130900

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
Daniel C. Marschall
Dr. Robert Doorley
James H. Bevan
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 2/4/81

RE: TCE/PCE & Sodium

We have some good news and some bad news on the TCE/PCE. The good news is that Wells #3, 7, & 16 appear to be improving. Hopefully, it won't be long before I can re-instate Well #7. The bad news is Well #12 with the 4.6ppb TCE.

The sodium column is by special request. Evidently, some of our customers are concerned about the amount of salt used on the Boro streets to control icing conditions. The results for sodium are in ppm rather than ppb and according to Quality Control, EPA has not established an MCL and is possible that they never will. The suggested or recommended maximum level at present is 20ppm. No one is policing the sodium levels. Check Wells #7, 14, 15, 18 & Philadelphia Suburban Water Co. Let's hope they never enforce the 20ppm!!!!

DATE SAMPLE COLLECTED 2/2/81

DATE SAMPLE ANALIZED 2/3/81

LAB QC

Sodium [illegible] HCL [illegible] 20 ppm max

| LOCATION *Indicates over max. | TCE ppb | PCE ppb | [illegible] |
|---|---|---|---|
| Well #1 pump to waste 3 hr prior to sampling | * [illegible] | [illegible] | [illegible] ppm |
| #2 " | * [illegible] | [illegible] | [illegible] ppm |
| #3 | * 6.1 | <.5 | [illegible] ppm |
| #6 | [illegible] | [illegible] | [illegible] |
| #7 pumping to waste since 11/11/80 | [illegible] | [illegible] | [illegible] ppm |
| Creek adjacent to well #7 | [illegible] | [illegible] | |
| #8 | [illegible] | [illegible] | [illegible] |
| #9 | [illegible] | [illegible] | [illegible] ppm |
| #12 | * [illegible] | [illegible] | [illegible] |
| Creek adjacent to well #12 | [illegible] | [illegible] | |
| #13 | <.5 | <.5 | [illegible] ppm |
| #14 pumping to waste since 10/22/80 | * 19.0 | [illegible] | [illegible] ppm |
| #15 | [illegible] | [illegible] | [illegible] ppm |
| #16 pump to waste 3 hr prior to sampling | * 11.2 | * 3.6 | [illegible] |
| #17 pumping to waste since 11/10/80 | * 151 | 2.1 | [illegible] |
| #18 | 2.8 | 0.7 | [illegible] |
| #20 | <.5 | 0.8 | [illegible] |
| #21 | <.5 | <.5 | [illegible] |
| PTWC Quantitation Ltd [illegible] | <.5 | [illegible] | [illegible] |

AR300470

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:
Lou Sayland
Daniel C. Marschall
James H. Bevan
William Kruse
Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 1/22/81

RE: TCE/PCE

Enclosed are results of samples collected January 19, 1981.

There appears to be a healthy decline in TCE contamination in wells 1,2,3 & 17. Well #7 indicated only a slight decline but at least it's going in the right direction. Maybe we're doing something right after all.

I don't like the results of #12 well - it will bear watching. It has been this high and higher in prior months but had hopes that it had settled down. I'll keep you posted.

Well #18 is bouncing around a bit, but this also has occured occasionally in prior months - we'll see.

The sample from the creek at Livingstone Apartments has declined from 2.1 ppb TCE to 0.7 ppb TCE. I have not been informed as to where it's coming from but I have been informed that EPA has it on their agenda to investigate the source.

DATE SAMPLE COLLECTED 1/19/81

DATE SAMPLE ANALIZED 1/21/81

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #1 | pump to waste 3 hr prior to sampling | * 34.3 - | <.5 |
| #2 | " | * 34.3 - | <.5 |
| #3 | " | * 7.2 - | <.5 |
| #6 | | 1.5 | <.5 |
| #7 | pumping to waste since 11/12/80 | * 6.0 - | 0.6 |
| Creek adjacent to well #7 | | * 10.2 | <.5 |
| #8 | | 3.0 | <.5 |
| #9 | | 2.4 | <.5 |
| #12 | | 4.2 + | <.5 |
| Creek adjacent to well #12 | | * 39.2 | <.5 |
| #13 | | <.5 | <.5 |
| #14 | pumping to waste since 10/22/80 | * 214 | <.5 |
| #15 | | 2.7 | <.5 |
| #16 | pump to waste 3 hr prior to sampling | * 15.0 | * 4.1 |
| #17 | pumping to waste since 11/10/80 | * 157 - | <.5 |
| #18 | | 3.5 + | 0.9 |
| #20 | | <.7 | 2.5 |
| #21 | | <.5 | |
| PSNC | Orancement's Rd Fire Hydrant | <.5 | <.5 |

AR300472

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Date Submitted: Jan. 5, 1981
Date Reported: Jan. 9, 1981

cc: Norristown - DER
Robert D. Gilmore & Assoc.

Hatboro Borough Water Authority
120 E. Montgomery Avenue
Hatboro, Pa. 19040

Att: Mr. Newton Finney

| Sample | QC # | TCE ppb | PCE mg/l |
|---|---|---|---|
| Well #1 | 1285 | 43.5 | <0.5 |
| Well #2 | 1286 | 52.9 | <0.5 |
| Well #3 | 1287 | 8.3 | <0.5 |
| Well #6 | 1288 | <0.5 | <0.5 |
| Well #7 | 1289 | 6.2 | 0.9 |
| Well #8 | 1290 | 3.1 | <0.5 |
| Well #9 | 1291 | 1.0 | <0.5 |
| Well #12 | 1292 | 3.1 | <0.5 |
| Well #13 | 1293 | <0.5 | <0.5 |
| Well #14 | 1294 | 194. | 0.6 |
| Well #15 | 1295 | 1.0 | <0.5 |
| Well #16 | 1296 | 13.0 | 4.1 |
| Well #17 | 1297 | 353. | 6.3 |
| Well #18 | 1298 | 2.6 | 1.4 |
| Well #20 | 1299 | <0.5 | 2.0 |
| Well #21 | 1300 | <0.5 | <0.5 |

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| Creek, County Line, Livingstone Apts. | 1301 | 2.1 | <0.5 |
| Creek adjacent to Well #7 | 1302 | 12.4 | <0.5 |
| Creek adjacent to Well #12 | 1303 | 45.6 | <0.5 |
| PSW Co., Orangemans Road, Fire Hydrant | 1304 | <0.5 | <0.5 |

Q C INC. A. F. Zimmermann

AR300473

jsl

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James Bevan
Daniel Marschall
Dr. Robert Doorley
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 1/8/81

RE: TCE/PCE

Enclosed are results of samples collected on January 5, 1981.

I have nothing outstanding to report on these results. The figures speak for themselves. #7 Well has not improved as predicted, if you recall, I had hopes that by pumping Wells #14 and #17 to waste and lowering the water table, thus increasing the size of the cone of influence, I could correct or improve Well #7 to a point where I could put it back on the line. I'll keep trying for awhile unless you inform me otherwise.

Check last sample on accompanying list -(marked: Creek County Line Rd. Livingstone Apart.). This sample was collected from the stream as it enters the Boro from Warminster Twp. I'm in the process of attempting to persuade EPA to locate the source of contamination - I'll keep you informed.

DATE SAMPLE COLLECTED 1/5/81

DATE SAMPLE ANALIZED 1/8/81

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| well #1 | pump to waste 3 hr prior to sampling | *43.5 | <.5 |
| #2 | " | *52.9 | <.5 |
| #3 | | *8.3 | <.5 |
| #6 | | <.5 | <.5 |
| #7 | pumping to waste since 11/12/80 | *6.2 | 0.9 |
| Creek adjacent to well #7 | | *12.4 | <.5 |
| #8 | | 3.1 | <.5 |
| #9 | | 1.0 | <.5 |
| #12 | | 3.1 | <.5 |
| Creek adjacent to well #12 | | *45.6 | <.5 |
| #13 | | <.5 | <.5 |
| #14 | pumping to waste since 10/22/80 | *194 | 0.6 |
| #15 | | 1.0 | <.5 |
| #16 | pump to waste 3 hr prior to sampling | *13.0 | *14.1 |
| #17 | pumping to waste since 11/10/80 | *353 | *6.3 |
| #18 | | 26 | 1.4 |
| #20 | | <.5 | 2.0 |
| #21 | | <.5 | <.5 |
| PSWCO - | Okanogan's Rd Fire Hydrant | <.5 | <.5 |

AR300475

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, PA 19040

Attn: Mr. C. Newton Finney, Supt.

Sampled: 12/23/80
Reported: 1/08/ 81
c.c.: Norristown/
Robt. Gilmore Assoc.

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #1 | 1244 | 56. | 0.65 |
| 2 | 1245 | 20.2 | <0.5 |
| 3 | 1246 | 19.2 | <0.5 |
| 6 | 1247 | 0.94 | <0.5 |
| 7 | 1248 | 6.1 | 0.9 |
| 8 | 1249 | 3.3 | <0.5 |
| 9 | 1250 | 1.9 | <0.5 |
| 12 | 1251 | 3.8 | <0.5 |
| 13 | 1252 | 0.65 | <0.5 |
| 14 | 1253 | 71.9 | 1.6 |
| 15 | 1254 | 1.5 | <0.5 |
| 16 | 1255 | 16.2 | 4.6 |
| 17 | 1256 | 341. | 6.3 |
| 18 | 1257 | 3.1 | 2.9 |
| 20 | 1258 | <0.5 | 1.5 |
| 21 | 1259 | <0.5 | <0.5 |

lei

QC INC. Robert F. Zimmermann

AR300476

(215) 673-4900
355-3900

QUALITY CONTROL LABORATORY DIVISION
1205 Industrial Highway, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, PA 19040

Attn: Mr. C. Newton Finney, Supt.

Sampled: 12/23/80
Reported: 1/08/ 81

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| Creek Adjacent to Well 7 | 1260 | 3.8 | 0.86 |
| Creek Adjacent to well 12 | 1261 | 44.7 | <0.5 |
| PSW Co.: | 1262 | <0.5 | <0.5 |

| | |
|---|---|
| Chloroform | 16.5 |
| Bromodichloroform | 19.7 |
| Dibromochloroform | 18.5 |
| Bromoform | 10.5 |

lei

EPA Standards

| | |
|---|---|
| TCE | 4.5 ppb |
| PCE | 3.55 ppb |

A. F. Zimmermann

QC INC. AR300477

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse
Dr. Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 12/29/80

RE: TCE/PCE

Enclosed are results of samples collected 12/22/80.

Well #7 appears to be improving even though the stream adjacent is contaminated with a TCE level of 3.9 PPB. This stream contamination could be primarily present because of the fact that we are pumping well #17 to waste up-stream from well #7. To partially confirm this theory (with the next batch of regular samples), I plan on sampling the same stream as it enters the Boro from Warminster township. If the stream is clean at that point, well #17 could be (just theory) adding to the contamination of well #7.

Possibly the same problem exists with well #12. Well #14 is being pumped to waste up-stream from #12. As you can see from the accompanying sheet, the creek adjacent to #12 is up to 44.7 PPB.

The results of #14 well are questionable. On occasion it is very difficult to acquire a good typical sample with no air bubbles. This could be the reason for the unusually low contamination.

DATE SAMPLE COLLECTED 12/22/80

DATE SAMPLE ANALIZED 12/24/80

LAB GC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb | THM |
|---|---|---|---|---|
| well #1 | pump to waste 3 hr prior to sampling | * 56 | 0.7 | |
| #2 | " | * 20.2 | <.5 | |
| #3 | " | * 19.2 | <.5 | |
| #6 | | 0.9 | <.5 | |
| #7 | pumping to waste since 11/12/80 | * 6.1 | 0.9 | |
| Creek adjacent to well #7 | | 3.9 | 0.9 | |
| #8 | | 3.3 | <.5 | |
| #9 | | 1.9 | <.5 | |
| #12 | | 3.8 | <.5 | |
| Creek adjacent to well #12 | | * 41.7 | <.5 | |
| #13 | | 0.7 | <.5 | |
| #14 | pumping to waste since 10/22/80 | * 72 | 1.6 | |
| #15 | | 1.5 | <.5 | |
| #16 | pump to waste 3 hr prior to sampling | * 16.2 | * 4.6 | |
| #17 | pumping to waste since 11/10/80 | * 341 | * 6.3 | |
| #18 | " | 3.1 | 2.9 | |
| #20 | | <.5 | 1.5 | |
| #21 | | <.5 | <.5 | |
| PSWC - Orangeman's Rd Fire Hydrant. | | <.5 | <.5 | 65.2 See attached |

AR300479

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Avenue
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney

## BACTERIOLOGICAL WATER ANALYSIS REPORT

date sampled: Dec. 12, 1980
date tested: Dec. 13, 1980
date reported: Dec. 16, 1980
sampled by: Deliv.
frequency:
copies to: DER-Norristown
Robert D. Gilmore & Assoc.

| SAMPLE | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE ppb | PCE ppb | | |
|---|---|---|---|---|---|---|---|
| Well #15 (QC #1160) | | | | 2.0 | <0.5 | | |
| Well #16 (QC #1161) | | | | 13.1 | 1.7 | | |
| Well #17 (QC #1162) | | | | 409. | 7.6 | | |
| Well #18 (QC #1163) | | | | 2.6 | 2.9 | | |
| Well #20 (QC #1164) | | | | 1.3 | 2.1 | | |
| Well #21 (QC #1165) | | | | <0.5 | <0.5 | | |
| PSW Co. (QC #1166) | | | | <0.5 | <0.5 | | |
| | | | | | | | |

Q C INC.

AR300480

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater"

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:
Lou Sayland
Daniel C. Marschall
James H. Bevan
Dr. Robert Doorley
William Kruse

FROM: C. N. Finney, Supt.

DATE: 12/15/80

RE: TCE/PCE

Results Labeled #1

Analysis of Wells #1 thru #14 are questionable, fact is - Quality Control Lab was reluctant to release these results until they had the opportunity to double check their findings. Incidently, this is the reason for the delay in relaying the information to you. As you can see, some results are up, while others show a downward trend. If I could believe these results, I could reinstate #7 Well but would be forced to monitor #12 Well more frequently. Wells #7, 12 & 14 will be resampled this morning and have been promised results this afternoon.

See Sheet #2

Results of samples collected December 12, 1980.

Well #7 has not improved since November 24, 1980. #12 Well bears watching and #14 Well speaks for itself.

ATTN: [illegible]

#1

DATE SAMPLE COLLECTED 12 | 8 | 80

DATE SAMPLE ANALIZED 12 | 11 | 80

[illegible]

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #1 | pump to waste 2 hr prior to sampling | * 52.3 ↓ | 1.0 ↑ |
| #2 | " | * 10.3 ↓ | <.5 |
| #3 | " | * 59.2 ↑ | 0.6 ↑ |
| #6 | | 1.3 | <.5 |
| #7 | pumping to waste since 11/12/80 | 3.3 ↓ | 0.6 |
| #8 | | 3.3 ↑ | 0.5 |
| #9 | | 2.6 | <0.5 |
| #12 | | * 4.6 ↑ | <.5 |
| #13 | | 1.3 ↑ | <.5 |
| #14 | pumping to waste since 10/27/80 | * 15.3 ↓ | 1.3 ↑ |
| #15 | | 2.0 | <.5 |
| #16 | pump to waste 3 hr prior to sampling | * 13.1 | 1.7 |
| #17 | pumping to waste since 11/13/80 | * 4.9 | * 2.6 |
| #18 | | 2.6 | 2.9 |
| 20 | | 1.3 | 2.1 |
| 21 | | <.5 | <.5 |
| PSLUC = Overseas's Bd Treatment | | <.5 | <.5 |

Possible Drum Disposal

AR300482

DATE SAMPLE COLLECTED 12/12/80 AM

DATE SAMPLE ANALIZED 12/12/80 PM

LAB GC

N/C

| LOCATION | *indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #7 | | * 6.4 | 1.3 |
| Well #12 | WATER UNDEFUNCT | 4.2 | <.5 |
| Well #14 | | * 172 | 0.7 |

AR300483

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:
Lou Sayland
Daniel C. Marschall
James H. Bevan
Dr. Robert Doorley
William Kruse

FROM: C. N. Finney, Supt.

DATE: 12/15/80

RE: TCE/PCE

Results Labeled #1

Analysis of Wells #1 thru #14 are questionable, fact is - Quality Control Lab was reluctant to release these results until they had the opportunity to double check their findings. Incidently, this is the reason for the delay in relaying the information to you. As you can see, some results are up, while others show a downward trend. If I could believe these results, I could reinstate #7 Well but would be forced to monitor #12 Well more frequently. Wells #7, 12 & 14 will be resampled this morning and have been promised results this afternoon.

See Sheet #2

Results of samples collected December 12, 1980.

Well #7 has not improved since November 24, 1980. #12 Well bears watching and #14 Well speaks for itself.

DATE SAMPLE COLLECTED 12 | 8 | 80

DATE SAMPLE ANALYZED 12 | 11 | 80

LAB [illegible]

#1

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| [illegible] #1 | pump to waste 2 hr prior to sampling | * 52.3 ↓ | 1.0 ↑ |
| #2 | " | * 10.3 ↓ | <.5 |
| #3 | " | * 59.2 ↑ | 0.6 ↑ |
| #6 | | 1.3 | <.5 |
| #7 | pumping to waste since 11/12/80 | 3.3 ↓ | 0.6 |
| #8 | | 3.3 ↑ | 0.5 |
| #9 | | 2.6 | <0.5 |
| #12 | | * 4.6 ↑ | <.5 |
| #13 | | 1.3 ↑ | <.5 |
| #14 | pumping to waste since 10/27/80 | * 15.3 ↓ | 1.3 ↑ |
| #15 | | 2.0 | <.5 |
| #16 | pump to waste 3 hr prior to sampling | * 13.1 | 1.7 |
| #17 | pumping to waste since 11/10/80 | * [illegible] | * 2.6 |
| #18 | | 2.6 | 2.9 |
| 20 | | 1.3 | |
| 21 | | <.5 | <.5 |
| PSLUC - Orangeburg's Pd [illegible] | | <.5 | <.5 |

RESIDUE DURING PUMPING

AR300485

DATE SAMPLE COLLECTED 12/12/80 AM

DATE SAMPLE ANALIZED 12/12/80 PM

GC

N/C

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #7 | | * 6.4 | 1.3 |
| Well #12 | WATCH CAREFULLY | 4.2 | <.5 |
| Well #14 | | * 172 | 0.7 |

AR300486

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse
Dr. Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 12/2/80

RE: TCE/PCE

Enclosed are results of samples collected November 24, 1980.

If I could draw any conclusions from these results, my first reactions would be that by pumping Wells #14 and 17 to waste, we are improving Well #7 - Hopefully this is fact, we shall see.

Well #12 is on the way up, this needs some watching.

Well #17 is being pumped to waste 24 hr./day since November 10, 1980 and has consequently lost 45' of cover. If you recall, as the water level decreases in this well the TCE level increases. TCE is heavier than water and has a tendency to be more prominent at the lower levels. On December 8, 1980, duplicate samples will be collected.

DATE SAMPLE COLLECTED 11/24/80

DATE SAMPLE ANALIZED 11/26/80

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #1 | pump to waste 3 hr prior to sampling | * 76.2 | <1.5 |
| #2 | " | * 25.2 | <1.5 |
| #3 | " | * 24.8 | <1.5 |
| #6 | | 1.7 | <1.5 |
| #7 | pumping to waste since 11/12/80 | * 6.3 | 0.8 |
| #8 | | 2.8 | <1.5 |
| #9 | | 2.1 | <1.5 |
| #12 | | 3.8 | <1.5 |
| #13 | | 0.7 | <1.5 |
| #14 | pumping to waste since 10/22/80 | * 214 | 0.9 |
| #15 | | 1.5 | <1.5 |
| #16 | pump to waste 3 hr prior to sampling | * 19.1 | * 4.6 |
| #17 | pumping to waste since 11/10/80 | * 419 | * 7.5 |
| #18 | | 2.2 | 2.4 |
| #20 | | 1.5 | 2.0 |
| #21 | | <1.5 | <1.5 |
| PSWC. - Orangeman's Rd Fire Hydrant | | <1.5 | <1.5 |

AR300488

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney, Supt.

BACTERIOLOGICAL WATER ANALYSIS REPORT

date sampled ~~11-24-80~~
date tested ~~XXXX 12-2-80~~
date reported ~~12-2-80~~
sampled by
frequency
copies to ~~Norristown~~
~~Robert D. Gilmore & Assoc.~~

| SAMPLE Water Samples | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE/ppb | PCE/ppb | | |
|---|---|---|---|---|---|---|---|
| Well #1(QC #1075) | | | | 76.2 | <0.5 | | |
| Well #2(QC #1076) | | | | 25.2 | <0.5 | | |
| Well #3(QC #1077) | | | | 24.8 | <0.5 | | |
| Well #6(QC #1078) | | | | 1.7 | <0.5 | | |
| Well #7(QC #1079) | | | | 6.3 | 0.8 | | |
| Well #8(QC #1080) | | | | 2.8 | <0.5 | | |
| Well #9(QC #1081) | | | | 2.1 | <0.5 | | |
| Well #12(QC #1082) | | | | 3.8 | <0.5 | | |
| Well #13(QC #1083) | | | | 0.7 | <0.5 | | |
| Well #14(QC #1084) | | | | 214. | 0.9 | | |

Q C INC.

**EPA Maximum Standards**

TCE-4.5ppb
PCE-3.55ppb

AR300489

cdj

Albert F. Zimmermann

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater"
Approved for the bacteriological examination of water by the Pennsylvania Department of Health, Certificate 1-38B

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney, Supt.

BACTERIOLOGICAL WATER ANALYSIS REPORT

date sampled 11-24-80
date tested 12-2-80
date reported 12-2-80
sampled by
frequency
copies to Norristown
Robert D. Gilmore & Assoc.

| SAMPLE<br>Water Samples | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE/ppb | PCE/ppb | | |
|---|---|---|---|---|---|---|---|
| Well #15(QC #1085)<br>Well #16(QC #1086) | | | | 1.5<br>19.1 | <0.5<br>4.6 | | |
| Well #17(QC #1087)<br>Well #18(QC #1088) | | | | 419.<br>2.2 | 7.5<br>2.4 | | |
| Well #20(QC #1089)<br>Well #21(QC #1090) | | | | 1.5<br><0.5 | 2.0<br><0.5 | | |
| PSW Co. Hydrant-Orangeman Rd.<br>[redacted] | | | | <0.5 | <0.5 | | |
| | | | | | | | |

Q C INC.

EPA Maximum Standards

TCE-4.5ppb
PCE-3.55ppb

cdj

AR300490

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater"
Approved for the bacteriological examination of water by the Pennsylvania Department of Health. Certificate L-38B

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse
Dr. Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 11/20/80

RE: TCE/PCE

Enclosed are results of samples collected November 13, 1980.

As anticipated, by taking Well #7 off the line, we have cleaned up the distribution system in the vicinity of Well #7. All results indicate that we are maintaining the contamination level below the recommended maximum. #7 Well with 7ppb TCE is still too high but appears that by pumping 24 hr./day, it has improved to a certain degree. #14 and #17 Wells are still pumping to waste, hopefully this procedure will aide in the clean-up process also.

Well #18 is still running slightly on the high side (PCE). Additional sampling will be conducted.

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney, Supt.

BACTERIOLOGICAL WATER ANALYSIS REPORT

| | |
|---|---|
| date sampled | 11-21-80 |
| date tested | 11-22-80 |
| date reported | 11-22-80 |
| sampled by | |
| frequency | |
| copies to | Morristown<br>Robert D. Gilmore & Assoc., |

| SAMPLE<br>Water Samples | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE/ppb | PCE/ppb | | |
|---|---|---|---|---|---|---|---|
| 14(QC #963)<br>15(QC #964) | | | | 209<br>1.7 | 0.9<br><0.5 | | |
| 16(QC #965)<br>17(QC #966) | | | | 22.4<br>184.6 | 4.9<br>5.2 | | |
| 18(QC #967)<br>20(QC #968) | | | | 1.0<br><0.5 | 3.0<br>0.6 | | |
| 21(QC #969)<br>Eaton Park Ser.(QC #970) | | | | <0.5<br>6.2 | <0.5<br>0.9 | | |
| PSW Co. (QC #971)<br>Eato n Park(QC #1010) | | | | <0.5<br>2.1 | <0.5<br>2.1 | | |

Q C INC.

cdj

AR300492

DATE SAMPLE COLLECTED 11/10/80

DATE SAMPLE ANALIZED 11/12/80

LAB GC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #1 | pump to waste 3 hr prior to sampling | *75.6 | 0.8 |
| #2 | " | *44.2 | <.5 |
| #3 | " | *13.1 | <.5 |
| #6 | | 1.4 | <.5 |
| #7 | | *7.3 | 1.2 |
| #8 | | 2.8 | <.5 |
| #9 | | 1.7 | <.5 |
| #12 | | 3.3 | <.5 |
| #13 | | <.5 | <.5 |
| #14 | pumping to waste since 10/22/80 | *209 | 0.9 |
| #15 | | 1.7 | <.5 |
| #16 | pump to waste 3 hr prior to sampling | *22.4 | *4.9 |
| #17 | START pumping to waste 24 hr/day 11/10/80 | *184.6 | *5.2 |
| #18 | | 1.0 | 3.0 (close) |
| #20 | | <0.5 | 0.4 |
| #21 | | <0.5 | <0.5 |
| PSWC. - Orangewood's Pd Fire Hydrant | | <.5 | <.5 |

AR300493

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

[illegible] Authority
[illegible] Montgomery Ave.
[illegible]
Att: Mr. C. Newton Finney, Supt.

BACTERIOLOGICAL WATER ANALYSIS REPORT

date sampled [illegible]
date tested [illegible]
date reported [illegible]
sampled by
frequency
copies to Finnstown
Robert D. Gilmore & Assoc.

| SAMPLE | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE/ppb | PCE/ppb | | |
|---|---|---|---|---|---|---|---|
| Water Samples | | | | | | | |
| ~~Well #15(QC #860)~~ | | | | 1.1 | <0.5 | | |
| Well #16(QC #861) | | | | 19.3 | 3.4 | | |
| Well #17(QC #862) | | | | 162. | 4.2 | | |
| Well #18(QC #863) | | | | 0.7 | 3.5 | | |
| Well #20(QC #864) | | | | <0.5 | <0.5 | | |
| Well #21(QC #865) | | | | <0.5 | <0.5 | | |
| PSW Co. (QC #866) | | | | <0.5 | <0.5 | | |
| (QC #867) Eaton Park Service | | | | 1.0 | 1.0 | | |

Q C INC.

AR300494

cdj

[illegible]

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater" [illegible] for the bacteriological examination of water by the Pennsylvania Department of Health, Certificate L-39B

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse
Dr. Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 10/30/80

RE: TCE/PCE

Well #7 is progressively on the way up. Looking back in the records, this increase has occurred previously but after two to three weeks has simmered down to where it was acceptable. This time - no such luck. The sample collected from Eaton Park service is in the near vicinity of Well #7 and as you can see, is suprisingly low. WHY? Three possibilities:

#1 Flow from #7 well is in a westerly direction on West Moreland Ave. (Away from Eaton Park Service)

#2 Eaton Park service (sampling point) is approximately 100' set back from distribution main, possibly the service line was not flushed long enough to get a true reading.

#3 There is enough mixing to reduce the amount of contamination. (I don't believe this possibility)

Additional sampling in the vicinity of Well #7 will be conducted today (10/30/80).

Namely:

2 Fire Hydrants on West Moreland Ave.
1 " " " Robin Road
1 " " " Mallard Road
2 " " " W. Monument Ave.
1 " " " Broad Street
Eaton Park service (Flush 30 minutes prior to sampling)

Well #18 (PCE) is borderline once again. If you recall, the recommended max contaminate level set by EPA is 3.55 ppb. This well is scheduled for resampling today.

I'll keep you posted. Incidently, I'm open for suggestions.

DATE SAMPLE COLLECTED 10/27/80

DATE SAMPLE ANALIZED 10/29/80

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| well #1 | pump to waste 3 hr prior to sampling | *76.3 | 1.6 |
| well # 2 | " | *47.2 | .6 |
| well # 3 | " | *15.5 | <.5 |
| well # 6 | | 1.8 | <.5 |
| well # 7 | | *7.8 | 1.2 |
| well # 8 | | 2.8 | <.5 |
| well # 9 | | 1.1 | <.5 |
| well # 12 | | 2.8 | <.5 |
| well # 13 | | <.5 | <.5 |
| well # 14 | pumping to waste since 10/22/80 | *216 | 0.5 |
| well # 15 | | 1.1 | <.5 |
| well # 16 | | *19.3 | 3.4 |
| well # 17 | " | *162 | *42 |
| well # 18 | | 0.7 | 3.5 (too close for comfort) |
| well # 20 | | <.5 | <.5 |
| well # 21 | | <.5 | <.5 |
| PSWC - | Oranckman's Rd Fire Hydrant | <.5 | <.5 |

AR300496

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

OCT 28 REC'D

Hatboro Borough Authority
120 E. Montgomery Ave.
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney, Supt.

## BACTERIOLOGICAL WATER ANALYSIS REPORT

| | |
|---|---|
| date sampled | 10-14-80 |
| date tested | 10-17-80 |
| date reported | 10-20-80 |
| sampled by | |
| frequency | |
| copies to | Norristown |
| | Robert D. Gilmore Assoc. |

| SAMPLE Water Samples | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE/ppb | PCE/ppb | | |
|---|---|---|---|---|---|---|---|
| 1 (QC #740)<br>2 (QC #741) | | | | 71.6<br>49.9 | <0.5<br><0.5 | | |
| 3 (QC #742)<br>6 (QC #743) | | | | 17.6<br>2.0 | <0.5<br><0.5 | | |
| 7 (QC #744)<br>8 (QC #745) | | | | 7.5<br>2.7 | 1.2<br><0.5 | | |
| 9 (QC #746)<br>12 (QC #747) | | | | 1.4<br>2.6 | <0.5<br><0.5 | | |
| 13 (QC #748)<br>14 (QC #749) | | | | <0.5<br>293. | <0.5<br><0.5 | | |

Q C INC.

**EPA Maximum Standards**

TCE-5.5ppb
PCE-3.55ppb

odj

AR300497

Robert F. Zimmermann

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater"
Approved for the bacteriological examination of water by the Pennsylvania Department of Health, Certificate 1-388

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 E. Montgomery Ave.
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney, Supt.

BACTERIOLOGICAL WATER ANALYSIS REPORT

| | |
|---|---|
| date sampled | 10-14-80 |
| date tested | 10-17-80 |
| date reported | 10-20-80 |
| sampled by | |
| frequency | |
| copies to | Norristown<br>Robert D. Gilmore Assoc. |

| SAMPLE<br>Water Samples | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE/ppb | PCE/ppb | | |
|---|---|---|---|---|---|---|---|
| 15 (QC #750)<br>16 (QC 751) | | | | 1.4<br>19.1 | <0.5<br>3.3 | | |
| 17 (QC #752)<br>18 (QC #853) | | | | 75.<br>0.7 | 2.9<br>0.8 | | |
| 20 ( QC #754)<br>21 (QC #755) | | | | <0.5<br><0.5 | 1.0<br><0.5 | | |
| PSW CO. (QC #756) | | | | <0.5 | <0.5 | | |
| | | | | | | | |

Q C INC.

**EPA Maximum Standards**

TCE-4.5ppb
PCE-3.55ppb

cdj

AR300498

Albert F. Zimmermann

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater"
Approved for the bacteriological examination of water by the Pennsylvania Department of Health, Certificate 1-38B

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
Dr. Robert Doorley
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 10/16/80

RE: TCE/PCE

Enclosed are results of samples collected on October 13, 1980.

As you will note, Well #7 is above the recommended max once again with 7.5 ppb TCE. Upon checking recent results, you will notice that Well #7 was high on sample collected September 2, 1980 (5.3 ppb TCE) and also high on sample collected September 8, 1980 (5.9 ppb TCE) and again high on sample collected on September 11, 1980 (4.7 ppb TCE), but indicating a downward trend. On September 15, 1980 Well #7 was below the recommended max TCE (4.2 ppb). Well #7 is constantly on the borderline and requires very close monitoring, consequently will be resampled today, results should be available tomorrow (10/17/80).

Well #14 (TCE) is on the way UP, fact is - it just about went off the recording chart. Reason: Unknown.

I'll keep you posted.

SAMPLES COLLECTED BY R. TROUT

| FROM | TIME | TO |
|---|---|---|
| H.B.A. | 3:15 | Q.C. Lab |
| | | [illegible] |

DATE SAMPLE COLLECTED 10/13/80

DATE SAMPLE ANALIZED 10/15/80

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #1 | Pump 3 hr prior to sampling | * 71.6 | <.5 |
| 2 | " | * 49.9 | <.5 |
| 3 | " | * 17.6 | <.5 |
| 6 | | 2.0 | <.5 |
| 7 | | * 7.5 | 1.2 |
| 8 | | 2.7 | <.5 |
| 9 | | 1.4 | <.5 |
| 12 | | 2.6 | <.5 |
| 13 | | <.5 | <.5 |
| 14 | " | * 293 | <.5 |
| 15 | | 1.4 | <.5 |
| 16 | " | * 19.1 | 3.3 |
| 17 | " | * 75.0 | 2.9 |
| 18 | | 0.7 | 0.8 |
| 21 | | <.5 | 1.0 |
| 31 | | <.5 | <.5 |
| PSWC | hydrant Oakleson's Rd | <.5 | <.5 |

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSborne 5-1633
OSborne 5-1634

MEMO TO ALL BOARD MEMBERS: Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse
Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 10/6/80

RE: TCE/PCE

I must be honest - sometimes the results received baffle the mind. Hopefully, when we sample all sources again on 10/13/80, we will be back to normal.

DATE SAMPLE COLLECTED 9/29/80

DATE SAMPLE ANALIZED 10/3/80

LAB QC

| DATE | TIME | FROM | TO |
|---|---|---|---|
| 9/29/80 | 3:10 P.M. | HATBORO BORO AUTH | J. Smith & Co. INC |
| | | | |

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #1 | Pump 3 hr prior to sampling | *59 | .6 |
| 2 | " | *70 | .8 |
| 3 | " | *13 | .6 |
| 6 | | 1.7 | .8 |
| 7 | | 3.5 | 3.1 |
| 8 | | 3.5 | 1.4 |
| 9 | | <.5 | <.5 |
| 12 | | 2.9 | 3.5 |
| 13 | | <.5 | 2.1 |
| 14 | " | *260 | *4.1 |
| 15 | | 1.7 | .6 |
| 16 | " | *15.7 | 3.2 |
| 17 | " | *243 | *5.7 |
| 18 | | <.5 | 2.6 |
| 20 | | <.5 | BR800502 |
| 21 | | <.5 | <.5 |
| PSW Co | Hyderant Onnicamen's Rd | <.5 | <.5 |

(215) 673-4900
355-3900

QUALITY CONTROL LABORATORY
1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, PA 19040

Attn: Mr. C. Newton Finney, Supt.

Date Sampled: Sept. 15, 1980
Date Reported: Sept. 29, 1980
c.c.: Norristown/ Gilmore & Assoc.

| SAMPLE | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #21 | 490 | 0.6 | 0.6 |
| PSW Co. | 491 | 0.6 | 1.0 |
| Well #18 | 492 | 0.6 | 1.8 |
| Well #13 | 493 | 0.6 | 0.7 |
| #14 | 494 | 151 | 1.2 |
| #6 | 495 | 1.2 | 0.6 |
| #7 | 496 | 4.2 | 1.5 |
| #3 | 497 | 10.1 | 0.8 |
| #17 | 498 | 46.8 | 2.4 |
| #12 | 499 | 3.0 | 0.9 |
| #2 | 500 | 31.0 | 1.1 |
| #16 | 501 | 16.0 | 3.9 |
| #15 | 502 | 1.2 | 0.8 |
| #20 | 503 | 0.6 | 1.7 |
| #8 | 504 | 1.8 | 1.1 |
| #9 | 505 | 1.2 | 0.59 |
| FP #12 | 506 | 355 | 11.7 |
| FP #13 | 507 | 64 | 7.5 |
| Well #1 | 508 | 61 | 1.0 |
| FP #14 | 509 | 19.7 | 15.6 |

AR300503

Safe drinking water standards of 4.5 ppb for TCE and 3.55 ppb for PCE have been established by the EPA.
lei

QC INC. Albert F. Zimmermann

QUALITY CONTROL LABORATORY
INDUSTRIAL HIGHWAY
SOUTHAMPTON, PA. 18966

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, PA 19040

Attn: Mr. C. Newton Finney, Supt.

Sampled: Sept. 3, 1980
Reported: Sept. 19, 1980
c/c.: Norristown/Robt.
Gilmore & Assoc.

RE: Well Samples

| SAMPLE # | TCE ppb | PCE ppb |
|---|---|---|
| 1 | 59 | 0.9 |
| 2 | 43 | 0.9 |
| 3 | 14 | 0.7 |
| 6 | 0.7 | <0.5 |
| 7 | 5.3 | 2.1 |
| 8 | 3.0 | 0.7 |
| 9 | 1.5 | 0.6 |
| 12 | 3.0 | 0.6 |
| 13 | <0.5 | <0.5 |
| 14 | 231 | 1.9 |
| 15 | 1.5 | 1.7 |
| 16 | 20 | 4.7 |
| 17 | 89 | 5.0 |
| 18 | <0.5 | 2.1 |
| 20 | 2.1 | 1.3 |
| 21 | <0.5 | <0.5 |
| PSW Co. | <0.5 | <0.5 |

AR300504

Safe drinking water standards of 4.5 ppb for TCE and 3.55 for PCE have been established by the EPA regulations.

lei

QC INC.

9 22/80 - corrected copy - please note results of TCE for sample #6.

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:
Lou Sayland
James H. Bevan
Daniel C. Marschall
Robert Doorley
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 9/18/80

RE: TCE/PCE

Enclosed are results of samples collected 9/15/80.

Page #1: All wells on line are below the suggested TCE/PCE limits. Wells #1, 2 & 3 fluctuate slightly but generally speaking, do not vary any great amount after pumping a minimum of three (3) hours prior to sampling. Keep in mind that TCE/PCE is heavier than water and will accumulate at the lower depths of the well and surrounding area. When pumping under normal conditions, one could anticipate a much higher amount of contamination because of the cone of influence (the contaminate is actually pulled into the cone).

Wells #14, 16 & 17 are very similar - all three have been idle for some weeks except for pumping three (3) hours prior to sampling every other week. I feel certain that if these wells were pumped normally, the contaminate would be much higher than the present samples indicate. Incidently Fischer & Porter have been pumping two (2) of their wells twenty-four hours per day for some time now. I don't know how many days, weeks or months they have been using this procedure, but if they continue to pump and their wells are deep enough, they could possibly pull the contaminate away from us. This procedure would protect us but in the process lower the water table and possibly cause additional problems.

Page #2: These samples are a duplicate of those collected by SMC Martin (to keep them honest).

Page 1

DATE SAMPLE COLLECTED 9/15/80

DATE SAMPLE ANALIZED 9/18/80

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well 1 | pump 3 hr prior to sampling | * 61.1 | 1.1 |
| " 2 | " | * 30.8 | 1.1 |
| " 3 | " | * 10.1 | .8 |
| " 6 | | 1.2 | .6 |
| " 7 | | 4.2 | 1.5 |
| " 8 | | 1.8 | 1.1 |
| " 9 | | 1.2 | .5 |
| " 12 | | 3.0 | .9 |
| " 13 | | .6 | .7 |
| " 14 | " | * 151 | 1.2 |
| " 15 | | 1.2 | .8 |
| " 16 | " | * 16.0 | * 3.9 |
| " 17 | " | * 46.8 | 2.4 |
| " 18 | | .6 | 1.78 |
| " 20 | | .6 | AR300506 |
| " 21 | | .6 | .6 |
| PSWCo | hydrant Orangeman's RV | .6 | 1.0 |

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, PA 19040

Attn: Mr. C. Newton Finney, Supt.

Sampled: Sept. 3, 1980
Reported: Sept. 19, 1980
c.c.: Norristown/Robt. Gilmore & Assoc.

RE: Well Samples

| SAMPLE # | TCE ppb | PCE ppb |
|---|---|---|
| 1 | 59 | 0.9 |
| 2 | 47 | 0.9 |
| 3 | 14 | 0.7 |
| 4 | [illegible] | <0.5 |
| 5 | 5.3 | 2.1 |
| 8 | 3.0 | 0.7 |
| 9 | 1.5 | 0.6 |
| 12 | 3.0 | 0.6 |
| 13 | <0.5 | <0.5 |
| 14 | 231 | 1.9 |
| 15 | 1.5 | 1.7 |
| 16 | 20 | 4.7 |
| 17 | 89 | 5.0 |
| 18 | <0.5 | 2.1 |
| 20 | 2.1 | 1.3 |
| 21 | <0.5 | <0.5 |
| PSW Co. | <0.5 | <0.5 |

Safe drinking water standards of 4.5 ppb for TCE and 3.55 for PCE have been establi[illegible] by the EPA regulations.

AR300507

lei

QC INC. Albert F. Zimmermann

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
William Kruse
James H. Bevan
Daniel C. Marschall
Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 9/9/80

RE: TCE/PCE

Enclosed are results of samples collected 9/2/80.

Other than wells #1, 2, 3, 14, 16 & 17, we appear to be within the suggested limits except for well #7.

Well #7 is constantly border-line and has been resampled. Results should be available 9/10/80.

DATE SAMPLE COLLECTED 9/2/80

DATE SAMPLE ANALIZED 9/4/80

LAB QC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| well #1 pump 3 hr prior to sampling | * 59 | .9 |
| well #2 " | * 43 | .9 |
| well #3 " | * 14 | .7 |
| well #6 | .7 | <.5 |
| well #7 | * 5.3 | 2.1 |
| well #8 | 3.0 | .7 |
| well #9 | 1.5 | .6 |
| well #12 | 3.0 | .6 |
| well #13 | <.5 | <.5 |
| well #14 " | * 231 | 1.9 |
| well #15 | 1.5 | 1.7 |
| well #16 " | * 20 | * 4.7 |
| well #17 " | * 89 | * 5.0 |
| well #18 | <.5 | 2.1 |
| well #20 | 2.1 | |
| well #21 | <.5 | <.5 |
| PSWCo — Fire Hydrant Orangeman's Rd | <.5 | <.5 |

AR300509

AR300503

(215) 673-4900
355-3900

QUALITY CONTROL LABORATORY
1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

SEP 5 REC'D

Hatboro Borough Authority
120 East Montgomery Avenue
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney, Supt.

BACTERIOLOGICAL WATER ANALYSIS REPORT

date sampled 8-18-80
date tested 8-27-80
date reported 9-4-80
sampled by
frequency
copies to Norristown
Gilmore & Assoc., Inc.

| SAMPLE Water Samples | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE/ppb | PCE/ppb | | |
|---|---|---|---|---|---|---|---|
| Well #14 | | | | 211 | 0.7 | | |
| Well #20 | | | | <.5 | 0.9 | | |
| Well #8 | | | | 2.9 | <.5 | | |
| Well #7 | | | | 5.0 | 0.7 | | |
| Well #16 | | | | 17 | 3.5 | | |
| Well #12 | | | | 4.0 | <.5 | | |
| Well #6 | | | | 1.4 | 0.9 | | |
| | | | | | | | |

Q C INC.

**EPA Maximum Standards**

TCE-4.5ppb
PCE-3.55ppb

edj

AR300510

Albert F. Zimmermann

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater"

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

AUG 22 REC'D

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
William Kruse
James Bevan
Daniel Marschall
Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: August 20, 1980

RE: TCE/PCE

Enclosed are results of samples collected on 8/18/80. Wells #1, 2,3,14,16 & 17 are still running above the maximum recommended contaminate level. Now, we add Well #7 to the list!!! On 8/13/80, we discontinued the practice of pumping well #17 to waste. Hopefully, the contamination at well #17 has not spread to well #7. Well #7 is scheduled to be resampled today, 8/20/80. I'll keep you posted.

Results at well #17 indicate that the TCE is down to 100 PPB (normally in the 400 PPB bracket). I believe the reason for the decline in the amount of TCE contamination is the fact that prior to 8/13/80 we had been pumping well #17 to waste 24 hours per day at approximately 300+ GPM. This procedure lowered the water table in the area and is believed to prevent the contamination from spreading. Now, with well #17 at idle, the contamination is diluting, consequently the lower TCE results.

DATE SAMPLE COLLECTED 8/18/80

DATE SAMPLE ANALIZED 8/30/80

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| Well 1 | pump 3 hr prior to sampling | *62 | <.5 |
| Well 2 | " | *33.5 | .8 |
| Well 3 | " | *15.4 | .8 |
| Well 6 | | 1.4 | .9 |
| Well 7 | | *5.0 | .7 |
| Well 8 | | 2.9 | <.5 |
| Well 9 | | 1.6 | <.5 |
| Well 12 | | 4.0 | <.5 |
| Well 13 | | .8 | <.5 |
| Well 14 | pump 3 hr prior to sampling | *211 | <.7 |
| Well 15 | | 2.2 | <.5 |
| Well 16 | pump 3 hr prior to sampling | *17.0 | 3.5 |
| Well 17 | pump 3 hr prior to sampling | *100 | 2.8 |
| Well 18 | | 1.9 | 3.2 |
| Well 20 | | <.5 | .9 |
| Well 21 | | <.5 | <.5 |
| PSW Co | hydrant Oranceman's Rd | <.5 | <.5 |

AR300512

Schmack

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-163
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James Bevan
William Kruse
Daniel Marschall
Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 8/8/80

RE: TCE/PCE

Enclosed see results of samples collected August 8, 1980. Actually it appears that we are holding our own. Well #7 is slightly high on TCE, but we have seen this fluctuate from time to time. We plan to resample on August 11th.

The sample collected from Phila. Suburban Water Co. for THM analysis indicates that they have made some improvements. It is down to 48.3PPB. If you recall, the last sample was slightly over 80PPB.

DATE SAMPLE COLLECTED 8/4/80

DATE SAMPLE ANALIZED 8/7/80

LAB QC

Total Th. { Dibromochloromethane, Chloroform ★, bromodichloromethane, bromoform } not to exceed 100PPB

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| well 1 pump 3 hr prior to sampling | * 65 | .8 |
| well 2 " | * 35 | .8 |
| well 3 " | * 15.0 | 1.0 |
| well 4 | 0.9 | 1.1 |
| well 7 | * 4.9 | 1.0 |
| well 8 | 1.6 | .6 |
| well 9 | 0.9 | 0.8 |
| well 12 | 3.4 | 1.0 |
| well 13 | <.5 | 0.9 |
| well 14 pump 3 hr prior to sampling | * 203 | 3.2 |
| well 15 | 1.7 | 0.7 |
| well 16 pump 3 hr prior to sampling | * 14.7 | 3.5 |
| well 17 | * 372 | * 5.0 |
| well 18 | 1.6 | 2.1 |
| well 20 | <.5 | 1.0 |
| well 21 | <.5 | <.5 |
| PSWCo — hydrant Ouingemon's Rd | <.5 | .8 |
| | THM | THM |
| | Chloroform 12.3 | Bromo- 1.0 |

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse
Robert Doorley

FROM: C. Newton Finney, Supt.

DATE: 7/29/80

RE: TCE/PCE

Enclosed are results of samples collected 7/28/80. Good news for a change - #7 and 12 wells have improved; consequently will leave #14 well idle. Close monitoring will continue until certain that contamination is not spreading. Additional samples are scheduled for collection on Thursday, July 31st.

DATE SAMPLE COLLECTED 7/28/80

DATE SAMPLE ANALIZED 11/29/80

LAB QC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| Well #7 | 4.2 | .8 |
| Well #9 | 1.4 | .6 |
| Well #12 | 4.2 | <.5 |
| Well #15 | 21 | <.5 |
| Well #16 | *14.0 | *4.2 |
| Well #18 | 1.4 | 1.6 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

AR300516

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, PA 19040

Attn: Mr. C. Newton Finney, Supt.

Date Sampled: July 7, 1980
Date Reported: July 15, 1980
c.c.: Norristown, Glace & Glace, Inc.

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #2 | 6389 | 42.3 | 1.1 |
| PSW Co.-hydrant, Orangeman's Rd. | 6390 | <.5 | 0.7 |
| Well #21 | 6392 | 1.3 | 1.5 |
| Well #7 | 6393 | 3.9 | 1.0 |
| Well #6 | 6394 | 2.0 | 0.9 |
| Well #8 | 6395 | 3.0 | 0.5 |
| Well #20 | 6396 | <.5 | 1.2 |
| Well #17 | 6397 | 471 | 9.2 |
| Well #12 | 6398 | 3.5 | 1.5 |
| Well #9 | 6399 | 1.9 | 0.9 |
| Well #18 | 6400 | 1.8 | 3.2 |
| Well #13 | 6401 | <.5 | 0.8 |
| Well #16 | 6402 | 18.1 | 5.0 |
| Well #14 | 6403 | 228 | 1.5 |
| Well #15 | 6404 | 1.8 | 1.4 |

Safe drinking water standards of 4.5 ppb for TCE and 3.55 ppb for PCE have been established by the EPA.

lei

A. F. Zimmermann
QC IN AR300517

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, PA 19040

Attn: Mr. C. Newton Finney, Supt.

Date Sampled: June 23, 1980
Date Reported: June 27, 1980
Copy to: Norristown

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| #2 Raw Water | 6032 | 34.9 | 0.8 |
| #6 " " | 6033 | 2.4 | 1.2 |
| #7 " " | 6034 | 4.0 | 1.2 |
| #8 " " | 6035 | 3.6 | <.5 |
| #9 " " | 6036 | 1.2 | <.5 |
| #12 " " | 6037 | 2.4 | <.5 |
| #13 " " | 6038 | <.5 | <.5 |
| #14 " " | 6039 | 221 | 0.8 |
| #15 " " | 6040 | <.5 | 0.8 |
| #16 " " | 6041 | 14.5 | 5.7 |
| #17 " " | 6042 | 466 | 4.2 |
| #18 " " | 6043 | 2.4 | 3.6 |
| #20 " " | 6044 | <.5 | 0.8 |
| #21 " " | 6045 | <.5 | <.5 |
| PSWG Hydrant Orangeman's Rd. | 6046 | <.5 | 1.1 |

Albert F. Zimmermann

QC INC.

AR300518

lei

Safe drinking water standards of 4.5 ppb for TCE and 3.55 ppb for PCE have been been established by the EPA regulations.

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, PA 19040
Attn: Mr. C. Newton Finney, Supt.

Sample Date: June 2, 1980
Sample Reported: June 13, 1980
C.C. to Norristown

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #14 | 5506 | 217 | 1.8 |
| Well #2 | 5507 | 3.6 | .6 |
| Well #16 | 5508 | 32.3 | 3.5 |
| Well #13 | 5509 | <.5 | <.5 |
| Well #17 | 5510 | 524 | 4.6 |
| Well #18 | 5511 | 1.6 | 3.3 |
| Well #9 | 5512 | 1.4 | 1.1 |
| Well #8 | 5513 | 5.7 | 1.0 |
| Well #12 | 5514 | 4.0 | <.5 |
| Well #15 | 5515 | 1.1 | <.5 |
| Well #6 | 5516 | 1.2 | <.5 |
| Well #21 | 5517 | <.5 | <.5 |
| Well #20 | 5518 | <.5 | 1.2 |
| Well #7 | 5519 | 3.5 | .9 |
| Hydrant-Orangeman's Rd. & School | 5520 | <.5 | <.5 |

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JUN 16 1980
HATBORO BOROUGH AUTHORITY

A. F. Zimmermann

QC INC. AR300519

lei

Safe drinking water standards of 4.5 ppb for TCE and 3.55 ppb for PCE have been established by the EPA.

DATE SAMPLE COLLECTED 6/2/80

DATE SAMPLE ANALYZED 6/6/80

LAB GC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 [illegible] | 3.6 | 0.6 |
| | 1.2 | <.5 |
| | 3.5 | 0.9 |
| | *5.7 | 1.0 |
| | 1.4 | 1.1 |
| | 4.0 | <.5 |
| | <.5 | <.5 |
| | *217 | 1.8 |
| | 1.1 | <.5 |
| | *32.3 | 3.5 |
| | *524 | *4.6 |
| | 1.6 | 3.3 |
| | <.5 | 1.2 |
| | <.5 | <.5 |
| [illegible] | <.5 | <.5 |

AR300520

DATE SAMPLES COLLECTED 6/23/80

DATE SAMPLES MAILED 6/24/80

LAB CC

| LOCATION | [illegible] | [illegible] |
|---|---|---|
| 1 11 -1 2 | 3.9 | [illegible] |
| " 6 | 3.4 | 3.[illegible] |
| " 7 | 3.0 | [illegible] |
| " 9 | 3.6 | [illegible] |
| " 7 | 1.2 | <.5 |
| " 12 | 3.4 | 4.5 |
| " 13 | <.5 | <.5 |
| " 2 | [illegible] | [illegible] |
| " 15 | <.5 | [illegible] |
| " 16 | 14.5 | 5.7 |
| " 17 | 430.0 | [illegible] |
| " 18 | 2.4 | 3.3 |
| " 20 | <.5 | [illegible] |
| " 21 | <.5 | <.5 |
| NLC Applicant Comment | <.5 | |

AR300521

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse
Robert Doorley

FROM: C. Newton Finney, Supt.
DATE: 7/14/80
RE: TCE/PCE

Enclosed are results of samples collected on 7/7/80. Not much good news - #16 is hanging in there with a fairly low TCE/PCE. Maybe in August when EPA releases the standard MCL, we might be able to put it back on line !!!
The last item on this sheet - PSW Co. THM. The THM are not to exceed 100 PPB. If you will notice, they are getting close.

| | | |
|---|---|---|
| Cloroform | - | 12.0 |
| Bromoform | - | < .5 |
| Bromodichloromethane | - | 57.2 |
| Dibromochloromethane | - | 11.1 |
| Total THM | | 80.8 PPB |

AR300522

DATE SAMPLE COLLECTED 7/7/80

DATE SAMPLE ANALIZED 7-11-80

LAB GC

Total THM { Dibromochloromethane, Chloroform, bromodichloromethane, bromoform } not to exceed 100 PPM

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| Well #2 pump for min 3 hr prior to sampling. | * 42.3 | 1.1 |
| #6 | 2.0 | .9 |
| #7 | 3.9 | 1.0 |
| #8 | 3.0 | .5 |
| #9 | 1.9 | .9 |
| #12 | 3.5 | 1.5 |
| #13 | <.5 | .8 |
| #14 | * 228 | 1.5 |
| #15 | 1.8 | 1.4 |
| #16 - pump for min. 3 hr prior to sampling | * 18.1 | * 5.0 |
| #17 | * 471 | * 9.2 |
| #18 | 1.8 | 3.2 |
| #20 | <.5 | 1.2 |
| #21 | 1.3 | 1.5 |
| PSWC hydrant Ormsbaman's Rd | <.5 | .7 |
| PSWC " " " | THM | THM |
| | Chloroform 12. Bromoform <.5 | Bromo - 57.2 Dibromo - 11.1 |

AR300523

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Avenue
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney, Supt.

## BACTERIOLOGICAL WATER ANALYSIS REPORT

date sampled 5-19-80
date tested 5-20-80
date reported 5-30-80
sampled by
frequency
copies to Norristown
Glace & Glace, Inc.

| SAMPLE<br>Water Samples | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE | PCE | | |
|---|---|---|---|---|---|---|---|
| Well #14(5174) | | | | 174 | 0.8 | ✓ | |
| 52 W. Lehman(5175) | | | | 1.5 | 2.9 | ✓ | |
| Well #16(5176) | | | | 43 | 1.9 | ✓ | |
| Well #13(5177) | | | | <0.5 | <0.5 | ✓ | |
| Fire Hydrant-James & Edwards Road(5178) | | | | 2 | <0.5 | ✓ | |
| Well #9(5179) | | | | 0.8 | <0.5 | ✓ | |
| 12 Belmar Road(5180) | | | | 3.1 | <0.5 | ✓ | |
| Fire Hydrant-A-5 Spring at Pennypack | | | | 0.8 | <0.5 | ✓ | |
| School(5181) | | | | 49.8 | 0.8 | ✓ | |
| Well #2(5182) | | | | 1.7 | <0.5 | ✓ | |
| Well #6(5183) | | | | | | | |

Q C INC.

EPA Maximum Standards

TCE - 4.5ppb
PCE - 3.55ppb

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JUN 3 1980
HATBORO BOROUGH AUTHORITY

Albert F. Zimmermann

AR300524

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater" ... for the bacteriological examination of water by the Pennsylvania Department of Health. Certificate I-388

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 5/22/80

RE: TCE/PCE

Enclosed are results of samples collected on May 19, 1980.

Wells #7 and 8 will be resampled on May 27, 1980 along with the fire hydrant at Home and Bright Roads. Results should be available by the 30th.

Would you believe that EPA has called twice in the last few days. Once to inform me that the thirty (30) plus samples originally scheduled for collection on the 14th - then moved to the 21st, has now been shifted to the 28th, then a few days later, they called back and stated that because their lab is so overloaded, they would have to reschedule at a later date and didn't know exactly when. With this in mind, I questioned EPA on the possibility of conducting the sampling with their assistance but eliminating the use of their laboratory facilities. EPA agreed and we will sample on the 28th of May as previously discussed (two 3 man teams conducting the sampling). That is-if weather permits.

On May 14, 1980, I discontinued the practice of flushing wells #2 and 16 to waste (both pumps are idle now). Consequently, we'll be watching the TCE/PCE results very closely for the next few days. Hopefully, we'll have no ill effects with these two shut down. Wells #14 and 17 are still pumping to waste.

DATE SAMPLE COLLECTED 5/19/80

DATE SAMPLE ANALIZED 5/22/80

LAB QC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 well | * 49.8 | .8 |
| #6 | 1.7 | <.5 |
| #7 | * 6.8 | 2.5 |
| #8 | * 6.2 | .8 |
| #9 | .8 | <.5 |
| #12 | 2.6 | <.5 |
| #13 | <.5 | <.5 |
| #14 | * 174 | .8 |
| #15 | 1.0 | <.5 |
| #16 | * 43 | 1.9 |
| #17 | * 590 | * 3.6 |
| #18 | 1.4 | 3.4 |
| #20 | <.5 | 0.6 |
| #21 | <.5 | .9 |
| 12 Belmont Rd | 3.1 | <.5 |
| Fire Hydrant - Blair Mill + James | 3.2 | .5 |
| Fire Hydrant - James & Edwards | 2.0 | <.5 |
| Fire Hydrant - Horne + Bright | 9.4 | .9 |
| 52 Lehman Ave | 1.5 | 2.9 |
| Fire Hydrant (A5 - Spring at Pennypack School) | .8 | <.5 |

AR300526

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Date Submitted: May 5, 1980
Date Reported: May 13, 1980

Hatboro Borough Authority
120 East Montgomery Avenue
Hatboro, Pa. 19040

Att: Mr. C. Newton Finney

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| Well #2 | 4819 | 60.4 | 6.2 |
| Well #6 | 4820 | 2.0 | 4.2 |
| Well #7 | 4821 | 4.0 | 4.0 |
| Well #8 | 4822 | 3.9 | 4.1 |
| Well #9 | 4823 | <0.5 | 4.4 |
| Well #12 | 4824 | 3.0 | 4.0 |
| Well #13 | 4825 | <0.5 | <0.5 |
| Well #14 | 4826 | 174 | <0.5 |
| Well #15 | 4827 | <0.5 | <0.5 |
| Well #16 | 4828 | 38.3 | 1.9 |
| Well #17 | 4829 | 548 | 7.8 |
| Well #18 | 4830 | <0.5 | 1.6 |
| Well #20 | 4831 | <0.5 | 1.0 |
| Well #21 | 4832 | <0.5 | <0.5 |

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| 12 Belmar | 4833 | 2.0 | 2.6 |
| 52 W. Lehman | 4834 | <0.5 | <0.5 |
| Fire Hydrant Home & Bright Rd. | 4835 | 2.1 | <05. |
| Fire Hydrant James & Edward | 4836 | 1.8 | <0.5 |
| Fire Hydrant Sping & Penny-pack School | 4837 | 1.5 | 4.2 |
| Fire Hydrant Blair Mill & James Roads | 4838 | 1.8 | 0.6 |

Albert F. Zimmermann

Q C INC. _____

AA300527

RECEIVED
MAY 14 1980
HATBORO BOROUGH AUTHORITY

jsl

2

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 5/9/80

RE: TCE/PCE

Enclosed are results of samples collected on May 5, 1980. I questioned the PCE results on wells #2,6,7,8,9,12 & fire hydrant A5, consequently I authorized re-sampling to be conducted as soon as possible. I'll inform you when these results are available.

If you will recall, I was concerned about the results of samples collected on the 21st of April. Particularly with #8 well being high in TCE and #18 well being high in PCE - we're OK now.

Incidently, the thirty plus samples scheduled for collection on the 14th of May have been moved back to the 21st (one week later).

DATE SAMPLE COLLECTED 5/5/80

DATE SAMPLE ANALYZED 5/8/80

LAB CC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 well | *60.4 | *6.2 |
| 6 | 2.0 | *4.2 |
| 7 | 4.0 | *4.0 |
| [illegible] | 3.9 | *4.1 |
| 9 | <.5 | *4.4 |
| 10 | 3.0 | *4.0 |
| 13 | <.5 | <.5 |
| 14 | *174 | <.5 |
| 15 | <.5 | <.5 |
| [illegible] | *38.3 | 1.9 |
| 17 | *548 | *7.8 |
| 18 | <.5 | 1.6 |
| 20 | <.5 | 1.0 |
| 21 | <.5 | <.5 |
| 12 Bellman Rd | 2.0 | 2.6 |
| Fire Hydrant Blair Mill & James | 1.8 | 6 |
| [illegible] Hydrant James & Edwards | 1.8 | <.5 |
| [illegible] Hydrant Home & Beight | 2.1 | <.5 |
| 55 W. Lehman Ave | <.5 | <.5 |
| Fire Hydrant (A5) Spring & Pennypack School | 1.5 | *4.2 |

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Ave.
Hatboro, Pa. 19040
Att: Mr. C. Newton Finney, Supt.

## BACTERIOLOGICAL WATER ANALYSIS REPORT

date sampled 4-23-80
date tested 4-24-80
date reported 4-29-80
sampled by
frequency
copies to Norristown
Glace & Glace, Inc.

| SAMPLE | Standard Plate Count per ml | Total Coliform Count per 100 ml MPN | Fecal Coliform Count per 100 ml MPN | TCE | PCE | | |
|---|---|---|---|---|---|---|---|
| Well #2 (4533) | | | | 71.8 | 0.6 | ✓ | |
| Well #7 (4534) | | | | 2.8 | 0.6 | ✓ | |
| Well #14 (4535) | | | | 135 | 0.6 | ✓ | |
| Well #16 (4536) | | | | 43.9 | 2.1 | ✓ | |
| Well #17 (4537) | | | | 556 | 7.0 | ✓ | |

Q C INC.

EPA Maximum Standards
PCE - 3.55 ppb
TCE - 4.5 ppb

RECEIVED
APR 30 1980
HATBORO BOROUGH AUTHORITY

Albert F. Zimmermann

AR300530

All analyses conform to the current edition of "Standard Methods for the Examination of Water and Wastewater"
Approved for the bacteriological examination of water by the Pennsylvania Department of Health, Certificate I-38B

# HATBORO BOROUGH AUTHORITY
## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1635
OSBORNE 5-1634

April 30, 1980

MEMO TO ALL BOARD MEMBERS:
Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

RE: TCE/PCE

Enclosed are results of samples collected on April 23, 1980. These represent samples duplicating those collected by SMC Martin. If you recall, SMC Martin are the consultants hired by Fischer & Porter to conduct a sixty day survey. Hopefully, the results of the survey should be released shortly. I'll keep you informed.

DATE SAMPLE COLLECTED 4/23/80

DATE SAMPLE ANALIZED 4/29/80

BY QC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 well | *71.8 | 0.6 |
| #7 well | 2.8 | 0.6 |
| #14 well | *135 | 0.8 |
| #15 well | *43.9 | 2.1 |
| #17 well | *556 | *7.0 |

AR300532

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Date Submitted: April 21, 1980
Date Reported: April 29, 1980
(QC #4471 - 4488)

Hatboro Borough Authority
120 East Montgomery Avenue
Hatboro, Pa. 19040

Att: Mr. Newton Finney

| Sample | TCE ppb | PCE ppb |
|---|---|---|
| Well #2 | 59.1 | 1.9 |
| Well #6 | 2.6 | <0.5 |
| Well #7 | 3.6 | 0.9 |
| Well #8 | 6.0 | 0.5 |
| Well #9 | 0.9 | 0.6 |
| Well #12 | 2.6 | <0.5 |
| Well #13 | <0.5 | <0.5 |
| Well #14 | 133 | <0.5 |
| Well #15 | 0.8 | 0.6 |
| Well #16 | 32.9 | 2.4 |
| Well #17 | 506 | 12.8 |
| Well #18 | 1.7 | 4.4 |

| Sample | TCE ppb | PCE ppb |
|---|---|---|
| Well #20 | <0.5 | 2.6 |
| Well #21 | <0.5 | <0.5 |
| 12 Belmar | 3.4 | <0.5 |
| Fire Hydrant Blair Mill & James | <0.5 | <0.5 |
| Fire Hydrant Home & Bright | <0.5 | <0.5 |
| Fire Hydrant James & Edward | <0.5 | <0.5 |

Albert F. Zimmermann

Q C INC. _____

jsl

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 4/24/80

RE: TCE/PCE

Enclosed are results of samples collected on April 21, 1980. #8 well is still holding at 6ppb of TCE. BUT, if you will notice, we have some mixing (thank goodness). The last four samples at the bottom of the page are in the vicinity of #8 well. These results are within the suggested MCL.

SMC - Martin collected five samples again yesterday, April 23, 1980. Wells #2, 7, 14, 16 & 17. We duplicated same and should have results by April 28th or 29th.

#18 well is high in PCE, consequently, on our next regular sampling day (5/5/80) we have scheduled additional samples to be picked up in that vicinity. Hopefully, we will experience some mixing resulting in an acceptable MCL.

On May 14, 1980, we will be collecting 30 (plus) samples from the UMHJSA manholes and questionable streams. Two,three man teams will be assigned to collect the samples. Each team will consist of an EPA Representative, a Sewer Authority employee and one of our own personnel. Our results should be available in a few days. It will take EPA three to four weeks.

DATE SAMPLE COLLECTED 4/21/80

DATE SAMPLE ANALIZED 4/24/80

LAB QC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 well | *59.1 | 1.9 |
| #6 well | 2.6 | <0.5 |
| #1 well | 3.6 | 0.9 |
| #5 well | *6.0 | 0.5 |
| #9 well | 0.9 | 0.6 |
| #12 well | 2.6 | <.5 |
| #13 well | <.5 | <.5 |
| #14 well | *133 | <.5 |
| #15 well | 0.8 | 0.6 |
| #16 well | *32.9 | 2.4 |
| #17 well | *506 | *12.8 |
| #18 well | 1.7 | *4.4 |
| #20 well | <.5 | 2.6 |
| #21 well | <.5 | <.5 |
| 12 Belmar | 3.4 | <.5 |
| Fire Hydrant Blair Mill & James | <.5 | <.5 |
| Fire Hydrant James & Edwards | <.5 | <.5 |
| Fire Hydrant Home & Briant | <.5 | <.5 |
| | | |
| | | |

AF300535

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY

1205 Industrial Highway, P.O. Box 514, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Hatboro Borough Authority
120 East Montgomery Avenue
Hatboro, PA 19040
Att: Mr. C. Newton Finney, Supt.

Date Sampled: 4-7-80
Date Reported: 4-16-80
Date Tested: 4-8-80
Copies to: Norristown, Glace & Glace, Inc.

| Water Supplies | TCE ppb | PCE ppb |
|---|---|---|
| #9 Well (QC #4133) | 1.3 | <.5 |
| 212 N. Warminster (QC #4134) | 2.0 | .8 |
| #8 Well (QC #4135) | 6.0 | <.5 |
| #13 Well (QC #4136) | .7 | <.5 |
| #7 Well (QC #4137) | 4.0 | .6 |
| #15 Well (QC #4138) | 1.2 | <.5 |
| #18 Well (QC #4139) | 1.0 | 1.4 |
| #2 Well (QC #4140) | 60 | <.5 |
| #2 Booster (QC #4141) | 2.7 | .5 |
| #12 Well (QC #4142) | 2.6 | <.5 |
| #6 Well (QC #4143) | 2.2 | <.5 |
| #21 Well (QC #4144) | .9 | <.5 |
| #14 Well (QC #4145) | 181 | <.5 |
| #20 Well (QC #4146) | <.5 | 1.0 |
| #17 Well (QC #4147) | 550 | 6.4 |
| #16 Well (QC #4148) | 44.3 | 1.4 |

Safe drinking water standards of 4.5 ppb for TCE and 3.55 ppb for PCE have been established by the EPA.

AR300536

Albert F. Zimmermann

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-16
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
V. R. Bitzer
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 4/11/80

RE: TCE/PCE

Enclosed are results of samples collected on April 7, 1980. As you will notice, #7 well has improved to an acceptable level but #8 is still giving me trouble. #17 is like a yo-yo; it must be of the opposite sex (very unpredictable).

EPA has purposely delayed starting their study on the follow-through of our findings in the sanitary sewer lines because of the excessive rainfall. As you know, the ground water is high causing flooding of the sewer lines, thus preventing proper sampling.

Our theory is that if we can control the discharge of TCE/PCE into sanitary sewer lines, our present contamination levels will be reduced. Hopefully to a point where we could possibly put some of the wells back on the system (probably wishfull thinking - but a possibility).

DATE SAMPLE COLLECTED 4/7/89

DATE SAMPLE ANALYZED 4/10/89

LAB GC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| [illegible] | *60.0 | <.5 |
| [illegible] | 2.2 | [illegible] |
| [illegible] | 4.0 | [illegible] |
| | *6.0 | [illegible] |
| | 6.3 | <.5 |
| | 3.6 | [illegible] |
| | 0.7 | <.5 |
| | *181.0 | [illegible] |
| | 1.2 | [illegible] |
| | *19.3 | 1.9 |
| | *550.0 | * [illegible] |
| [illegible] | 1.0 | [illegible] |
| [illegible] | <.5 | [illegible] |
| [illegible] | 0.9 | [illegible] |
| [illegible] Crocker Station (After pumping) | 2.7 | 0.5 |
| [illegible] (WARM Water [illegible] | 3.0 | [illegible] |
| | | |

AR300538

(215) 673-4900
355-3900

# QUALITY CONTROL LABORATORY DIVISION

1205 Industrial Highway, Southampton, PA 18966

E. W. Cook, V.M.D.
A. F. Zimmermann

Date Submitted: March 25, 1980
Date Reported: April 2, 1980

Hatboro Borough Authority
120 East Montgomery Avenue
Hatboro, Pa. 19040

Att: Mr. Newton Finney

| Sample | QC # | TCE ppb | PCE ppb |
|---|---|---|---|
| #2 Booster Station | 3892 | 3.43 | 1.44 |
| #2 Raw Water | 3893 | 86.4 | 0.96 |
| #7 Well | 3894 | 4.8 | 0.82 |
| #8 Well, Raw Water | 3895 | 5.98 | 1.29 |
| #12 Well, Raw Water | 3896 | 3.68 | 0.53 |
| #14 Well | 3897 | 184 | 1.1 |
| #16 Well | 3898 | 38 | 1.7 |
| #17 Well | 3899 | 368 | 4.11 |
| Creek, Rt. 611 | 3900 | 2.7 | 5.8 |
| Creek, Terwood & Davisville | LAB. | ACCIDENT | |
| Down Carpet, bet. Railroad & Turnpike | 3902 | <0.5 | <0.5 |
| Sun Oil, West Mill Road | 3903 | 1.8 | 0.9 |
| Fire Hydrant | 3904 | 2.6 | 0.9 |
| Railroad Culvert at Delaware Valley Concrete | 3905 | <0.5 | <0.5 |

Albert F. Zimmermann

Q C INC. _____

AR300539

jsl

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO TO ALL BOARD MEMBERS:
Lou Sayland
V. R. Bitzer
James Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: April 3, 1980

RE: TCE/PCE

Enclosed are results of samples collected 3/19/80 and 3/24/80.

Samples collected on 3/19/80 represent a very makeshift method of removing TCE/PCE by aeration. Our compressor was set up at the site and connected to the existing 1/4" air line. We started injecting air at 8:30 A.M. and stopped after taking the last sample at 4:00 P.M. I called William Stothoff Company and A. J. Nicholas & Company (both reputable pump service companies) and was advised that a larger air line could be installed to the bottom of the well permitting much larger amounts of air to be injected. Both service companies stated that it would not be recommended.

The reasons are:

#1. Large bubbles of air entering the pump would cause terrific vibrations.

#2. Pump cavitation

#3. Large amounts of entrained air in discharge water at surface.

Samples collected on 3/24/80 speak for themselves. (Check Fischer & Porter)

Numbers 7 & 8 wells are high in TCE. I'm going to continue to pump these unless you direct me otherwise. Before we started getting rain on 3/21/80, we were forced to reduce the amount of water discharged to waste from wells #14,16 & 17 to conserve the groundwater in the area. It is our opinion that by reducing the discharge, the water table increased thus permitting the TCE to spread to other wells; namely, #7 & #8. On 4/2/80, the discharge was increased on wells #14,16 & 17 hopefully lowering the water table enough to protect #7 & #8 once again. Samples will be collected on 4/7/80. I'll keep you posted.

EPA is due in shortly.

DATE SAMPLE COLLECTED 7/24/[illegible]

DATE SAMPLE ANALYZED 8/1/[illegible]

LAB QC

(SMH) Sewer Manhole (Collected [illegible])

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| [illegible] Culvert at Delaware Valley Concrete | <.5 | <.5 |
| [illegible] - Rock Cell (next to Fiesta) | [illegible] | *5.[illegible] |
| [illegible] - Tenwood + Dacksville Rd | SAMPLE [illegible] | [illegible] |
| [illegible] - Down Carpet (Lease - bet Pulaski + Turnpike) | <0.5 | <0.5 |
| [illegible] - (Stream Discharge) West Mill Rd | 1.8 | 0.9 |
| [illegible] Plant - effluent | 4.46 | 2.12 |
| [illegible] Plant - influent | *8.0 | 3.14 |
| [illegible] Rd (400' west of Rock Cell SMH) | *40.2 | *14.2 |
| [illegible] Maryland Dr (1000' west of Rock Cell SMH) | *22.2 | *8.4 |
| [illegible] West Interceptor (800' west of Rock Cell SMH) | *26.8 | *7.9 |
| [illegible] (bet Blair Mill Rd + Maryland Rd - SMH) | *38.5 | 7.[illegible] |
| [illegible] Rd at #20 Pimpleton SMH | <.5 | 3.4 |
| [illegible] Mill Village (west of Pennypack opposite Williams SMH) | <.5 | [illegible] |
| [illegible] Mill - bet Bright + W. Moreland (approx 200' E of Blair Mill) SMH | <.5 | <.5 |
| [illegible] + Pinkton (County Line Rd) SMH | *1407 | *17.2 |
| [illegible] + Hat. Industrial Park SMH | 2.09 | [illegible] |
| [illegible] + Tanner SMH | *311 | *5.[illegible] |
| [illegible] + Moreland (Mirford River SMH) | *77 | [illegible] |
| [illegible] - Lancaster Rd SMH | *5.94 | .51 |
| [illegible] Moreland (east extension to Hatboro Park) SMH | <.5 | 0.[illegible] |
| [illegible] Rd - 400' of No Life Cleaners SMH | <.5 | 1.4 |
| [illegible] Drive - Down Carpet SMH | <.5 | <.5 |
| [illegible] + Dacksville Rd SMH | <.5 | <.5 |
| [illegible] Hydrant (HTA) Blair Mill Rd - N of Village Drive | 2.6 | 0.9 |
| [illegible] | *5.98 | 1.27 |
| [illegible] | 3.6[illegible] | 0.53 |
| [illegible] Station (after pumping) | 3.43 | 1.44 |
| [illegible] | *4.8 | 0.82 |
| [illegible] | *86.4 | 0.96 |
| [illegible] | *184 | [illegible] |
| [illegible] | *[illegible] | 1.7 |
| [illegible] | *368 | 4.[illegible] |

AR300541

DATE SAMPLE COLLECTED 3-19-80

DATE SAMPLE ANALYZED 3-21-80

BY GC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| Monroe - after blowing 8:25 A.M. | 51.1 | 1.5 |
| Monroe - during pot-boiling 11:40 AM | 51.1 | " |
| Monroe - after 7½ hrs - 4:00 P.M. | 49 | " |
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AR300542

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# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-163
OSBORNE 5-1634

March 19, 1980

MEMO TO ALL BOARD MEMBERS:
Lou Sayland
V. R. Bitzer
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: March 19, 1980

RE: TCE/PCE

Enclosed are results of samples collected on 3/12/80. As you can see, #7 is still acting up. I'm going to leave it ride unless you direct me otherwise.

At the Regular Meeting in March, Mr. Schmauk and I were directed to inform EPA that out of necessity the HBA had authorized Well #17 be placed back into service. If you recall, Kurt Heine from "Today's Spirit" was present when this decision was made. Mr. Heine took it on himself (article in "Today's Spirit" dated 3/19/80) to inform EPA of our decision. EPA (Mr. Robert Runowski) called me on 3/18/80, evidently because of the "Today's Spirit" inquiry rather than a call I had placed to them on the 14th. My original call was to inform them of our decision to conduct a series of tests on raw sewage samples and the results of same.

EPA did not mention that "Today's Spirit" had called them. At the close of our discussion, I took it on myself to question them on what their reaction would be to the proposed notification (informing them of Well #17). His statement to me was that all they could do would be to recommend alternatives for contaminant removal, alternate source development, blending, etc. The 4.5 ppb TCE is recommended and not a MCL.

We did discuss at length, the theory that our wells could be contaminated by/or contributed to ruptures, breaks or cracks in the sanitary sewer lines adjacent to our wells. Mr. Runowski indicated that we had struck on something that EPA would be very anxious to pursue and asked if I could recommend the man-days required to complete this investigation. It was decided that ten (10) man-days would be a good starting point (additional man-days could be allotted if deemed necessary). Possibly fifty (50) or more samples (if required) to be collected.

Mr. Runowski stated that aeration systems have proven effective

in the removal of TCE/PCE/TTHM from water. A 15' high x 4' diameter aeration tower has been proven to remove the above contaminates to below the recommended in California ( 300-400 GPM at 50 ppb). Mr. Runowski is to forward information on this installation as soon as possible.

Also discussed in this conversation was the possibility that EPA would work hand in hand with us as an engineering consultant and arrange for funding (they are presently looking at grants).

A meeting is scheduled for the 3rd week in April with all affected water companies to discuss this mutual problem. (Time and place undetermined at present).

After this discussion with EPA, I called Lou and asked if he would mind if I wiggled out of sending the letter to EPA (pretaining to putting #17 back on line). He thought that because of their willingness to assist in resolving the problem, I need not send the above mentioned letter. Hoping this action is in full agreement with the balance of the Authority Members.

NOTE: I should be back April 2nd.

DATE SAMPLE COLLECTED 3/12/90

DATE SAMPLE ANALIZED 3/13/90

LAB GC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| # 2 well | *94.3 | 0.7 |
| # 7 well | *5.2 | <0.5 |
| # 14 well | *232 | 0.6 |
| #16 well | *53.5 | 1.0 |
| #17 well | *545 | *5.0 |
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| | | AR300545 |
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Mr. Schmauk

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO: To All Board Members
Lou Sayland
V. R. Bitzer
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: March 7, 1980

RE: TCE/PCE

Enclosed are results of duplicate samples collected February 27, 1980. Received results from Quality Control on the 29th. Greenwood Lab cannot release their results to me directly. They must go through SMC - Martin first. Consequently, it requires a few extra days before I am informed of their results. Check results of Well #7 (Keep in mind that the TCE maximum is 4.5 PPB).

Received verbal approval from Chairman of the Upper Moreland-Hatboro Joint Sewer Authority via Mr. Lou Sayland on March 6, 1980 to proceed with sampling of sewage for TCE/PCE as was discussed at the March 3rd meeting. Samples will be collected from eight pre-selected manholes in the vicinity at questionable areas plus one sample of the influent and one of the effluent at the sewer plant itself. These ten (10) samples plus our regular samples will be collected on March 10, 1980. Results should be available by the 12th or 13th.

DATE SAMPLE COLLECTED 2/27/80

DATE SAMPLE ANALIZED 2/27/80

LAB GC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 well | *89.2 | 0.7 |
| #7 well | *6.3 | <0.5 |
| #14 well | *178 | 0.6 |
| #16 well | *49.9 | 1.0 |
| #17 well | *502 | *5.5 |

AR300547

*Greenwood Laboratories*

ANALYTICAL CHEMISTS AND CONSULTANTS

903 E. BALTIMORE PIKE — MARTIN — KENNETT SQUARE, PA. 19348
KING OF PRUSSIA, PA. PHONE: 215-388-7295

RECEIVED
MAR 6 1980

TO: Stephen W. Saul
SMC MARTIN
King of Prussia, PA 19406

FROM: Gerald R. Umbreit, Ph.D.

DATE: March 5, 1980 GREENWOOD NO. GL 4309

SUBJECT: Examination of water samples for trichloroethylene and related compounds.

SAMPLES: GL 4309-1 thru -27: Fischer & Porter Co. samples, 2/27/80 (listed below).

SUMMARY:

These samples have been analyzed by gas chromatography using the previously described procedure. The analytical results are as follows:

| Sample Designation | Greenwood No. | $C_2HCl_3$ TCE | $CCl_4$/ $CH_3CCl_3$* 111 | $CHCl_3$ Chloroform | $C_2Cl_4$ PCE |
|---|---|---|---|---|---|
| 1107 Hatboro Mun. #2 | " -7 | 86 ppb | 2.4 ppb | 16 ppb | - |
| 1108 " " #7 | " -8 | 4.6 ppb | - | - | - |
| 1109 " " #14 | " -9 | 167 ppb | 12 ppb | - | - |
| 1110 " " #17 | " -10 | 520 ppb | - | - | - |
| 1111 " " #16 | " -11 | 51 ppb | 1 ppb | - | 1.9 ppb |

*computed as $CH_3CCl_3$

AR300548

Gerald R. Umbreit
Gerald R. Umbreit, Ph.D.
GREENWOOD LABORATORIES

GRU:del

12

DATE SAMPLE COLLECTED 2/27/80

DATE SAMPLE ANALIZED 3/5/80

LAB Greenwood Lab

| LOCATION *Indicates over max. | TCE ppb | PCE ppb | 111 | TH.[illegible] Chlorof[illegible] |
|---|---|---|---|---|
| #2 well | * 86 | 0 | 2.4 | 16 |
| #7 well | * 4.6 | 0 | 0 | 0 |
| #14 well | * 167 | 0 | 12 | 0 |
| #16 well | * 51.0 | 1.9 | 1 | 0 |
| #17 well | * 520 | 0 | 0 | 0 |

AR300549

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

FEB 27 REC'D

MEMO: TO ALL BOARD MEMBERS
Lou Sayland
V. R. Bitzer
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 2/22/80

RE: TCE/PCE/THM

Enclosed are results of samples collected 2/14/80. Compare Quality Control with Greenwood Lab. These samples were collected at the same time and place, using identical sampling procedures.

DATE SAMPLE COLLECTED 2/14/50

DATE SAMPLE ANALIZED 2/19/50

LAB QC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| # 2 well | *[illegible] | <.5 |
| # 7 well | <.5 | <.5 |
| # 14 well | *169.0 | <.5 |
| # 16 well | *53.5 | 1.2 |
| # 17 well | *547.0 | *3.7 |

AR300551

Greenwood Laboratories

ANALYTICAL CHEMISTS AND CONSULTANTS

903 E. BALTIMORE PIKE KENNETT SQUARE, PA. 19348

PHONE: 215-388-7295

TO: Stephen W. Saul
SMC Martin
P. O. Box 190
King of Prussia, PA 19406

FROM: Gerald R. Umbreit, Ph.D.

DATE: February 19, 1980 GREENWOOD NO. GL 4287

SUBJECT: Examination of water samples for trichloroethylene content.

SAMPLES: GL 4287-1 thru -17: Fischer & Porter Co., dated 2/14/80 (listed below)

SUMMARY:

These samples have been examined by gas chromatography using electron capture detection and theomethods previously described. The analytical results are as follows:

| Sample Designation | Greenwood No. | $C_2HCl_3$ TCE | $CCl_4/CH_3CCl_3$* TCA | $CHCl_3$ Chloroform | $C_2Cl_4$ PCE |
|---|---|---|---|---|---|
| 1013 Hatboro Mun. Water A. Well #2" | -13 | 68 ppb | 3.4 ppb | 14 ppb | 0.4 ppb |
| 1014 " " " " Well #14" | -14 | 157 ppb | 10 ppb | - | - |
| 1015 " " " " Well #7" | -15 | 3.5 ppb | - | - | - |
| 1016 " " " " Well #17" | -16 | 420 ppb | 24 ppb | - | 4.4 ppb |
| 1017 " " " " Well #16" | -17 | 58 ppb | 3.8 ppb | - | 2.4 ppb |

*these compounds are not separated; computation is made as $CH_3CCl_3$.

SMC-MARTIN
KING OF PRUSSIA, PA.
RECEIVED
FEB 21 1980

Gerald R. Umbreit, Ph.D
GREENWOOD LABORATORIES

AR300552

GRU:del

DISTRIBUTION
S. Saul

DATE SAMPLE COLLECTED 2/14/86

DATE SAMPLE ANALIZED

LAB Greenwood Lab

| LOCATION *Indicates over max. | TCE ppb | PCE ppb | 111 | THM (Chloroform) |
|---|---|---|---|---|
| #2 well | 68 | 0.4 | 3.4 | 14 |
| #7 well | 3.5 | 0 | 0 | 0 |
| #14 well | 157 | 0 | 10 | 0 |
| #16 well | 58 | 2.4 | 3.8 | 0 |
| #17 well | 420 | 4.4 | 24 | 0 |

AR300553

DATE SAMPLE COLLECTED 1/31/88

DATE SAMPLE ANALIZED 2/1/88

LAB GC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #18 well | 1.8 | * 1.4 |
| #2 well | * [illegible] | 0.9 |
| #7 well | 3.08 | <0.5 |
| #14 well | * 137 | [illegible] |
| #16 well | * 35.3 | 2.8 |
| #17 well | * 512 | * 8.0 |

AR300554

15

# Greenwood Laboratories

ANALYTICAL CHEMISTS AND CONSULTANTS

903 E. BALTIMORE PIKE — MAKENNETT SQUARE, PA. 19348
KING OF PRUSSIA, PA. PHONE: 215-388-7295

RECEIVED
FEB 6 1980

DISTRIBUTION
S. Saul

Logged
ALT
2/7/80

TO: Stephen W. Saul
SMC MARTIN
P. O. Box 190
King of Prussia, PA 19406

FROM: Gerald R. Umbreit, Ph.D.

DATE: February 5, 1980

GREENWOOD NO. GL 4270

SUBJECT: Examination of water samples for trichloroethylene content and other organic compounds detected.

SAMPLES: GL 4270-1 thru -11: Fischer & Porter samples of 1/30/80 (rec'd 2/4/80)

SUMMARY:

These samples have been examined by gas chromatography using the previously described procedure. The analytical results are as follows:

| Sample Designation | Greenwood No. | $C_2HCl_3$ TCE | $CH_3CCl_3$* 111 | $CHCl_3$ Chloroform | $C_2Cl_4$ PCE |
|---|---|---|---|---|---|
| #5 Hatboro Well #2 | " -5 | 85 ppb | 3.3 ppb | 19.3 ppb | 0.5 ppb |
| #6 Hatboro Well #14 | " -6 | 140 ppb | 9.8 ppb | - | 0.4 ppb |
| #7 Hatboro Well #7 | " -7 | 3.5 ppb | - | - | 0.2 ppb |
| #8 Hatboro Well #17 | " -8 | 400 ppb | 25 ppb | 2.0 ppb | 5.3 ppb |
| #9 Hatboro Well #16 | " -9 | 44 ppb | 2.8 ppb | - | 2.2 ppb |

* Carbon tetrachloride and 1,1,1-trichloroethane are not separated; these samples are computed as 1,1,1-trichloroethane in this case.

AR300555

Gerald R. Umbreit

Gerald R. Umbreit, Ph.D.
GREENWOOD LABORATORIES

HATBORO BOROUGH AUTHORITY
HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

FEB 3 REC'D

MEMO: To All Board Members
Lou Sayland
V.R. Bitzer
James H. Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE: February 5, 1980

RE: TCE/PCE

Enclosed are results of samples from Quality Control collected January 30th and 31st 1980. PLEASE compare results!!! Quality Control stated prior to releasing results to me that the analysis of samples collected January 30, 1980 were questionable. They had double-checked their equipment and procedures and suggested the possibility of poor sampling techniques. Upon questioning our employee who normally collects the samples, I was informed that the sampling procedure has not been altered and that samples were collected in bottles prepared by Quality Control. Results of samples collected on January 31, 1980 are compatible with previous results. Now then - check results of samples collected by Greenwood Lab on January 30, 1980. These are also compatible with previous results. Reasons for the variation in Quality Control's results dated January 30, 1980 have not been determined.

Samples collected by Quality Control on January 31, 1980 and Greenwood Lab on January 30, 1980 indicate that #7 well has improved but well #18 analysed on February 1, 1980 by Quality Control is still high in PCE. This morning (Feb. 5, 1980) another sample will be collected from well #18 and analysed as soon as possible.

SMC - Martin will collect again week ending February 16, 1980.

DATE SAMPLE COLLECTED 1/30/80

DATE SAMPLE ANALIZED 2/5/80

LAB Greenwood Lab

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 well | *85 | .5 |
| #7 well | 3.5 | .2 |
| #14 well | *140 | .4 |
| #16 well | *44 | 2.2 |
| #17 well | *400 | *5.3 |

AR300557

DATE SAMPLE COLLECTED 1/30/80

DATE SAMPLE ANALIZED 2/1/80

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| #2 well | | <0.5 | 0.65 |
| #7 well | | 2.8 | 0.[illegible] |
| #14 Well | | *53.1 | 0.5 |
| #16 well | | *27.4 | [illegible] |
| #17 well | | *270.0 | 2.1 |

SMC-MARTIN collecting samples at the above well sites - are collected at the same time to compare results

MARTIN USING GREEN WOOD KENNETH SQUARE LAB

AR300558

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO: To All Board Members
Lou Sayland
V. R. Bitzer
James Bevan
Daniel C. Marschall
William Kruse

FROM: C. Newton Finney, Supt.

DATE 1/31/80

RE: TCE
PCE

Enclosed are results of samples collected January 16th and 28th 1980. Also I have taken the liberty of enclosing an article from the January 1980 issue of "Chemecology" (published by the Chemical Manufacturers Association to promote a clean environment). It makes for good reading - you can draw your own conclusions.

In my memo dated January 17, 1980, I expressed my concern over the results of testing #7, #8 and #18 wells. Again, keep in mind that the TCE maximum is 4.5 ppb and PCE is 3.55 ppb. If you will notice, #7 is over the TCE maximum and #18 is over the PCE maximum. #8 well analysis shows a marked improvement. The sooner we can acquire these inter-connections, the better we'll be.

Also mentioned in the last memo was the fact that SMC - Martin had been authorized by Fischer & Porter to conduct a sixty (60) day study. The wheels are turning - Yesterday (1/30/80), a representative from Martin called and made the necessary arrangements to collect five (5) samples to be analyzed for TCE/PCE contamination. These samples were collected from wells 2,7,14, 16 & 17. I was informed that he had just picked up two (2) samples from Warminster Heights and also sampled Fischer & Porter's private wells. Results should be available Monday, February 4th. Martin is using Greenwood Lab in Kennett Square - with this thought in mind, I decided to compare results again. We collected duplicate samples from the above mentioned wells for comparison and delivered them to Quality Control for analysis.

Another sample from well 18 will be collected this A.M. (1/31/80) and delivered to Quality Control.

Results of the five (5) samples collected yesterday (1/30/80) plus the one today should be available Friday, February 1, 1980. Hopefully, wells #7 and #18 will have improved.

I'll keep you informed.

DATE SAMPLE COLLECTED 1/28/86

DATE SAMPLE ANALIZED 1/30/86

LAB GC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 well | *84.7 | 0.4 |
| #6 " | 3.0 | 0.52 |
| #7 " | *5.7 | 1.6 |
| #8 " | 1.8 | 1.04 |
| #9 " | 1.8 | 1.3 |
| #12 " | 2.5 | 1.03 |
| #13 " | 1.7 | 1.03 |
| #14 " | *155 | 1.8 |
| #15 " | 1.6 | 0.8 |
| #16 " | *37.5 | *3.8 |
| #17 " | *471.0 | *9.4 |
| #18 " | 1.8 | *7.0 |
| #20 " | 1.7 | 1.8 |
| 21 " | 20.5 | 0.8 |
| Creek (County Line Rd. Lancaster Apart | *9.2 | 1.6 |
| Creek (Cynthia Rd at Lyptian Apart) | *60.3 | 1.5 |
| Creek (Lo Monument - 1st Bridge west of Broad) | *33.3 | 1.4 |
| Creek (Lo Woodland - Bridge) | *13.6 | 1.04 |
| Creek (Hathaway Estates Park - 4 of Woodland) | *7.9 | 0.4 |
| 2315 Horsham Rd | 2.1 | 0.8 |
| 212 N. Lansdowne Rd | 2.2 | *7.0 |
| #1 Booster station (after pumping) | 2.2 | 3.0 |
| #2 Booster station (after pumping) | 3.5 | 1.8 |
| 52 Lehman Ave | 1.8 | 3.5 |

AR300560

18

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSborne 5-1633
OSborne 5-1634

MEMO TO ALL BOARD MEMBERS:

Lou Sayland
William Kruse
James Bevan
V. R. Bitzer

FROM: C. Newton Finney, Supt.

DATE: 1/17/80

RE: TCE
PCE

Enclosed are results of samples collected January 14, 1980.

Wells #7, #8, and #18 have me concerned. Keep in mind that TCE Max. is 4.5 ppb and PCE Max. is 3.55 ppb.

Well #14 - TCE is going up again.

Well #17 - TCE and PCE are up.

Evidently, the results of tests conducted by Fischer & Porter mentioned in previous memos left a considerable number of questions unanswered. Consequently, Fischer & Porter has hired SMC Martin from King of Prussia as their consultants to conduct a sixty (60) day study. Included in this study, Fischer & Porter will pump two (2) of their wells to waste (24 hours per day) and collect analysis samples for TCE, not only from their wells but also the two wells in Warminster Heights and our contaminated wells. The Consultants are to keep us abreast of their progress.

DATE SAMPLE COLLECTED 1/14/80

DATE SAMPLE ANALIZED 1/14/80

LAB GC

| LOCATION *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|
| #2 well | * 81.7 | 1.0 |
| #6 well | <.5 | <.5 |
| #7 well | 3.5 | <.5 |
| #8 well | 4.4 | <.5 |
| #9 well | <.5 | <.5 |
| #12 well | 1.8 | <.5 |
| #13 well | <.5 | <.5 |
| #14 well | *150 | 0.9 |
| #15 well | <.5 | .5 |
| #16 well | *40.8 | 2.7 |
| #17 well | * 5.7 | * 5.0 |
| #18 well | <.5 | 3.2 |
| [illegible] well | <0.5 | 0.5 |
| [illegible] well | <0.5 | <0.5 |
| Creek (County Line at Lincoln Apart) | 1.8 | <0.5 |
| Creek (Lyons Rd at Lyons Farm Apart) | * 29.2 | 0.5 |
| Creek (W. Monument - 1st Bridge west of Bound) | * 14.5 | 0.5 |
| Creek (W. Moreland - Bridge) | 4.4 | <0.5 |
| Creek (Hathaway Estate Park - #14 discharge) | 1.8 | <0.5 |
| 2215 Horsham Rd | <.5 | <.5 |
| 212 N. Warminster Rd | <0.5 | [illegible] |
| #1 Booster Station (after pumping) | 3.5 | 1.8 |
| [illegible] Booster Station (after pumping) | 2.2 | 1.5 |
| [illegible] W Lehman Ave | [illegible] | 1.7 |

AR300562

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO: To All Board Members
Joseph Lutz
James Bevan
Lou Sayland
V. R. Bitzer
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 12/28/79

RE: TCE
PCE

Enclosed are results of samples collected 12/26/79.

Called EPA 12/21/79 and was informed that Quality Control Lab has been approved to conduct TCE and PCE analysis. I have nothing in writing to verify same but list should be available in a very few days - whatever that means!

Fischer & Porter is considering conducting still another study on their facilities over the four day New Years weekend. We haven't received the results from the Thanksgiving weekend study, so don't expect anything spectacular. EPA still feels that Fischer & Porter is one of the culprits and if they can prove this fact, Fischer & Porter is going to have one enormous job trying to clean up.

DATE SAMPLE COLLECTED 12/26/79

DATE SAMPLE ANALIZED 12/28/79

LAB QC

| LOCATION | *Indicates over max. | TCE ppb | PCE ppb |
|---|---|---|---|
| #2 well | (pumped to waste) | *79.5 | <.5 |
| #6 | | 1.8 | <.5 |
| #7 | | 1.7 | <.5 |
| #8 | | 3.5 | <.5 |
| #9 | | 0.9 | <.5 |
| #12 | | 1.6 | <.5 |
| #13 | | <.5 | <.5 |
| #14 | (pumped to waste) | *134 | <.5 |
| #15 | | <.5 | <.5 |
| #16 | (pumped to waste) | *44.3 | 2.1 |
| #17 | (pumped to waste) | *5.2 | *5.2 |
| #18 | | 1.7 | *3.7 |
| #20 | | <.5 | <.5 |
| #21 | | <.5 | <.5 |
| Creek (County Line at Livingstone Apart) | | *7.0 | 0.9 |
| Creek (York Rd at Lafayette Apart) | | *40.9 | 1.08 |
| Creek (In Monument - 1st Bridge west of Broad) | | *227 | 0.6 |
| Creek (In Mckelvey - Bridge) | | *11.1 | <.5 |
| Creek (Hathaway Estates Park - North of #1 discharge) | | *7.1 | <.5 |
| 2315 Horsham Rd | | 1.8 | <.5 |
| 212 N Warminster Rd | | 2.6 | 2.1 |
| #1 Booster Station (After pumping) | | <.5 | 1.9 |
| #2 Booster Station (After pumping) | | <.5 | 2.2 |
| 52 In Lehman Ave | | 1.8 | <.5 |

AR300564

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO: TO ALL BOARD MEMBERS

Joseph Lutz
Lou Sayland
Williwm Kruse
James Bevan
V. R. Bitzer

FROM: C. Newton Finney, Supt.

DATE: 12-12-79

RE: TCE & PCE

Enclosed is results of samples collected December 10, 1979. EPA personnel are conducting their survey in the Boro at the present. Mr. Schmauk accompanied EPA on their door to door inspection Tuesday A.M., December 11, 1979. I accompanied them Wednesday A.M., December 12, 1979. EPA states that Fischer & Porter are setting on the "Mother Load" and are attempting to prove that they are at least partially at fault. EPA anticipates finalizing their survey by the end of the week.

Date Sample Collected 12 12 79
Date Sample Analize 12 12 79
Lab QC

| LOCATION * INDICATES OVER MAX. | TCE PPB | PCE PPB |
|---|---|---|
| #[illegible] well (pumping to waste) | 47 * | 0.5 |
| # [illegible] well | 1.1 | <0.5 |
| # 7 well | 2.5 | <0.5 |
| # [illegible] well | 2.2 | <0.5 |
| # 1 well | 1.1 | <0.5 |
| # 12 well | 2.0 | <0.5 |
| # 13 well | 1.1 | <0.5 |
| # 14 well (pumping to waste) | 152 * | 0.5 |
| #15 well | 1.1 | 0.5 |
| # 10 well (pumping to waste) | 44.6 * | 2.5 |
| # 11 well (pumping to waste) | 375 * | 6.0 * |
| # 18 well | 1.1 | 3.3 |
| # [illegible] well | <0.5 | <0.5 |
| # 21 well | <0.5 | <0.5 |
| Creek (County Line at Lincoln Avenue) | 5.3 * | 0.5 |
| Creek (Lyons Rd at Lincoln Avenue) | 57.5 * | 0.7 |
| Creek (N Monument - 1st Bridge west of Broad) | 25.1 * | 0.5 |
| 2315 Horsham Rd | 1.7 | <0.5 |
| 212 N Warminster Rd | 1.4 | 2.7 |
| # 1 Booster Station (after pumping) | 1.1 | 2.8 |
| # [illegible] (after pumping) | 1.7 | 0.8 |
| 5.2 W Lehman | 1.4 | 3.3 |

AR300566

Results of sample
collected 11/29/79 TCE

Dr Joe Owens
Bill Krose
Newt Finney

Private Lab - 12/5/79

#2 well
(average of 4 analysis) 41 ± 1 PPB

#14 well
(average of 4 analysis) 123 ± 2 PPB

#16 well
(average of 4 analysis) 36 ± 2 PPB

#17 well
(average of 3 analysis) 340 ± 6 PPB

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO: To All Board Members
Joseph Lutz
James Bevan
Lou Sayland
V. R. Bitzer
William Kruse

FROM: C. N. Finney, Supt.

DATE: 11/26/79

RE: TCE
PCE

11/19/79 - Two samples collected - results are enclosed.

11/19/79 - 10:00 A.M. started to drain 960,000 gallon tank to waste.

11/20/79 - 8:00 A.M. 960,000 gallon tank empty.

11/20/79 - A.M. - inspected interior of 960, 000 gallon tank. Those present were: Bob Schmauk and Dave Fredericks, paint representative.

11/20/79 - P.M. - cleaned interior tank and chlorinated same. Commenced filling operation.

11/20/79 - Called EPA for progress report. They are reported in the field conducting survey - no results at present.

11/21/79 - Twenty-two samples collected - results are enclosed.

11/22/79 - 960,000 gallon tank shut off at 55 feet. Hopefully, will be on line 11/26/79.

11/25/79 - Hydrant flushing at Central & Warminster and Jefferson & Tanner has been discontinued. Hydrant at main plant still flushing.

11/26/79 - Collected four (4) samples for TCE & PCE analysis.
#1 Booster Station
#2 Booster Station
212 N. Warminster Road
#18 Pump house
Results should be available by Wednesday P.M. 11/28/79.

Date Sample Collected 11 21 27
Date Sample Analized 11 23 27
Lab QC

| LOCATION * INDICATES OVER MAX. | TCE PPB | DCE PPB |
|---|---|---|
| #2 well (flushing to waste) | *44.7 | [illegible] |
| #6 well | <0.5 | <0.5 |
| #7 well | <0.5 | [illegible] |
| #8 well | <0.5 | [illegible] |
| #10 well | <0.5 | [illegible] |
| #12 well | <0.5 | [illegible] |
| #13 well | <0.5 | [illegible] |
| #14 well (flushing to waste) | *122.0 | [illegible] |
| #15 well | <0.5 | [illegible] |
| #16 well (flushing to waste) | *56.3 | [illegible] |
| #17 well (flushing to waste) | *458.0 | *6.5 |
| #18 well | 2.3 | *3.7 |
| #20 well | <0.5 | [illegible] |
| #21 well | <0.5 | <0.5 |
| Creek-York at Longpark Apart | *6.5 | 1.0 |
| " -County Line at Livingston Apart | *6.0 | 0.6 |
| Hydrant (main plant) | 2.0 | [illegible] |
| #1 Booster (after pumping) | *6.0 | [illegible] |
| Hydrant Jefferson & Tanner | 1.5 | [illegible] |
| " Foundry & Tanner | 1.4 | [illegible] |
| Hydrant Byberry Rd & Coolidgewood La. PSW | <0.5 | [illegible] |
| " County Line Rd & Park Ave WMA | 2.3 | [illegible] |

Note: PSW = Phila Sub. Water
WMA = Warminster Municipal Authority

AR300597

Date Sample Collected 11 19 79
Date Sample Analized 11 21 79
Lab CC

| LOCATION * INDICATES OVER MAX. | TCE PPB | PCE PPB |
|---|---|---|
| 3rd well site Black Mill Village (while pumping) | <.5 | <.5 |
| bottled water (France) | <.5 | <.5 |

AR300570

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ANNAPOLIS FIELD OFFICE, REGION III

DATE: November 26, 1979

Telecopied to Jeff Hass (3SA00)

SUBJECT: FID Screens 791116-(01-10) for TCE

FROM: Frederick Dreisch
Chemist

TO: Daniel K. Donnelly
Chief, Lab Section

THRU: T. O. Munson, Ph.D.
Chief, Organic Analysis Unit

The following samples were screened on the H.P. FID:

791116-03 Hatboro Distribution Office, grab
791116-04 Hatboro Well #14, grab
791116-05 Hatboro Well #14 hydrant, grab
791116-06 Hatboro Well #7, grab
791116-07 Hatboro Well #16, grab
791116-08 Hatboro Well #17, grab

The results are reported below with the knowledge that the identification is only an assumed one due to the way in which they were derived. All unknown peaks were calculated according to Trichloroethylene's response. All values are in parts per billion (µg/l).

| RT TCE | Compound | 791116 -03 | -04 | -05 | -06 | -07 | -08 | -10 |
|---|---|---|---|---|---|---|---|---|
| .48 | Unknown | --- | --- | --- | --- | --- | 3 | --- |
| .71 | Unknown | 1 | 40 | --- | --- | 5 | 30 | --- |
| .85 | 1,1,1-Trichloroethane | < 2 | 7 | --- | --- | --- | < 2 | --- |
| .88 | Unknown | --- | 1 | --- | --- | --- | --- | --- |
| .97 | Unknown | --- | 2 | --- | --- | --- | --- | --- |
| .00 | Trichloroethylene | 2 | 140 | 2 | 3 | 60 | 550 | --- |
| .03 | Benzene | --- | 1 | --- | --- | --- | --- | --- |
| .33 | Tetrachloroethylene or 1,1,2,2-Tetrachloroethane | < 5 | --- | < 5 | --- | --- | < 5 | --- |

Dreisch:jr

AR300571

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO: TO ALL BOARD MEMBERS
Joseph Lutz
James Bevan
Lou Sayland
V. R. Bitzer
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 11-16-79

RE: TCE
PCE

Enclosed are results of samples collected by EPA on 11/1/79, also our results of twenty samples collected on 11/14/79 sent to Quality Control.

EPA collected the following samples on 11/15/79:

| | |
|---|---|
| Well #2 | (pumping to waste) |
| " #7 | |
| " #14 | (pumping to waste) |
| " #16 | (pumping to waste) |
| " #17 | (pumping to waste) |
| Hydrant | S. Linden and Harding Aves. |

Hydrant flushing ceased at Byberry & Warminster on 11/13/79 because of possible icing conditions. Hydrant at Central and Warminster is adjacent to storm sewer inlet and will replace the one at Byberry and Warminster 11/15/79.

EPA stated 11/15/79 that on the 16th, they are starting to knock on doors to determine the possible offenders. Fischer & Porter are setting up to conduct a test over the Thanksgiving Holidays, November 22, 23, 24 and 25th to determine if their underground tank and/or pipe lines are leaking. Hopefully, we will have results of survey shortly.

P.S. Just received correspondence from DER - copy attached.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
1875 New Hope Street
Norristown, PA 19401
215 631-2409



November 15, 1979

C.N. Finney, Jr., Superintendent
Hatboro Borough Water Authority
120 East Montgomery Avenue
Hatboro, PA 19040

Re: Water Supply
Hatboro Borough Water Authority
Borough of Hatboro
Montgomery County

Dear Mr. Finney:

The results of the sampling, conducted on the wells in the subject system, on November 1, 1979, were as follows:

| Well No. | TCE (ppb) | PCE (ppb) |
|---|---|---|
| 1 | 230. | 1.5 |
| 2 | 130. | 0.8 |
| 3 | 39. | 1.1 |
| 6 | 1.4 | ND |
| 7 | 2.9 | 0.6 |
| 8 | 3.0 | < 0.5 |
| 9 | ND | ND |
| 12 | 1.3 | ND |
| 13 | ND | ND |
| 14 | 120. | 0.8 |
| 15 | < 1.0 | < .5 |
| 16 | 72. | 3.8 |
| 17 | 580. | 9.8 |
| 18 | 1.8 | 1.8 |
| 20 | ND | .5 |
| 21 | ND | ND |

In addition, the following are the results of samples collected from the distribution system.

| | TCE (ppb) | PCE (ppb) |
|---|---|---|
| Boro hydrant | 66. | 2.5 |
| Boro standtank | 90. | 6.4 |
| hydrant-Warminnster & Newton | 24. | 1.9 |
| hydrant-Roundmeadow & Moore | 11. | .7 |
| hydrant-Crooked Billet & Moreboro | 1.8 | ND |

As has been discussed previously, all wells with a TCE concentration greater than 4.5 ppb should be taken out of service, and wherever possible, pumped to waste. I understand, from our telephone conversation of November 9, 1979, that wells 1, 2, 3, 14, 16 and 17 have been taken out of service. Wells 2, 16 and 17 are being pumped to waste and well 14 will be shortly.

The Authority should contact it's consultant to begin investigating alternative water sources and/or the feasibility of treating the affected wells to reduce the concentrations below 4.5 ppb. Some thought should be given to the treatment of the water in the two storage tanks to reduce the levels present in them.

The distribution system samples indicate TCE levels to be exceeding the recommended guideline of 4.5 ppb. Further analysis of the distribution system will be required bi-weekly until the levels in the system drop below the recommended level.

It is understood that the November 1, 1979 samples were collected prior to determining well 14 to have been affected. Subsequently it has been taken out of service. Should the distribution sampling scheduled for November 14, 1979 indicate a TCE concentration below 4.5 ppb, the sampling frequency can be altered.

Since the PCE level in well 18 has occasionally exceeded the recommended guideline level of 3.55 ppb, this well should also be sampled bi-weekly.

The results of all sampling done by the Authority should be forwarded to us monthly for evaluation.

If you have any questions on these matters, feel free to contact me.

Very truly yours,

Joseph A. Feola

Joseph A. Feola
Water Quality Specialist

JAF:smc

cc: Bernie Sarnoski
Water Supply Branch, U.S. EPA (3WA31)
Mike Museno, U.S. EPA
Walt Lee, U.S. EPA
Ce Re 30
W232/.1

ANNAPOLIS FIELD OFFICE, REGION III

DATE: November 13, 1979

SUBJECT: Results from Warminster Heights & Hatboro Area Water Systems

FROM: Daniel K. Donnelly (3SA22)
Chief, Lab Section

TO: Walter Lee (3SA30)
Environmental Emergency Branch

Enclosed is a copy of the analyses results for PID screens done on these samples. Listed below are the sample descriptions:

| Sample # | Description |
|---|---|
| 79110109 | Blank |
| 79110110 | Warminster Heights Well #1 |
| 79110111 | Warminster Heights Well #2 |
| 79110112 | Warminster Heights Cistern |
| 79110113 | Warminster Heights Distribution (office) |
| 79110114 | Warminster Distribution (office) |
| 79110115 | Warminster Well #26 |
| 79110116 | Hatboro Well #1 |
| 79110117 | Hatboro Well #2 |
| 79110118 | Hatboro Well #3 |
| 79110119 | Hatboro Well #8 |
| 79110120 | Hatboro Well #14 |
| 79110121 | Hatboro Well #16 |
| 79110122 | Hatboro Well #17 |
| 79110123 | Hatboro Well #18 |
| 79110124 | Harboro Distribution (office) |

year
month
day
sample #

AR300575

ISJ-6 (REV. 4-70)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ANNAPOLIS FIELD OFFICE, REGION III

DATE: November 13, 1979

SUBJECT: TCE Screens on FID

FROM: Frederick Dreisch
Chemist

TO: Robert A. Bennett
Chief, Lab Section

VIA: [illegible]
Chief, Organic Analysis Unit

The following samples were screened for various volatile organic compounds on the flame ionization detector. The values of the identified are all based on one standard response and therefore are at best estimations of their true values. Identification of the compounds was based on retention times of the sample compared to the standard.

The values are in parts per billion (µg/l), where the detection limit is in the vicinity of 1 ppb for most compounds.

| 791101 | -09 | -10 | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 |
|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethylene | --- | 20 | 2 | 8 | 8 | --- | 180 | 190 | 110 | 35 |
| Tetrachloroethane or Tetrachloroethylene | --- | L | 13 | 26 | 25 | --- | 17 | --- | --- | --- |
| 1,1,1-Trichloroethane | --- | --- | --- | --- | --- | --- | 80 | 2 | --- | --- |
| 1,1-Dichloroethylene | --- | --- | --- | --- | --- | --- | 7.5 | --- | --- | --- |
| 1,1-Dichloroethane | --- | --- | --- | --- | --- | --- | 18 | --- | --- | --- |

| 791101 | -19 | -20 | -21 | -22 | -23 | -24 |
|---|---|---|---|---|---|---|
| Trichloroethylene | 4 | 180 | 96 | 790 | 3 | 60 |
| Tetrachloroethylene or Tetrachloroethane | --- | --- | L | 11 | 14 | L |
| 1,1,1-Trichloroethane | --- | 6 | --- | --- | 2 | 3 |
| cis or trans-1,2-Dichloroethylene | --- | --- | 9 | 53 | 3 | 2 |
| Benzene | --- | 2 | --- | --- | --- | 1 |
| Unknown 12.52[1] | --- | 35 | --- | --- | --- | 15 |

[1]Based on TCE response
L = less than 7 ppb

AR300576

Date Sample Collected 11 14 79
Date Sample Analized 11 16 79
Lab QC

| LOCATION * INDICATES OVER MAX. | TCE PPB | PCE PPB |
|---|---|---|
| #2 WELL (flushing to waste) | 23.9 | <.5 |
| #6 " | 1.09 | <.5 |
| #7 " | 3.3 | <.5 |
| #8 " | 2.2 | <.5 |
| #9 " | 1.0 | <.5 |
| #12 " | 0.9 | <.5 |
| #13 " | <.5 | <.5 |
| #14 " (flushing to waste) | 124.0 | 0.8 |
| #15 " | 0.9 | <.5 |
| #16 " (flushing to waste) | 78.3 | 3.2 |
| #17 " (flushing to waste) | 422.0 | 3.2 |
| #18 " | 0.8 | 3.5 |
| #20 " | <.5 | <.5 |
| #21 " | <.5 | <.5 |
| Creek Fork at Wynnfall Apart | 39.2 | <.5 |
| hydrant (MAIN PLANT) | 3.0 | 1.7 |
| #1 Booster | 18.5 | 4.4 |
| #2 " | 94.7 | 2.0 |
| hydrant Jefferson & Tanner | 2.3 | 0.6 |
| " Poundstone & Moore | <.5 | <.5 |
| | | |
| | AR 300577 | |
| | | |
| | | |

Friday 11/9/79 2:30 P.M. received call from DER (Joe Feola).
The following list of samples were collected 11/1/79.

| | | TCE | PCE |
|---|---|---|---|
| Well #1 | | 230.0 | 1.5 |
| " #2 | | 130.0 | .8 |
| " #3 | | 39.0 | 1.1 |
| " #6 | | 1.4 | 0 |
| " #7 | | 2.7 | .2 |
| " #8 | | 3.0 | - .5 |
| " #9 | | 0 | 0 |
| " #12 | | 1.3 | 0 |
| " #13 | | 0 | 0 |
| " #14 | raw | 120.8 | .8 |
| | treated | 140.0 | .7 |
| " #15 | raw | - 1.0 | - .5 |
| | treated | - 1.0 | - .5 |
| " #16 | | 72.0 | 3.8 |
| " #17 | | 580.0 | 9.8 |
| " #18 | | 1.8 | 1.8 |
| " #20 | raw | 0 | .5 |
| | treated | - 1.0 | - .5 |
| " #21 | raw | 0 | 0 |
| | treated | 0 | 0 |
| Creek North of #16 well | | 6.9 | 0.7 |
| Instrument Line (base 410,000 gallon tank ) | | 90.0 | 6.4 |
| Hydrant main plant | | 66.0 | 2.5 |
| " | Warminster & Newton | 24.0 | 1.9 |
| " | Roundmeadow & Moore | 11.0 | .7 |
| " | Crooked Billet & Moreboro | 1.8 | 0 |

AR300578

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

November 5, 1979

MEMO: TO ALL BOARD MEMBERS
Joseph Lutz
James Bevan
Lou Sayland
V. R. Bitzer
William Kruse

NOV REC'D

FROM: C. Newton Finney, Supt.

DATE: 11-5-79

RE: TCE
PCE

Enclosed is a list of results of water samples collected on October 29, 1979. On October 23, 1979, we commenced flushing #16 & #17 to waste (24hrs./day) and this procedure has continued to date. If you will notice, #17 in particular, is constantly increasing. Quality Control, at their own expense, sent duplicate samples to Betz Lab and one to National Medical Service for analysis (the results of this comparison is on the accompanying sheet.)

A sample was taken from the creek (marked creek-York & Wynfair). This sample point was chosen to represent a common discharge for #16 and #17 being pumped to waste. I learned this morning that Fischer & Porter also have been using the same creek for a discharge containing TCE.

Number 8 well has constantly been improving since we started flushing wells #16 and #17. Hopefully, by additional pumping we can reduce the TCE to the suggested level.

Well #13 - the following was an experiment.
Removed the chlorine tank from well house #17 and installed same in well house #13. #13 has been clean from the start - sample taken October 29, 1979 after switching chlorine tanks proved to be as previously recorded.

Bad News - Samples collected on October 22, 1979 (#14 well-Harding and South Linden). Just discovered that the TCE of 1.9PPB should have been 109.0PPB - Either I was informed wrong or I misunderstood (results are given to me by phone first and then verified at a later date).

Received call from "Intelligencer" (John Covaleski), he stated that they collected a sample from the drinking fountain in the Municipal Building and had just received the results (this action was unknown to me). He asked if I knew that the drinking water contained 50.9 60 PPB. I could not deny same!!!!!!

AR300579

More important - I have a feeling that when we filled the tank (here at the main plant - this past spring) we got a load of TCE and it's still there. I hope I'm wrong. If you notice - I had DER take a

AR300579

Memo dated 11-5-79 continued

sample from the very bottom of the tank. If this is the case - I'll probably have to dump it!!!! Whose to say that the other tank isn't contaminated?????

DER and EPA were both here today.
The following samples were taken:

| | DER | EPA |
|---|---|---|
| Well #1 | x | x |
| " #2 | x | x |
| " #3 | x | x |
| " #6 | x | |
| " #7 | x | |
| " #8 | x | x |
| " #9 | x | |
| " #12 | x | |
| " #13 | x | |
| " #14 | x | x |
| " #15 | x | |
| " #16 | x | |
| " #17 | x | |
| " #18 | x | x |
| " #20 | x | |
| " #21 | x | |
| Base of 410,000 Gal. Tank | x | |
| Hydrant(Warminster & Newton) | x | |
| Hydrant(Roundmeadow & Moore) | x | |
| Hydrant(Crooked Billet & Moreboro) | x | |
| Hydrant(Main plant) | x | x |

Samples taken 10-29-79 QUALITY CONTROL
Note: * indicates above min.

| | | TCE | PCE |
|---|---|---|---|
| Well #17 | Quality Control | 729.0* | 12.0* |
| | Betz Lab | 670.2* | 13.2* |
| | National Medical Serv. - no results as yet | | |

| | | |
|---|---|---|
| Well #18 (creek) | - .5 | - .5 |
| Well #8 | 5.09* | - .5 |
| Creek-York & Wynfair | 89.5* | 1.5 |
| Hydrant-Pennypack School | 2.0 | 4.6* |
| Well #13 | - .5 | - .5 |
| Hydrant-Warminster & Newton | 46.3* | 3.2 |
| Well #16 | 89.8* | 0.7 |
| Hydrant-Lancaster Place | 10.2* | - .5 |
| 52 W. Lehman | 1.9 | 3.3 |
| Hydrant-Meadowbrook & Windsor | 4.8* | - .5 |
| Well #18 | 1.8 | 4.6* |
| 212 N. Warminster | 71.9* | 1.3 |
| Hydrant-Main plant | 65.9* | 6.8* |
| Hydrant-Round Meadow & Moore | 23.4* | 0.7 |


AR 300 580

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

October 29, 1979

MEMO: TO ALL BOARD MEMBERS

Joseph Lutz
James Bevan
Lou Sayland
V. R. Bitzer
William Kruse

DATE: 10-29-79

FROM: C. Newton Finney, Supt.

RE: TCE
PCE

Enclosed are the results of sixteen (16) samples collected on 10-24-79. I questioned Quality Control on their results on eight (8) of the sixteen (16). They agreed to compare their results with two other labs on any sample we prefer. (There would be no charge for the samples sent to the other labs.) Please compare results from sheet marked - Sampling Date 10-22-79.

I questioned the following:

Well #16
Well #17 - flushing to waste (24hr./day) since 10-22-79

Well #18 TCE doubled

Distribution System:

52 W. Lehman Ave. ----------PCE up
212 N. Warminster Road ----------PCE up
Hydrant (Lancaster Place)---------PCE up
Hydrant (Round Meadow & Moore)----PCE up
Hydrant (Meadowbrook & Windsor)---PCE up

Three samples from Well #17 will be collected today along with fourteen additional for a total of seventeen. Hopefully, I'll have the results October 31, 1979. I'll let you know.

Additional Information:

TCE & PCE

non flammable
odor - chloroform
heavier than water
clear

AR300581

Yours truly,

C. N. Finney, Supt.

CNF/dk enc.

QUALITY CONTROL

| Sampling Date: 10-24-79<br>* Indicates over EPA max. | TCE | PCE |
|---|---|---|
| 52 W. Lehman Ave. | 2.0 | 5.4* |
| Well #6 | 2.1 | .97 |
| Well #7 | 3.4 | .95 |
| Well #8 | 6.1* | 1.09 |
| Well #16 | 80.8* | 4.2* |
| Well #17 | 426.0* | 7.5* |
| Well #18 | 5.1* | 6.6* |
| Well #19 | 11.5* | .85 |
| Hydrant - Livingstone | 4.1 | 1.2 |
| Hydrant Lancaster Place | 11.4* | .80 |
| Hydrant Warminster & Newton | 20.9* | 2.06 |
| Hydrant Main Plant | broke sample | |
| Hydrant Pennypack | - .5 | 4.9* |
| Hydrant Round Meadow & Moore | 42.5* | 1.8 |
| Hydrant Meadowbrook & Windsor | 12.2* | 1.5 |
| 212 N. Warminster Road | 59.0* | 7.7* |

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

MEMO: TO ALL BOARD MEMBERS
Joseph Lutz
James Bevan
Lou Sayland
V. R. Bitzer
William Kruse

OCT 30 REC'D

DATE: 10-24-79

FROM: C. Newton Finney, Supt.

RE: TCE
PCE

Enclosed are results of samples collected on 10/22/79.

#16 and #17 wells continue to be pumped to waste. The hydrants at Newton and Warminster and at the main plant are being flushed approximately eight (8) hours per day. The hydrant at Roundmeadow and Moore has been placed on the list to be flushed as above and will continue to be flushed until further notice.

Sixteen (16) samples are being collected this P.M. and delivered to Quality Control.

DER notified me to-day that they have formally notified EPA, requesting them to conduct the before mentioned survey. EPA (if you recall) states that once they have the formal request, they can jump right on it. According to DER, EPA is going to drag their heels and possibly not conduct the survey even after they have received the request. If the survey is conducted; it could possibly take approximately two (2) months to complete.

I'll be in touch.

P.S. Incidently, the only regulations available from EPA are what you have !!! the "EPA FACTSHEET"

Yours truly,

HATBORO BOROUGH AUTHORITY

AR300583

Newt

CNF/dk

C. Newton Finney, Supt.

QUALITY CONTROL LAB

| Sampling Date 10-22-79 * indicates over EPA max. | TCE | PCE |
|---|---|---|
| Well #1 | 103.5 * | 3.6 * |
| " #2 | 69.8 * | 4.0 * |
| " #3 | 22.5 * | 2.4 |
| " #6 | 2.7 | 4.1 * |
| " #7 | 5.3 * | 2.2 |
| " #8 | 8.0 * | 2.0 |
| " #9 | - .5 | 2.1 |
| " #12 | - .5 | .9 |
| " #13 | - .5 | - .5 |
| " #14 | 1.9 | 1.3 |
| " #15 | - .5 | 1.0 |
| " #16 | 34.2 * | 5.0 * |
| " #17 | 410.0 * | 7.5 * |
| " #18 | 2.7 | 5.7 * |
| " #20 | - .5 | 1.0 |
| " #21 | - .5 | .9 |
| 2315 Horsham Road | - .5 | - .5 |
| 212 N. Warminster Rd. | 29.1 * | 1.1 |
| Hydrant-Meadowbrook & Windsor | 8.8 * | 1.1 |
| " Pennypack School | 2.4 | 4.2 * |
| " Main Plant | 42.0 * | 2.0 |
| 52 W. Lehman Ave. | - .5 | 4.2 * |
| Hydrant-Crooked Billet & Moreboro | 2.6 | 1.0 |
| " Livingston | 4.2 | .7 |
| " #13 & Orangeman's Rd. | - .5 | - .5 |
| " Round Meadow & Moore | 28.4 * | 2.5 |
| " Spring & Aintree | 1.2 | .8 |
| " Lancaster Place | 5.8 * | - .5 |

# HATBORO BOROUGH AUTHORITY

HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1633
OSBORNE 5-1634

October 17, 1979

MEMO TO ALL BOARD MEMBERS:
Joseph Lutz
James Bevan
Lou Sayland
V.R. Bitzer
William Kruse

DATE: October 17, 1979

FROM: C. Newton Finney, Supt.

RE: Trichloroethylene (TCE)
Perchloroethylene (PCE)

DER and Mr. Emery collected fifteen (15) duplicate samples on October 11, 1979. DER ships their samples to their Harrisburg Lab via "Purolator". Our samples were sent to Betz Lab for analysis.

For results see enclosed list. (For convenience - please attach sheet to list sent 10/9/79. NOTE: additional sampling points at bottom of list.)

POINTS OF INTEREST

#1. Well #8 - on 9/28/79 Betz Lab reported TCE -.1PPB and PCE -.1PPB. As of 10/11/79 (see results) Actually, we should shut this well down. Keep in mind that the TCE max. allowable is 4.5 PPB.

#2. Check sample from 212 N. Warminster Rd. Look at the PCE (max. allowable is 3.55 PPB) where is this originating?

#3. Check sample from Hydrant (main plant) the PCE is 34.0 PPB.

DER has indicated that a letter of instructions will be forthcoming. I will endeavor to abide with their requirements and keep you posted.

As I had mentioned at the regular October meeting - DER has, or intends to request EPA to conduct a survey of our service area (and adjacent area) to determine the location of the contamination. Our hydro-geoligist will be requested to aide in this survey.

Yours truly,
HATBORO BOROUGH AUTHORITY

AR300585

C. Newton Finney, Supt.

Berz Lab DER

| | | 10/11/79 | | | 10 /79 | |
|---|---|---|---|---|---|---|
| | | TCE | PCE | | TCE | PCE |
| 6 | | 0.9 | 0.1 | | 1.5 | 0.0 |
| 8 | | 10.5 | 0.2 | | 9.0 | 0.0 |
| | RAW WATER | | | RAW WATER | | |
| 17 | | 45.5 | 5.0 | | 41.0 | 3.2 |
| 20 | | 0.1 | 0.2 | | 0.0 | 0.0 |
| 21 | | 0.1 | - 0.1 | | 0.0 | 0.0 |
| | | 51.4 | 18.6 | | 51.0 | 20.0 |
| | | 4.1 | 0.1 | | 5.7 | - .5 |
| | | 0.5 | 5.5 | | 2.5 | 5.4 |
| | | 48.2 | 22.8 | | 60.0 | 34.0 |
| drant-Crooked Billet&Moreboro | | 7.7 | 0.2 | | 9.0 | 0.0 |
| drant-Livingston | | 5.0 | 0.3 | | 5.4 | - 0.5 |
| #13&Orangemens Rd. | | - 0.1 | - 0.1 | | - 0.1 | - 0.1 |
| RoundMeadow&Moore | | 17.8 | 0.8 | | 18.0 | 0.9 |
| Spring & Aintree | | 0.5 | 0.1 | | 1.6 | 0.0 |
| Lancaster Place | | 2.7 | - 0.1 | | [illegible] | [illegible] |

AR300586

| WELL # | | Betz Lab 9/28/79 TCE | Betz Lab 9/28/79 PCE | | Quali Control 10 '79 TCE | Quali Control 10 '79 PCE | | DER 10/3/79 TCE | DER 10/3/79 PCE |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | TREATED WATER | 117.4 | 1.1 | RAW WATER | 134.0 | 1.2 | RAW WATER | 88.0 | 1.2 |
| 2 | TREATED WATER | 100.8 | 1.0 | RAW WATER | 77.3 | 0.5 | RAW WATER | 39.0 | 0.6 |
| 3 | TREATED WATER | 25.7 | 0.2 | RAW WATER | 29.3 | 0.5 | RAW WATER | 4.6 | 0.5 |
| 6 | TREATED WATER | - .1 | - .1 | RAW WATER | | | RAW WATER | | |
| 7 | TREATED WATER | 1.2 | 0.1 | RAW WATER | | | RAW WATER | | |
| 8 | TREATED WATER | 1.2 | 0.1 | RAW WATER | | | RAW WATER | | |
| 9 | TREATED WATER | - .1 | - .1 | RAW WATER | | | RAW WATER | | |
| 12 | TREATED WATER | - .1 | - .1 | RAW WATER | | | RAW WATER | | |
| 13 | TREATED WATER | - .1 | - .1 | RAW WATER | | | RAW WATER | | |
| 14 | TREATED WATER | - .1 | .3 | RAW WATER | | | RAW WATER | | |
| 15 | TREATED WATER | - .1 | - .1 | RAW WATER | | | RAW WATER | | |
| 16 | TREATED WATER | 40.8 | 2.3 | RAW WATER | 108.0 | 2.9 | RAW WATER | 76.0 | 4.2 |
| 17 | TREATED WATER | 249.6 | 4.7 | RAW WATER | 43.9 | 2.5 | RAW WATER | 33.0 | 3.1 |
| 18 | TREATED WATER | - .1 | 3.7 | RAW WATER | 1.8 | 5.0 | RAW WATER | 1.5 | 6.8 |
| 20 | TREATED WATER | - .1 | 0.2 | RAW WATER | | | RAW WATER | | |
| 21 | TREATED WATER | - .1 | - .1 | RAW WATER | | | RAW WATER | | |
| Creek adjacent to W[illegible] #20 | | - .1 | - .1 | | | | | | |
| Creek Blair Mill Road between Monument&Bright | | - .1 | - .1 | | | | | | |
| Creek adjacent to Well #16 | | - .1 | - .1 | | | | | | |
| Private Well 340 W. Monument | | - .1 | - .1 | | | | | | |
| Private Well Red Barn | | - .1 | - .1 | | | | | | |
| Bottled Water | | - .1 | - .1 | | | | | | |
| 2315 Horsham Rd. | | | | | - .1 | - .1 | | - .1 | - .1 |
| 212 N. Warminster Rd. | | | | | 84.0 | 8.8 | | 43.0 | 9.0 |
| 3rd Well Site BMV | | | | | - .1 | - .1 | | | |
| Hydrant-Meadowbrook & Windsor | | | | | 246.0 | 3.3 | | 130.0 | 2.9 |
| Hydrant-Pennypack School | | | | | 2.6 | 6.4 | | 1.8 | 5.2 |
| Hydrant-Main Plant | | | | | 129.0 | 1.7 | | 72.0 | 2.0 |
| 52 W. Lehman | | | | | 2.0 | 3.0 | | 1.4 | 3.0 |

# HATBORO BOROUGH AUTHORITY

## HATBORO, PENNSYLVANIA

WATER SERVICE OFFICE
120 E. MONTGOMERY AVENUE

OSBORNE 5-1631
OSBORNE 5-1634

October 3, 1979

MEMO TO: Joseph W. Lutz
James Bevan
Lou Sayland
V. R. Bitzer
William Kruse

FROM: C. Newton Finney, Supt.

DATE: 10-3-79

RE: Trichloroethylene (TCE)
Perchloroethylene (PCE)
continued from Memo dated October 1, 1979

Results of tests collected on 9/28/79 - Received 10/2/79 A.M.
Note: Maximum Allowable 4.5 PPM

| | TCE | PCE |
|---|---|---|
| #1 | 117.4 | 1.1 |
| #2 | 100.8 | 1.0 |
| #3 | 25.7 | 0.2 |
| #6 | less than .1 | less than .1 |
| #7 | " " 1.2 | 0.1 |
| #8 | 1.2 | 0.1 |
| #9 | Less than .1 | less than .1 |
| #12 | " " .1 | " " .1 |
| #13 | " " .1 | " " .1 |
| #14 | " " .1 | .3 |
| #15 | " " .1 | less than .1 |
| #16 | 40.8 | 2.3 |
| #17 | 249.6 | 4.7 |
| #18 | Less than .1 | 3.7 |
| #20 | " " .1 | 0.2 |
| #21 | " " .1 | less than .1 |
| Creek adjacent to Well #20...Less than | .1 | " " .1 |
| Creek-Blair Mill Rd. bet. Monument& Bright.....Less than | .1 | less than .1 |
| Creek adjacent to Well #16 Livingston ..Less than | .1 | less than .1 |

AR300588

| | TCE | PCE |
|---|---|---|
| Private Well 340 W. Monument Ave... | Less than .1 | Less than .1 |
| Private Well Red Barn | " " .1 | " " .1 |
| Bottled Water | " " .1 | " " .1 |

Authorized Production Manager to shut down wells 1,2,3,16 & 17 immediately until further notice.

Notified DER of results and was informed that they would take water samples of the wells showing concentrations above the allowable limits, samples from the distribution system and other areas where necessary at 8:00 A.M. 10/3/79.

Questioned DER if flushing the distribution system in the areas of the high concentration would be of any value. DER approved.
Started flushing at 11:30 A.M. 10-2-79:
Fire Hydrant - Penn & Montgomery - #1,2,3 wells
Fire Hydrant - Meadowbrook & Lancaster - #17 well
Fire Hydrant - E. County Line at Livingston Aparts.-#16 well
Stopped flushing at 6:00 P.M. 10/2/79

Informed Gilmore & Associates (Bob Schmauk) of results and that he and a hydrogeologist would be responsible for correcting or eliminating the problem.

The Press was informed at 4:00 P.M. 10/2/79.

Yours truly,

Newt

CNF/dk

C. Newton Finney, Supt.