL DITCH

1988 Sediment Sampling Data




2440

ATTACHMENT V

SEDIMENT SAMPLING ALONG THE FMPC STORM SEWER OUTFALL DITCH

1987

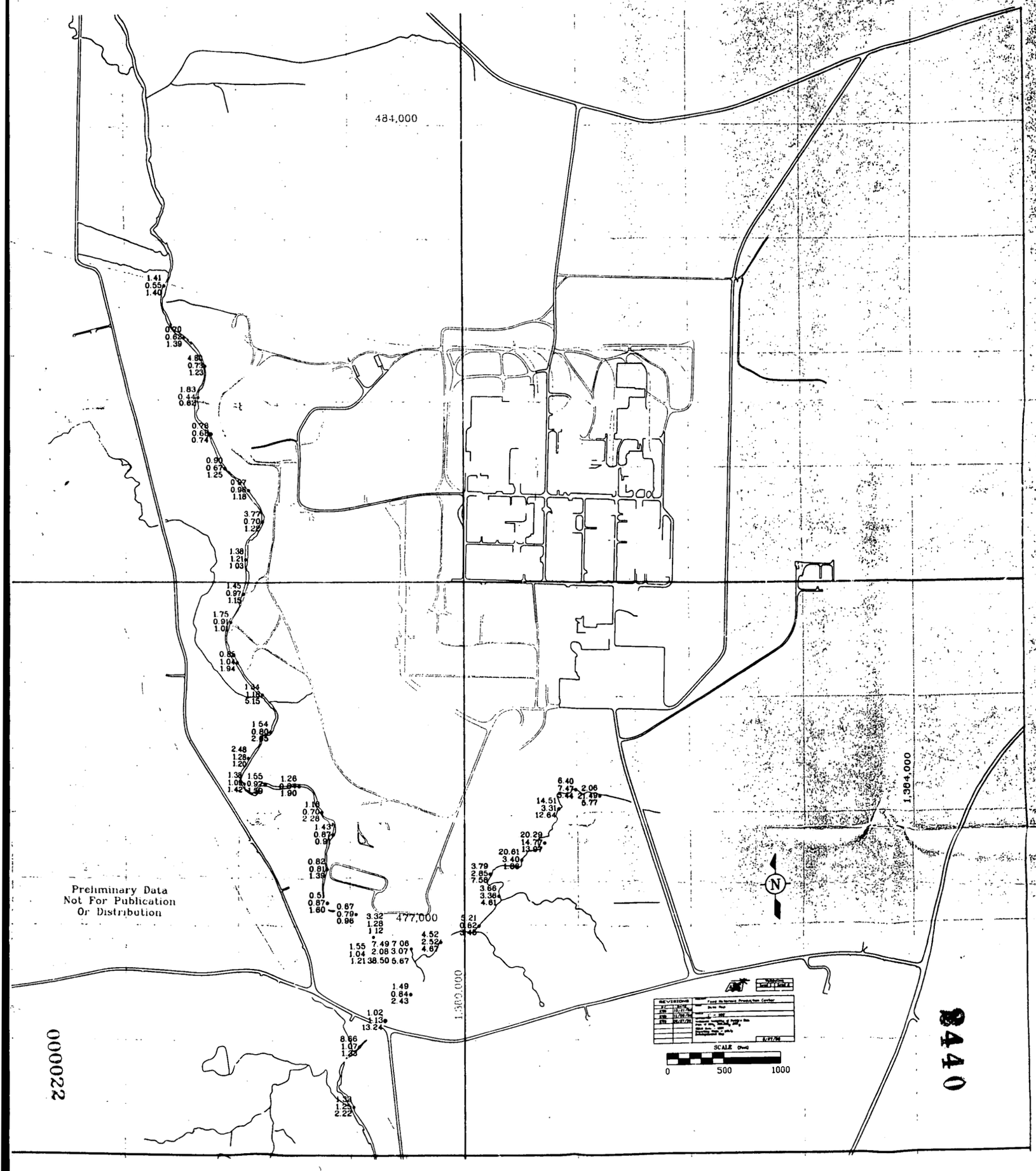
| DISTANCE FROM 0 (meters)* | LOCATION W/REF TO STREAM | TOTAL U CONC (pCi/g) |
|---|---|---|
| -875 | E | 2.06 |
| -800 | E | 6.40 |
| -700 | E | 14.51 |
| -600 | E | 20.29 |
| -500 | E | 20.61 |
| -400 | E | 3.79 |
| -300 | E | 3.66 |
| -200 | E | 5.21 |
| -90 | E | 4.52 |
| 0 | E | 7.06 |
| -875 | M | 21.49 |
| -800 | M | 7.47 |
| -700 | M | 3.31 |
| -600 | M | 14.77 |
| -500 | M | 3.40 |
| -400 | M | 2.85 |
| -300 | M | 3.36 |
| -200 | M | 0.82 |
| -90 | M | 2.52 |
| 0 | M | 3.07 |
| -875 | W | 5.77 |
| -800 | W | 5.44 |
| -700 | W | 12.64 |
| -600 | W | 13.97 |
| -500 | W | 1.86 |
| -400 | W | 7.58 |
| -300 | W | 4.61 |
| -200 | W | 3.45 |
| -90 | W | 4.67 |
| 0 | W | 5.67 |

1988

| DISTANCE FROM 0 (meters)* | LOCATION W/REF TO STREAM** | TOTAL U CONC (pCi/g) |
|---|---|---|
| -750 | S | 4.76 |
| -700 | S | 65.41 |
| -600 | S | 10.99 |
| -500 | S | 8.69 |
| -400 | S | 5.61 |
| -300 | S | 11.59 |
| -200 | S | 14.13 |
| -100 | S | 16.63 |
| 0 | S | 4.55 |
| -750 | M | 6.91 |
| -700 | M | 8.28 |
| -600 | M | 4.53 |
| -500 | M | 5.94 |
| -400 | M | 3.45 |
| -300 | M | 3.95 |
| -200 | M | 4.08 |
| -100 | M | 2.32 |
| 0 | M | 3.05 |
| -750 | N | 14.04 |
| -700 | N | 12.66 |
| -600 | N | 15.96 |
| -500 | N | 22.73 |
| -400 | N | 1.73 |
| -300 | N | 5.33 |
| -200 | N | 5.11 |
| -100 | N | 13.70 |
| 0 | N | 5.37 |

* Location 0 is the confluence of Paddy's Run and the FMPC Storm Sewer Outfall Ditch
Negative #s are upstream from location 0
Positive #s are downstream from location 0

** S corresponds to E and N corresponds to W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Or Distribution
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000022

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Not For Publication
Or Distribution
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