



Superfund Record of Decision:

**New Brighton Site, MN
(Interim Water Treatment)**

TECHNICAL REPORT DATA <i>(Please read Instructions on the reverse before completing)</i>		
1. REPORT NO. EPA/ROD/RO5-83/005	2.	3. RECIPIENT'S ACCESSION NO.
4. TITLE AND SUBTITLE SUPERFUND RECORD OF DECISION: New Brighton Site, MN (Interim Water Treatment)		5. REPORT DATE 06/24/83
		6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT NO.
		11. CONTRACT/GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460		13. TYPE OF REPORT AND PERIOD COVERED Final ROD Report
		14. SPONSORING AGENCY CODE 800/00
15. SUPPLEMENTARY NOTES		
16. ABSTRACT <p>The municipal drinking water wells in the City of New Brighton/Arden Hills were found to be contaminated with volatile organic solvents in June 1981. The City opened two new wells in 1982 to reach a lower non-contaminated water aquifer. Since discovery of the contamination, the levels of hazardous substances have increased the remaining undeeptened municipal wells. The city is presently drilling two additional deeper wells. However, these new wells will not be available until the end of the year. Despite water restrictions, anticipated summertime peak demands for water will not be met without drawing water from contaminated wells.</p> <p>The cost-effective initial remedial measure (IRM) selected for this site is treatment of the New Brighton/Arden Hills wells #5 and #6 with granular activated carbon to meet anticipated peak summertime demands. The capital cost for this IRM is estimated to be \$150,400 and O&M costs are \$30,526 for four months.</p> <p>Key Words: Granular Activated Carbon (GAC), Potable Water Supply, DOD, Federal Facilities, Off-Base Contamination, Fire Protection</p>		
17. KEY WORDS AND DOCUMENT ANALYSIS		
a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Record of Decision: New Brighton Site, MN (Interim Water Treatment) Contaminated media: gw Key contaminants: VOCs, solvents, TCE		
18. DISTRIBUTION STATEMENT	19. SECURITY CLASS (This Report) None	21. NO. OF PAGES 24
	20. SECURITY CLASS (This page) None	22. PRICE

ROD ISSUES ABSTRACT

Site: New Brighton/Arden Hills, Minnesota

Region: V

AA, OSWER

Briefing Date: June 24, 1983

SITE DESCRIPTION

The municipal drinking water wells in the City of New Brighton/Arden Hills were found to be contaminated with volatile organic solvents in June 1981. The City opened two new wells in 1982 to reach a lower non-contaminated water aquifer. Since discovery of the contamination, the levels of hazardous substances have increased in the remaining undeepened municipal wells. The city is presently drilling two additional deeper wells. However, these new wells will not be available until the end of the year. Despite water restrictions, anticipated summertime peak demands for water will not be met without drawing water from contaminated wells.

SELECTED ALTERNATIVE

The cost-effective initial remedial measure (IRM) selected for this site is treatment of the New Brighton/Arden Hills wells #5 and #6 with granular activated carbon to meet anticipated peak summertime demands. The capital cost for this IRM is estimated to be \$150,400 and O&M costs are \$30,526 for four months.

ISSUES AND RESOLUTIONS

1. A fast-track RI/FS was conducted to assess alternatives to provide the City with potable water to meet anticipated summertime peak demands. The FS recommended a hydraulic connection with a neighboring community's water system. The City objected due to taste and odor problems with the nearby system and requested that granular activated carbon (GAC) be used for treating the contaminated wells. As a result the cost estimate for carbon treatment was reevaluated. Based on new information from the prospective suppliers of the treatment system, the revised costs were estimated to be essentially the same as a connection to the nearby water system. Therefore, the feasibility study was amended and carbon treatment was recommended.

KEY WORDS

- . Granular Activated Carbon (GAC)
- . Potable Water Supply

New Brighton/Arden Hills, Minnesota
June 24, 1983
Continued

ISSUES AND RESOLUTIONS

KEY WORDS

2. Fund-financed response actions are not authorized for releases from Federal facilities. The Twin Cities Army Ammunition Plant, a Federal facility, is one of several potential sources of contamination. However, fund-financed response actions were authorized because it has not been determined that the problems addressed in the IRM originate from the Federal facility.
- . Federal Facilities.

JUN 24 1983

RECORD OF DECISION
Initial Remedial Measure

SITE: New Brighton/Arden Hills Site
New Brighton, Minnesota

ANALYSIS REVIEWED:

I have reviewed the following documents describing the analysis of cost-effectiveness of remedial alternatives at the New Brighton/Arden Hills Site:

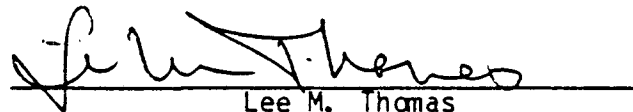
- Remedial Action Master Plan, New Brighton, CH₂M Hill, January 29, 1983.
- Focused Remedial Investigation/Feasibility Study, New Brighton, CH₂M Hill, May 29, 1983.
- Resolution of the City Council of New Brighton No. 83-69, May 24, 1983.
- Staff summaries and recommendations.

DESCRIPTION OF SCHEDULED OPTION:

- Interim Water treatment system for the City of New Brighton wells #5 and #6 for peak demand periods for the summer using granular activated carbon (project duration 4 months).

DECLARATIONS:

Consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), and the National Contingency Plan (40 CFR Part 300), I have consulted with the State of Minnesota prior to determining the appropriate remedial action. I have determined that the granular activated carbon treatment for the New Brighton Site is a feasible and cost-effective remedial action necessary to protect public health and the environment. I have also determined that the action being taken is appropriate when balanced against the resources available in the Trust Fund and the need to respond at other sites.



Lee M. Thomas
Acting Assistant Administrator
Office of Solid Waste & Emergency Response



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

June 22, 1983

OFFICE OF
GENERAL COUNSEL

MEMORANDUM

SUBJECT: New Brighton/Arden Hills Site

FROM: Lisa K. Friedman *LF*
Associate General Counsel
Solid Waste & Emergency Response
Division (LE-132S)

TO: Lee M. Thomas
Assistant Administrator for Solid Waste
and Emergency Response (WH-562A)

I concur in your decision to undertake an initial remedial action (IRM) at the New Brighton/Arden Hills site on the following condition: that the Agency has not determined that the problems to be addressed by the IRM result from a release from a Federally-owned facility.

New Brighton/Arden Hills Site
Remedial Action
Briefing Document

Purpose of this briefing is to obtain AA approval for the initial remedial measure recommended by the Region and the State for the New Brighton/Arden Hills Site. A "Record of Decision" has been prepared to document the approval.

The New Brighton/Arden Hills Site is contaminated with volatile organic solvents found in drinking water. The plume has spread over approximately 18 square miles potentially contaminating the drinking water supplies of 48,000 residents. Source(s) for the contamination have not been positively identified.

This contamination was found in New Brighton's municipal drinking water wells in June 1981. The City of New Brighton deepened two city wells in 1982 to reach a lower noncontaminated water aquifer. Since discovery of the contamination, the levels of hazardous substances have increased in the undepened municipal wells. The City of New Brighton is presently drilling two additional deeper wells. Although this program is progressing as fast as possible, these new wells will not be available until late this year.

Despite water restrictions, anticipated summertime peak demands for water will not be able to be met without drawing water from contaminated wells. The New Brighton water system does not blend the water as it is pumped from the municipal wells; therefore, the contaminated ground water will not be diluted by blending with uncontaminated water.

The City engineer of New Brighton estimates that an additional 2 million gallons per day (mgd) capacity will be required to meet peak summer demands, although normal use should require only an average of 1 mgd. Recognizing the need for expeditious remedial action, EPA conducted a fast-track RI/FS to assess available alternative actions.

CH₂M Hill completed a RI/FS in May 1983. Three alternatives were considered:

Hydrologic connection to a Minneapolis water reservoir	\$185,209	2-3 weeks for implementation
Treatment of New Brighton municipal wells #5 and #6 with granular activated carbon	\$180,926	2-3 weeks for implementation
Treatment of New Brighton municipal wells #5 and #6 with air stripping	\$144,865	6-7 weeks for implementation

The costs noted above include the present worth cost of both capital and O & M costs for the project life which is four (4) months.

A public meeting was held in New Brighton, Minnesota on May 23, 1983. Approximately 40 people attended. The State presented a brief background on what is known about the contamination problem. The CH₂M Hill Project Officer presented a summary of results and the recommended initial remedial measure to those in attendance for review and comment. The recommended alternative was connection to the Minneapolis water supply. There was some concern among those present regarding the pipeline connection to Minneapolis due to perceived taste and odor problems with this water during summer months. U.S. EPA informed the public that additional comments could be submitted during the two-week period following the meeting. Copies of the feasibility study were made available to the public on May 26, 1983. The two-week public comment period ended on June 9, 1983. The only written comment received was a resolution from the City Council of New Brighton (See Attachment D). The resolution requested treatment of the New Brighton wells with granular activated carbon.

Based on consideration of public comments and review of the CH₂M Hill FS and addendum (copy attached), EPA has determined that granular activated carbon (GAC) treatment of the municipal water wells # 5 and # 6 is the appropriate initial remedial measure to be implemented. The Regional Office of Drinking Water, the Minnesota Pollution Control Agency, the Minnesota Department of Health and the City of New Brighton concur in this decision.

The installation of GAC constitutes one part of the IRM. Private drinking wells and the City of St. Anthony will be addressed later in a separate Record of Decision.

This "Record of Decision" certifies that:

- The selected initial remedial measure is a cost-effective remedy for the site.
- The selected initial remedial measure will effectively protect the public health.
- Monies are available in the Fund to finance the remedy.

Presently there is no enforcement action on-going with this site. Letters were sent to potential responsible parties on June 6, 1983 notifying the parties of the recommended IRM and giving them seven (7) days to inform U.S. EPA if they wish to perform this IRM.

The following actions are required to move this IRM into constructi

- Approve recommended IRM AA, OSWER

- Enforcement release U.S. EPA - Region V
Notification time (7 days) to
potential responsible parties
- Approve proposed cooperative agreement - Awarded June 17, 1983
Design IRM U.S. EPA - Region V
Construct IRM U.S. EPA - Region V

Remedial Implementation Alternative Selection
New Brighton/Arden Hills Site
New Brighton, Minnesota
June 3, 1983

HISTORY

The New Brighton/Arden Hills Site is located immediately north of Minneapolis/ St. Paul, Minnesota (See Attachment A). In June 1981, the Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Health (MDH) found solvent contamination of the groundwater used for drinking water in the City of New Brighton and surrounding communities. More than 150 area wells have been sampled by the State of Minnesota, the U.S. EPA Field Investigation Team (FIT), and Army contractors. Fifteen volatile organic priority pollutants were found. Although the major contaminant is trichloroethylene (TCE), each well contaminated by TCE is typically also contaminated with other volatile organic chemicals. Contaminant concentrations occur at levels warranting serious concern over potential adverse impacts upon public health. MDH has ordered several municipal and private wells closed. Retests, although few in number, have indicated increasing concentrations of some contaminants. The U.S. Army is a potential source of contamination at the site. However, the RI/FS has not been completed and it is not possible to determine that the problems at New Brighton result from a release from a federal facility.

The most probable source(s) of the groundwater contamination lies within Ramsey County, northeast of the City of New Brighton, a suburb of the Twin Cities. The identified plume of contaminated groundwater underlies approximately 18 square miles of Ramsey and Hennepin Counties. Several potential sites have been identified so that each may be the primary and/or a contributing source of the contamination.

A draft Remedial Action Master Plan (RAMP) for this site was prepared and submitted to U.S. EPA Region V in late 1982. On May 2, 1983, a feasibility study for a temporary water supply for the cities of New Brighton and St. Anthony and several private homes on private wells was authorized by U.S. EPA Headquarters. A preliminary site investigation by the feasibility study contractor (CH₂M Hill), MPCA, and the regional U.S. EPA Project Officer was conducted on May 9 to 11, 1983. Discussions with City officials and MPCA staff indicated that, of the three study areas, New Brighton had the most immediate need for a temporary, drinking water source to augment existing supplies over the peak (summertime) demand period. Without temporary augmentation in New Brighton starting in June, either: (1) severe water pressure drops could occur in the City distribution system due to inadequate supply, thereby creating a significant risk in the event of a major fire, or (2) contaminated wells would have to be pumped, thereby violating an MDH ban on their use and exposing the population to a contaminated water source.

Because New Brighton's need is immediate compared to the other two study areas, the feasibility study addressed only New Brighton. The other study areas will be addressed in later feasibility

CURRENT STATUS

Prior to June 1981, New Brighton operated eight municipal wells, designated Wells 2 through 9. Contamination was detected in all wells but in significantly varying degrees. In response to a MDH order, the City embarked on a program to provide residents with a noncontaminated water supply. Following a comprehensive study by the City, they concluded that the best long-term solution was to deepen existing wells into the noncontaminated Mt. Simon/Hinckley aquifer where possible, and/or develop new wells into this formation if necessary. Wells 8 and 9 have already been deepened. Wells 2 and 7 have trace levels of contamination. Wells 2, 7, 8, and 9 are currently in service and supply a total capacity of 5.1 mgd. However, during the summer peak-use period (June 1 to October 1), maximum daily water demands run as high as three times the average daily rate, or 7.5 mgd. Consequently, City engineers are projecting a summer peak period shortfall of approximately 2.4 mgd. The construction of Wells 10 and 11, originally planned for startup in early 1983, has been delayed due to unforeseen drilling problems. It is believed however that these wells will be producing by late 1983.

In discussions with New Brighton City engineers, and a review of historical water demands, it has been agreed that a temporary summertime water augmentation of approximately 2.0 mgd will provide the City with enough capacity to meet their peak requirements and that an average quantity of 1 mgd will be required. Further, if treatment and use of an existing well source is to be considered, the only likely candidates are Wells 5 and 6 due to their capacity (2.2 mgd total), location, and ability to integrate a treatment system quickly. Wells 5 and 6 are currently used only for emergency standby since the contamination levels in the wells exceed State standards.

The feasibility study and addendum published by CH₂MHill in May 1983, identified three alternatives as an initial remedial measure for the New Brighton/Arden Hills Site as follows:

Hydrologic connection to a Minneapolis water reservoir	\$185,209*
Treatment of New Brighton Municipal Wells #5 & 6 with granular activated carbon	\$180,926*
Treatment of New Brighton Municipal Wells #5 & 6 with air stripping	\$144,865* +

* (Present worth cost for capital and O&M costs for life of the project - 4 months).

+ Implementation would take 6-7 weeks as compared to 2-3 weeks for the other alternatives.

Each of the alternatives summarized above would provide adequate protection of public health, welfare and the environment.

On May 23, 1983, at a public meeting in New Brighton, Minnesota the findings and recommendations of the CH₂M Hill report were presented by the CH₂M Hill Project Officer. MPCA, MDH, and U.S. EPA Region V were also at the meeting. The residents in attendance raised objections to the use of Minneapolis water due to perceived taste and odor problems. Members of the City Council of New Brighton also share this concern. The Minneapolis water according to MPCA files does have trace amounts of contaminants in it.

Following the public meeting, the feasibility study was made available to the public for a comment period of two weeks. The feasibility study was sent to U.S. EPA Headquarters for review prior to release. Regional Counsel and the Regional Response Branch also reviewed the feasibility study. The City of New Brighton and MPCA also reviewed and commented on the feasibility study prior to public release. Based on review of all available data, findings, recommendations of current and past technical studies, and public comments, the Region (in concurrence with the Regional Office of Drinking Water Quality) recommend approval of treating wells No. 5 and 6 using granular activated carbon. The system would utilize 80,000 pounds of virgin activated carbon approved for potable water service. The system would provide 13 minutes contact time at a total design flow rate of 1500 gpm. The length of the project is 4 months. Total capital costs and O&M costs are shown in Attachment B. Testing of the water for water quality will be done by the City of New Brighton.

RECOMMENDED ALTERNATIVE

Section 300.68(e)(1) of the National Oil and Hazardous Substances Contingency Plan (NCP) states that initial remedial measures should be taken when they are determined to be feasible, cost-effective, and necessary to limit exposure to a significant health hazard. Based on our evaluation of the cost-effectiveness of each of the proposed alternatives, the comments received from the public and the City Council of New Brighton, information from the State (MPCA and MDH) and from the Regional Office of Drinking Water, we have determined that the IRM utilizing granular activated carbon meets the NCP criteria.

PROPOSED ACTION

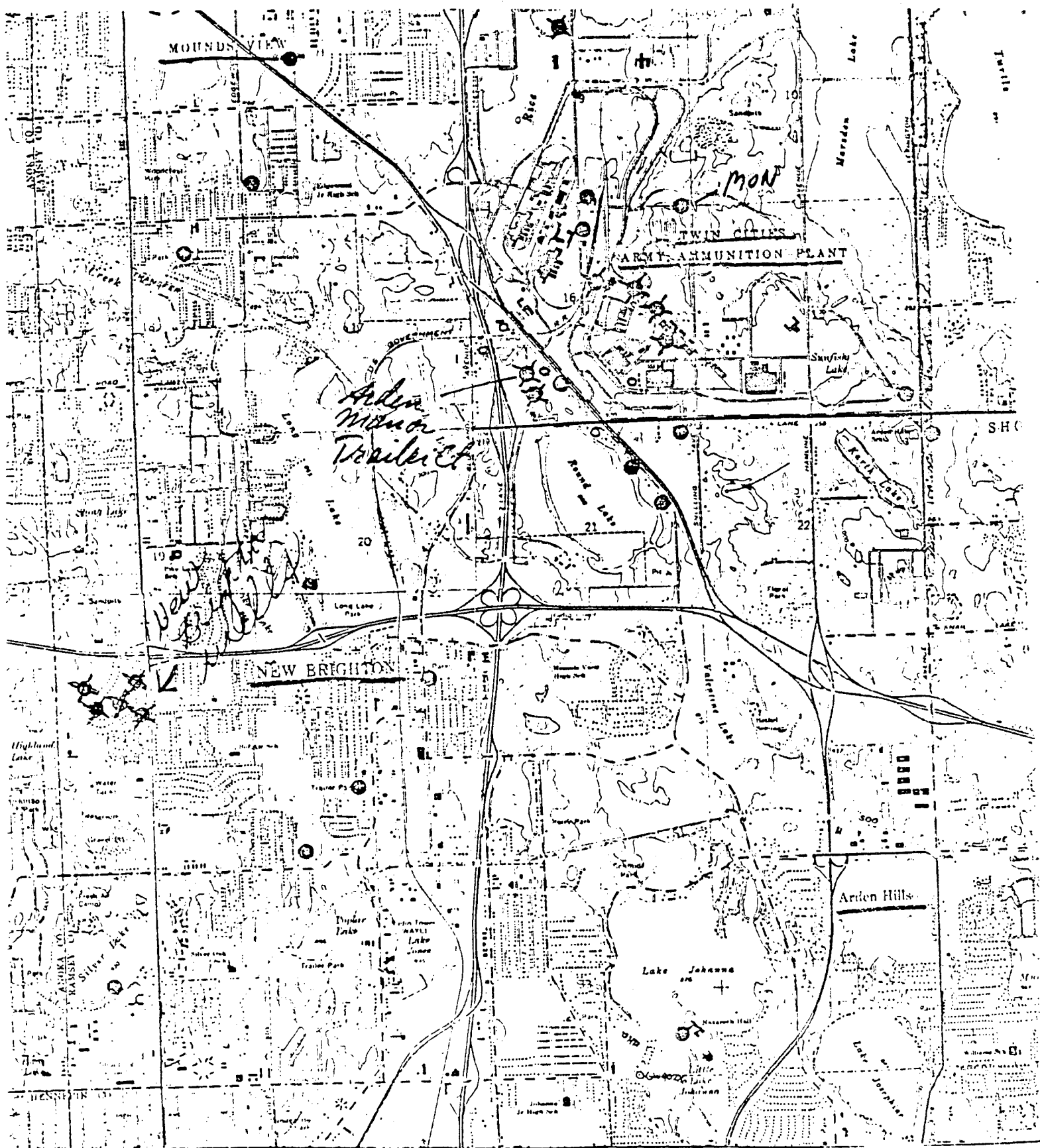
We request your approval of this IRM for granular activated carbon for treatment of municipal water wells 5 and 6 in New Brighton, Minnesota. Attachments B-D provide additional information to support the documentation for this decision.

TENTATIVE SCHEDULE

Advise and receive bids	U.S. EPA (CH ₂ M Hill) Completed
Design and construction of selected IRM	Following bid receipt, tabulation, and recommendation of award

If you have any questions please call Karen Waldvogel at (312) 886-7573.

Attachments as noted



Gettysburg, Pa.

ADDENDUM NUMBER 1
TO
DRAFT FEASIBILITY STUDY
TEMPORARY WATER SUPPLY
NEW BRIGHTON, MN
MAY 27, 1983

As indicated in a footnote in Section 9, page 9-1, of the subject Feasibility Study, it was anticipated that the activated carbon system supplier, whose equipment and costs were used in the study, would submit a revised proposal. This proposal was received and evaluated and is the subject of this addendum.

The purpose of any Feasibility Study is to evaluate alternatives and recommend the most cost-effective solution to the problem consistent with sound engineering principles and judgement. With this in mind, the referenced Feasibility Study recommended that a temporary pipeline be installed from Minneapolis' Hilltop Reservoir to New Brighton's distribution and storage system at an evaluated cost of \$1.76/1,000 gallons of water used. The activated carbon alternative was evaluated at \$1.98/1,000 gallons (See Table 8-1).

The carbon system supplier's revised proposal contained several significant additions, at no additional cost, which had the effect of eliminating the previously applied cost contingency of \$27,200 (Table 6-1) and reducing their evaluated cost to \$1.72/1,000 gallons. The table below summarizes the revised carbon system costs. Refer to Tables 6-1, 6-2 and 8-1 for previous cost figures.

TOTAL COSTS
CARBON ALTERNATIVE (REVISED)

Carbon System Lease	\$136,000
Power & Pipe Connections	5,000
Subtotal, Facilities	<u>141,000</u>
Engineering, CM	9,400
Contingency	0
Project Capital Estimate	<u>150,400</u>
O&M Costs	30,526
Total Project Cost	<u>\$180,926</u>
Water Rate, \$/1,000 gallons (At 105 days and 105 MG)	\$1.72

Attachment B

Further, in an attempt to offset the potential risks with the carbon system described in Sections 6 and 8 (pages 6-3, 8-1 and 8-3), the carbon system supplier has proposed to 1) provide an equipment or operational performance bond equal to their proposal price (\$126,000) at no additional cost, and 2) provide up to an additional 80,000 lbs of virgin carbon if premature break through of contamination occurs before the 105 day performance period ends.

All of the above considerations, coupled with the New Brighton water department and city council's expressed desire for an activated carbon system over the pipeline alternative, have necessitated a concerted and critical reevaluation of the previous pipeline system recommendation. At this time, based on the available information, the most cost-effective choice now appears to be the carbon system. Further, it is believed that any accompanying risks with this acknowledged novel system design can be offset by the proposed performance bond. Consequently, the recommendation of this feasibility study should be changed from the pipeline alternative to the carbon alternative, subject to negotiation of contract terms with the carbon system supplier.

Subject: Review of New Brighton, MN Temporary
Water Supply Treatment for Organic Removal

From: JFH, Office of Drinking Water, Region II

To: Russ Dieffenbach

We have reviewed the CH2M Hill and Carbon Services, Inc. reports on proposed method of short term treatment of New Brighton drinking water for organic chemical contamination reduction.

It is our opinion that the Engineer's original recommendation of providing an interconnection with the City of Minneapolis water system is the best solution to the problem from a long range standpoint, but there appears to be local political opposition to this alternative.

We have discussed the Carbon Services, Inc. proposal with staff at the Minnesota Department of Health, and we are in agreement that the equipment described will adequately and safely provide ~~the~~ temporary reduction of organic chemical levels in the New Brighton well water.



June 1, 1983

Ms. Karen Waldvogel
U.S. EPA
Region V
230 South Dearborn Street
Chicago, Illinois 60604

TEMPORARY WATER SUPPLY
CITY OF NEW BRIGHTON, MINNESOTA

Karen, enclosed is a resolution adopted by the New Brighton City Council on May 24, 1983 requesting the U.S. Environmental Protection Agency to provide a temporary water supply to meet Summer water needs and stating a strong preference for the carbon adsorption option discussed in the May 26, 1983 draft feasibility study prepared by CH2M Hill.

Thank you for this opportunity to provide City input.

Sincerely,

A handwritten signature in cursive script that reads 'Leslie Proper'.

Leslie J. Proper, P.E.
Director of Public Works

mh

Enclosure

cc: Steve Lee, MPCA

Attachment

RESOLUTION NO 83-69

STATE OF MINNESOTA
COUNTY OF RAMSEY
CITY OF NEW BRIGHTON

RESOLUTION REQUESTING U.S. ENVIRONMENTAL PROTECTION AGENCY TO
PROVIDE TEMPORARY WATER SUPPLY AND STATING PREFERENCE FOR CARBON
ADSORPTION OPTION

WHEREAS, the City of New Brighton has had several of its
water supply wells contaminated with volatile organic hydro-
carbons; and


WHEREAS, in order to comply with a directive from the
Minnesota Department of Health to provide non-contaminated water
to its residents, the City will need a temporary water supply
to meet Summer water peak needs in 1983; and

WHEREAS, the U.S. Environmental Protection Agency has funded
a feasibility study to determine alternative methods of providing
the needed temporary water supply.

NOW THEREFORE BE IT HEREBY RESOLVED by the City Council of
the City of New Brighton that the City hereby requests that the
U.S. Environmental Protection Agency provide a temporary water
supply to meet the City's 1983 Summer water needs; and

BE IT FURTHER RESOLVED that the City strongly prefers the
carbon adsorption option outlined in the May 26, 1983 draft
feasibility study prepared by CH2M Hill.

Adopted this 24th day of May, 1983.

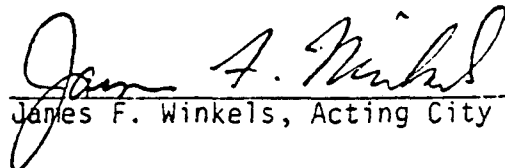


Gregory B. Marcus, Mayor

ATTEST:



Margaret A. Egan, City Clerk



James F. Winkels, Acting City Manager

(SEAL)

FB85-213940



Superfund Record of Decision:

New Brighton Site, MN (Water Supply System)

Hazardous Waste Collection
Information Resource Center
US EPA Region 3
Philadelphia, PA 19107

U.S. Environmental Protection Agency
Region III Hazardous Waste
Technical Information Center
841 Chestnut Street, 9th Floor
Philadelphia, PA 19107

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EPA Report Collection
Information Resource Center
US EPA Region 3
Philadelphia PA 19107

TECHNICAL REPORT DATA <i>(Please read Instructions on the reverse before completing)</i>		
1. REPORT NO. EPA/ROD/R05-83/005	2.	3. RECIPIENT'S ACCESSION NO.
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		6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)		8. PERFORMING ORGANIZATION REPORT NO.
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		11. CONTRACT/GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency 401 M Street, S.W. Washington, D.C. 20460		13. TYPE OF REPORT AND PERIOD COVERED Final ROD Report
		14. SPONSORING AGENCY CODE 800/00
15. SUPPLEMENTARY NOTES		
16. ABSTRACT <p>The municipal drinking water wells in the City of New Brighton/Arden Hills were found to be contaminated with volatile organic solvents in June 1981. The City opened two new wells in 1982 to reach a lower non-contaminated water aquifer. Since it was first discovered, the contamination levels have increased in the remaining undeeptened municipal wells to approximately 70 ppb trichloroethylene (TCE) The Minnesota Department of Health has ordered several municipal and six private wells closed. The users of the private wells are at present being supplied with bottled water.</p> <p>The cost-effective Initial Remedial Measure (IRM) is to extend the existing water supply system to the New Brighton and Arden Hills private well users whose wells have been found to be contaminated with TCE and other chlorinated organics. Capital costs for the IRM are estimated to be \$217,958.</p> <p>Key Words: Ambient Water Quality Criteria, Municipal Water System, Potable Water System, Potable Water Supply, DOD, Federal Facilities, Off-Base Contamination, Fire Protection</p>		
17. KEY WORDS AND DOCUMENT ANALYSIS		
a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Record of Decision New Brighton Site, MN Contaminated media: gw Key contaminants: volatile organic solvents, chlorinated organics (TCE)		
18. DISTRIBUTION STATEMENT	19. SECURITY CLASS (This Report) None	21. NO. OF PAGES 24
	20. SECURITY CLASS (This page) None	22. PRICE

ROD ISSUES ABSTRACT

Site: New Brighton/Arden Hills, Minnesota

Region: V

AA, OSWER

Briefing Date: September 19, 1983

SITE DESCRIPTION

The municipal drinking water wells in the City of New Brighton/Arden Hills were found to be contaminated with volatile organic solvents in June 1981. The City opened two new wells in 1982 to reach a lower non-contaminated water aquifer. Since it was first discovered, the contamination levels have increased in the remaining undeepened municipal wells to approximately 70 ppb trichloroethylene (TCE). The Minnesota Department of Health has ordered several municipal and six private wells closed. The users of the private wells are at present being supplied with bottled water.

SELECTED ALTERNATIVE

The cost-effective Initial Remedial Measure (IRM) is to extend the existing water supply system to the New Brighton and Arden Hills private well users whose wells have been found to be contaminated with TCE and other chlorinated organics. Capital costs for the IRM are estimated to be \$217,958.

ISSUES AND RESOLUTIONS

1. The EPA agreed to extend an existing water supply system to users of private wells with TCE concentrations exceeding the Ambient Water Quality Criteria (27 ppb based on increased cancer risk of 10^{-5}). It was originally recommended to provide a connection to a private water supply system. However, affected residents felt that a private system would be unreliable and requested connection with the municipal system. It was decided that the slight increase in cost to use the municipal system was justified because long-term operation and maintenance would be more reliable.

KEY WORDS

- . Ambient Water Quality Criteria
- . Municipal Water System
- . Potable Water Supply

New Brighton/Arden Hills, Minnesota
September 19, 1983
Continued

ISSUES AND RESOLUTIONS

2. The Twin Cities Army Ammunition Plant is a potential source of contamination. EPA, the State, and the Army have established a task force to coordinate various investigations and share data. The Army believes it is not responsible for the off-base contamination; the source has not in fact been positively identified. Trust Fund monies were used because it was not clearly established that the contamination originated at a Federal facility.
3. The water lines were increased by one pipe size (i.e., from 4 to 6 inches) to provide capacity for fire protection. The increased cost was considered an eligible fund expense.

KEY WORDS

- . DOD
- . Federal Facilities
- . Off-Base Contamination
- . Fire Protection

SEP 19 1983

Record of Decision
Initial Remedial Measures

SITE: New Brighton/Arden Hills Site
New Brighton, Minnesota

ANALYSIS REVIEWED:

I have reviewed the following documents describing the analysis of cost-effectiveness of remedial alternatives at the New Brighton/Arden Hills Site:


- Remedial Action Master Plan, New Brighton, CH2M Hill, January 29, 1983.
- Focused Remedial Investigation/Feasibility Study, Private Well Users, New Brighton and Arden Hills, Mn., CH2M Hill, June 27, 1983.
- Office Memorandum, Minnesota Department of Health, July 5, 1983
- Remedial Implementation Alternative Selection, EPA, August, 31 1983
- Public comments and Staff summaries and recommendations.

DESCRIPTION OF SCHEDULED OPTION:

- Extend existing water supply system to the New Brighton and Arden Hills private well users whose wells have been found to be contaminated with trichloroethylene and other chlorinated organics.

DECLARATIONS:

Consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), and the National Contingency Plan (40 CFR Part 300), I have consulted with the State of Minnesota prior to determining the appropriate remedial action. I have determined that water main and service connections for the New Brighton and Arden Hills private well users is a necessary and timely remedial action to protect public health and the environment, and is a feasible and cost-effective remedy. I have also determined that the action being taken is in balance with available resources in the Trust Fund and other program demands.



Lee M. Thomas
Acting Assistant Administrator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 19 1983

OFFICE OF
GENERAL COUNSEL

MEMORANDUM

SUBJECT: Record of Decision for IRM at New Brighton,
Minn.

FROM: Lisa K. Friedman ²⁻²
Associate General Counsel
Solid Waste and Emergency Response
Division (LE-132S)

TO: Lee M. Thomas
Assistant Administrator for Solid Waste
and Emergency Response

I concur with the above-cited action. However, as Dan Berry noted in the September 16 meeting, we may face substantial problems in recovering the additional costs attributable to the decision to hook up to the city water system.

Remedial Implementation Alternative Selection
New Brighton/Arden Hills, Minnesota
August 31, 1983

PURPOSE

The purpose of this briefing is to obtain AA approval for the initial remedial measure recommended by the Region and the State for the New Brighton/Arden Hills Site. A "Record of Decision" has been prepared to document the approval.

BACKGROUND

The New Brighton/Arden Hills Site is located immediately north of Minneapolis/ St. Paul, Minnesota. In June 1981 the Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Health (MDH) found solvent contamination of the ground water used for drinking water in the City of New Brighton and surrounding communities. More than 150 area wells have been sampled by the State of Minnesota, the U.S. EPA Field Investigation Team (FIT), and Army contractors. Fifteen volatile organic priority pollutants were found. Although the major contaminant is trichloroethylene (TCE), each well contaminated by TCE is typically also contaminated with other volatile chemicals. These contaminant concentrations occur at levels high enough to warrant serious concern over the potential adverse impacts upon public health. In fact, MDH has ordered several municipal and six private wells closed. Private wells have TCE levels up to 2700 ppb which is significantly higher than EPA's Ambient Water Quality Criteria of 27ppb (based on increased cancer risk of 10^{-5}). Retests although few in number, have indicated increasing concentrations of some contaminants.

Source(s) for the contamination have not been positively identified. However, the most probable source(s) of the ground water contamination lies within Ramsey County, northeast in the City of New Brighton. The identified plume of contaminated ground water underlies approximately 18 square miles of Ramsey and Hennepin Counties. Several potential sites have been identified that may each be the primary and/or contributing source of the contamination. One potential source of contamination is the Twin Cities Army Ammunition Plant (TCAAP). The Army has completed the first phase of an investigation of the on-base contamination but, they believe they are not responsible for any off base contamination. The second phase of the Army's study is on-going to further evaluate on-base contamination. A task force has been established between EPA, the State and the Army to share data and coordinate the various investigations being conducted.

RESPONSE ACTIONS TO DATE

Contamination was found in New Brighton's municipal drinking water wells in June 1981. The City of New Brighton has deepened two city wells in 1982 to a lower noncontaminated water aquifer. Since discovery the contamination levels have increased in the remaining undeeptened municipal wells to approximately 70 ppb of TCE. The City of New Brighton is presently drilling two additional deeper wells. Although this program is progressing as fast as possible, these new wells will not be available until late this year.

CERCLA activities at the site are proceeding in two steps. The first step addresses the short term problem posed by the contaminated water supplies. EPA has conducted three limited feasibility studies for the areas with contaminated water supplies. The first feasibility study for the summertime water supply for the City of New Brighton municipal wells was completed and a Record of Decision was approved on June 24, 1983. The chosen Initial Remedial Measure (IRM) has been implemented by EPA. This action consisted of installation of granular activated carbon filters on two undeeptened wells to treat water during the peak summer demand.

The second feasibility study for temporary water supply for St. Anthony, Mn. was completed on June 27, 1983. At present, St. Anthony does not have excessive levels of contamination, but low levels to trace levels of contaminants have been found. The feasibility study for St. Anthony will be finalized only if contaminants continue to increase; therefore, no IRM is being recommended now. The third feasibility study for temporary water supply for the private well users in New Brighton and Arden Hills was completed in draft form for public comment on June 27, 1983. The accompanying Record of Decision addressed the recommendation of that study.

The second step of CERCLA activity at the site consists of an on-going area wide remedial investigation to evaluate the extent and source(s) of ground water contamination. At this point, EPA does not know the source(s) of contamination. The State is managing this project under a cooperative agreement with EPA. The project is expected to be completed in December 1984 and will be followed by a feasibility study.

CURRENT STATUS OF PRIVATE WELL AREA

Six private New Brighton/Arden Hills wells are contaminated with excessive levels of volatile organic chemicals. The users of these wells are at present being supplied with bottled water by the Department of Defense, (DOD) (see attachment A). DOD has not accepted responsibility for ground water contamination outside

of the TCAAP. The Army intends to stop supplying bottled water to the private wells following construction of the IRM. TCAAP was sent a notice letter but did not respond (see Enforcement Status).

The users of these wells have been advised by the Minnesota Department of Health not to use their water for cooking or drinking, and some users have been told not to use their water for any purpose.

ALTERNATIVE EVALUATION

Eleven alternatives were considered to replace the contaminated well water. These alternatives were evaluated by a set of weighed criteria: health, reliability, feasibility, implementability, permanence (meaning active governmental participation during the life of the project), time required to implement, operation and maintenance. This evaluation is presented in numerical terms (see attachment B) and demonstrates that only two of the alternatives were worth further consideration: a new pipeline connection to an existing supply and a deep well to the uncontaminated Mt. Simon/Hinckley aquifer with a new distribution system. Continuation of bottled water supplies were eliminated from further consideration since long-term costs were significantly higher than other alternatives and the long-term use of bottled water was not considered an acceptable remedy. The costs associated with each of these alternatives is summarized below:

<u>Alternatives</u>	<u>Estimated Capital Cost</u>
Pipeline from existing supply*	\$ 217,958
Deeper wells	\$ 440,400

*Fire protection was included in this cost estimate.

On June 28, 1983 at a public meeting in St. Anthony, Minnesota the findings and recommendations of the CH2M Hill report were presented. MPCA, MDH, and U.S. EPA Region V were at the meeting. The residents in attendance raised objections to connecting the pipeline to the Arden Manor trailer park water supply and preferred connection to the Arden Hills municipal system. The residents felt that since this is a private water supply system there would be very little if any control over the quality of the water. It was decided to use the public water system because the long-term operation and maintenance would be more reliable. Following the public meeting on June 28, 1983, the feasibility study was made available to the public for a public comment period of two weeks. Prior to release of the feasibility study a copy was sent to U.S. EPA Headquarters, Regional Counsel, and the Regional Office of Drinking Water Quality for review and comments. Written

communications from the area residents include a request to connect to Arden Hills water supply rather than to the Arden Manor trailer park system plus they also ask if fire protection could be included. There was also one letter from Briggs and Morgan, attorneys that represent the residents involved in a class action law suit against Honeywell and the U.S. Army asking that the water pipeline also be extended to residences along Round Lake, south of Highway 96. However, the MPCA feels that these homes do not have excessive levels of contaminants at present to warrant this action. Based on review of all available data, findings, recommendations of current and past technical studies, the Region and State recommends the approval of a pipeline connection as stated in the feasibility study, with the exception that the connection be to the City of Arden Hills or New Brighton depending on proximity, in lieu of the the Arden Manor trailer park water supply system.

ENFORCEMENT STATUS

Presently there is no enforcement action on-going with this site. The potential responsible parties were notified in August 1983 of the IRM that is being recommended and were given seven (7) days to inform U.S. EPA if they wish to perform the IRM. No responses were received accepting responsibility for implementation of the IRM. OWPE has determined that the potential responsible parties will not voluntarily conduct the IRM and that CERCLA funds can be used.

RECOMMENDED ALTERNATIVE

Section 300.68 of the National Oil and Hazardous Substances Contingency Plan (NCP) states that the appropriate extent of remedy shall be determined by the lead agency's selection of the remedial action which the agency determines is cost-effective (i.e., the lowest cost alternative that is technologically feasible and reliable) and which effectively mitigates and minimizes damage to and provides adequate protection of public health, welfare, or the environment. Based on our evaluation of the cost-effectiveness of each of the proposed alternatives, the comments received from the public, the Regional Office of Water Quality, and information from the State (MDH and MPCA), we have determined that the IRM to provide an alternative water supply by installation of a pipeline meets the NCP criteria.

The IRM selected is a pipeline connection from the City of Arden Hills or the city of New Brighton depending on the closeness of the pipelines to the affected residences. The Regional Office of Drinking Water, the Minnesota Pollution Control Agency, the Minnesota Department of Health and the Cities of New Brighton and Arden Hills concur in this decision. The State has agreed to provide its 10 percent cost-share through an amendment to the existing site cooperative agreement.

The Record of Decision certifies that:

- The selected Initial Remedial Measure is a cost-effective remedy for the site.
- The selected Initial Remedial Measure will effectively protect the public health and the environment.
- Monies are available in the Trust Fund to finance the remedy.

Attachments C-D provide additional information to support the documentation for this decision.

REQUIRED ACTION

The following actions are required to move the IRM into construction:

- | | | |
|--|-------------------|---------------|
| - Approve proposed remedy, and cooperative agreement amendment | AA OSWER | Sept 19, 1983 |
| - Enforcement release | U.S. EPA OWPE/OEC | Sept 19, 1983 |
| - Amend cooperative agreement | GAD | Sept 30, 1983 |
| - Design IRM | MPCA | Nov-Dec 1983 |
| - Construct IRM | MPCA | Dec-Feb 1984 |



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310

18 May 1983

ATTACHMENT A

Mr. William N. Hedeman, Jr.
Director
Office of Emergency and
Remedial Response (WH-548)
U.S. Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Hedeman:

As you know, the State of Minnesota advised six well owners in New Brighton - Arden Hills, Minnesota, across from the southwest boundary of Twin Cities Army Ammunition Plant, not to drink or, in some cases, bathe in their well water. As an interim measure after consultation with Mr. Wyer and Mr. Cohen of your office, the Army on May 9, 1983, began providing water for the six well owners. This interim response will allow time for EPA to conduct the initial remedial action study and make funds available for providing potable water to the affected families on a more permanent basis. This letter confirms our understanding that, upon completion of your study on the most effective method of providing an alternate water supply, EPA will promptly begin providing water. Further, we understand the study is expected to last about two months.

We continue to support EPA's recent decision to approve the area-wide study and encourage expeditious handling and processing of the study and the interim remedial action. The Army remains ready to work closely with EPA and the State of Minnesota in resolution of this problem.

Sincerely,

Lewis D. Walker
Deputy for Environment, Safety
and Occupational Health
OASA (IL&FM)

Attachment A

ATTACHMENT B

Table 4-3
RANKING OF ALTERNATIVES

Points Remaining After Subtraction of Demerits

Criterion: Weighting Factor:	<u>Health</u> 5	<u>Reliability</u> 5	<u>Personal Feasibility</u> 5	<u>Implementability</u> 4	<u>Permanence</u> 4	<u>Time Required</u> 3	<u>O&M</u> 2	<u>Total</u>
<u>Alternative</u>								
1. Bottles - All Use	25	22	15	22	15	25	22	577
2. Truck Delivery Storage - All Use	21	22	25	19	11	18	19	552
3. Bottles - Potable Use Truck Delivery Storage - Nonpotable Use	23	20	16	19	1	18	19	467
4. In-House Treatment - All Use	22	21	22	18	21	15	15	556
5. Bottles - Potable Use In-House Treatment - Nonpotable Use	23	20	13	18	11	15	13	467
6. Neighborhood Treatment - All Use	23	23	25	15	15	15	15	550
7. Bottles - Potable Use Neighborhood Treatment - Nonpotable Use	24	22	16	15	5	15	13	461
8. Pipeline From Existing Supply	25	25	25	20	25	20	25	665
9. Deep Well	25	24	25	15	23	15	24	615
10. Existing 1-Inch Line From Existing Supply Storage - All Use	22	24	25	16	21	15	21	590
11. Bottles-Potable Use Existing 1-Inch Line From Existing Supply Storage - Nonpotable Use	24	22	16	16	11	15	21	505

Attachment B

STATE OF MINNESOTA

DEPARTMENT

HEALTH

Office Memorandum
ATTACHMENT C

TO: Steven Lee
Solid & Hazardous Waste Division
Minn. Pollution Control Agency

DATE: July 5, 1983

FROM: Richard D. Clark, P.E., Supervisor *Re*
Engineering Unit
Section of Water Supply & General Engineering

PHONE: 623-5227

SUBJECT: Feasibility Study, Temporary Water Supply, Private Well Users
New Brighton and Arden Hills

The following is a Minnesota Department of Health comment concerning the above-mentioned study.

The Minnesota Department of Health's water supply construction standards require that all municipal water mains be at least 6-inch diameter pipe. In addition, the Department recommends that fire hydrants not be placed at the end of a 6-inch deadend water main, unless hydraulic analysis can show that the pressure in the water main will not be less than 20 psi at the maximum fire flow demand rate. These requirements would apply to the option of extending an Arden Hills municipal water main along Highway 10 to serve the Group 2 homes and Stewart Lumber.

If you have any questions, please contact me at 623-5227.

RDC:mrs

RECEIVED

JUL 06 1983

MINN. POLLUTION
CONTROL AGENCY



minnesota department of health

717 s.e. delaware st. minneapolis 55440

(612) 296-5221

ATTACHMENT C

February 24, 1982

RECEIVED

FEB 25 1982

MINN. POLLUTION
CONTROL AGENCY

Mr. Richard E. DeWitte
4651 Highway 10
Arden Hills, MN 55112

Dear Mr. DeWitte:

Your water well has been sampled by the Pollution Control Agency and found to contain organic contaminants. The concentration of these contaminants is high enough to cause us to be concerned about the long-term ingestion of this water. This Department, therefore, recommends you seek an alternate source of water for drinking and food preparation. At this time, we see no reason for you to discontinue the use of your well for other purposes such as bathing, dishwashing, etc.

Sincerely,

David G. Gray, Chief
Section of Health Risk Assessment

DGG/nec

cc: Mr. Steve Lee
MPCA

Attachment C



minnesota department of health

717 s.e. delaware st.

minneapolis 55440

(612) 296-5221

February 24, 1982

Mr. Dave Yepma
2023 Old Highway 8
New Brighton, MN 55112

Dear Mr. Yepma:

Your water well has been sampled by the Pollution Control Agency and found to contain organic contaminants. The concentration of these contaminants is high enough to cause us to be concerned about the use of this water for any purpose. This Department, therefore, recommends you completely discontinue the use of your well.

Sincerely,

David G. Gray, Chief
Section of Health Risk Assessment

DGG/nec

CC: Steve Lee
MPCA

October 27, 1982

Mr. George Indykiowicz
1924 West Highway 96
Arden Hills, MN 55112

Dear Mr. Indykiowicz:

Your water well has been sampled by the Pollution Control Agency and found to contain organic contaminants. The concentration of these contaminants is high enough to cause us to be concerned about the long-term ingestion of this water. This department, therefore, recommends you seek an alternate source of water for drinking and food preparation. At this time we see no reason for you to discontinue the use of etc. well for other purposes such as bathing, dishwashing,

Sincerely,

David G. Gray, Chief
Section of Health Risk Assessment

DGG/...

cc: Mr. Michael Kanner
Pollution Control Agency



minnesota department of health

717 s.e. delaware st.

minneapolis 55440

(612) 296-5221

February 24, 1982

Mr. Jack Lee
52 Mound Street
New Brighton, MN 55112

Dear Mr. Lee:

Your water well has been sampled by the Pollution Control Agency and found to contain organic contaminants. The concentration of these contaminants is high enough to cause us to be concerned about the long-term ingestion of this water. This Department, therefore, recommends you seek an alternate source of water for drinking and food preparation. At this time, we see no reason for you to discontinue the use of your well for other purposes such as bathing, dishwashing, etc.

Sincerely,

David G. Gray, Chief
Section of Health Risk Assessment

DGG/nec

cc: Steve Lee
Minnesota Pollution
Control Agency

COMMUNITY
WATER POLLUTION

September 3, 1982

Mr. Jack Lee
2087 Old Highway 8
#2
New Brighton, MN 55975

Dear Mr. Lee:

Your water well has been sampled by the Pollution Control Agency and found to contain organic contaminants. The concentration of these contaminants is high enough to cause us to be concerned about the use of this water for any purpose. This Department, therefore, recommends you completely discontinue the use of your well.

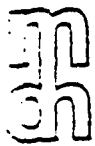
Sincerely,



David G. Gray, Chief
Section of Health Risk Assessment

DGG/nc

cc: Mr. Steve Lee
MPCA



minnesota department of health

717 s.e. delaware st. minneapolis 55440

(612) 276-5221

RECEIVED

MAR 6 1982

March 3, 1982

MINN POLLUTION
CONTROL AGENCY

Mr. Glen Medbury
Stewart Lumber Company
Highway 8 and Highway 10
Arden Hills, MN 55112

Dear Mr. Medbury:

Your water well has been sampled by the Pollution Control Agency and found to contain organic contaminants. The concentration of these contaminants is high enough to cause us to be concerned about the long-term ingestion of this water. This Department, therefore, recommends you seek an alternate source of water for drinking and food preparation. At this time, we see no reason for you to discontinue the use of your well for other purposes such as bathing, dishwashing, etc.

Sincerely,

David G. Gray, Chief
Section of Health Risk Assessment

DGG/nc

cc: Mr. Steve Lee
MPCA

STL

DEPARTMENT

MN POLLUTION CONTROL AGENCY

Office Memorandum

TO Roger DeRoos
Minnesota Department of Health

FROM Michael Kanner, Head *MK*
Strike Force Unit
Regulatory Compliance Section
Solid and Hazardous Waste Division

DATE: September 25, 1981

PHONE:

SUBJECT: HEALTH RISK ASSESSMENT
MINNESOTA POLLUTION CONTROL AGENCY
STRIKE FORCE PROJECTS

I request the assistance of your staff in evaluating the health risks associated with continued consumption of drinking water shown by the attached lab sheets to be contaminated by various volatile organic chemicals. The sampling points are near the Twin City Army Ammunition Plant in Arden Hills. They are:

Thill Residence	132429
DeKitt Residence	✓ 132431 and 132344 ✓
Cmial Residence	132258
Bauer Residence	132252
Martin Residence	132253
52 Mounds Avenue ✓	132343
Stewart Lumber (commercial well) ✓	132240

Please ask your staff to contact Steve Lee of my staff at 297-3355 if they have questions regarding these samples. Thank you.

MK/SM:dc
Attachments

cc: Gordon W. Meyer, Chief, Regulatory Compliance Section, Solid and Hazardous
Waste Division, MPCA
Terrance W. Kasen, Regulatory Compliance Section, Solid and Hazardous
Waste Division, MPCA

STATE OF MINNESOTA

Office Memorandum

DEPARTMENT Health

TO : Michael Kanner, Head
Strike Force Unit
Regulatory Compliance Section
Solid and Hazardous Waste Division

FROM : David G. Gray, Chief
Section of Health Risk Assessment

DATE: October 21, 1981

RECEIVED

PHONE: 296-5352

...581

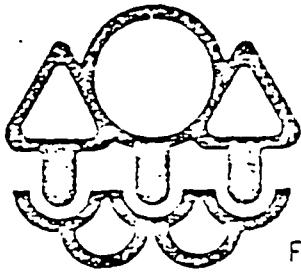
SUBJECT: Residential Wells Near the Arsenal

MINN. POLLUTION
CONTROL AGENCY

This is in response to your request September 25, 1981 for an assessment of the water quality in the residential wells near the Twin City Arsenal. Four samples (132343, 132344, 132431, 132240) contain chlorinated organics at great enough concentration that we would advise they not be used for drinking or food preparation. Of course one should confirm the presence of the material by a second sampling as you have done for the DeWitte residence.

If you have any questions please give me a call.

DGG/nec



Minnesota Pollution Control Agency

February 9, 1982

Mr. Dave Yepma
2023 Old Highway 8
New Brighton, Minnesota 55112

Dear Mr. Yepma:

Enclosed please find the laboratory report sheet for the analysis conducted on a water sample collected from your well. The Minnesota Department of Health (MDH) Analytical Laboratory conducted the analysis for the chemicals listed on the sheet, basically solvent-like chemicals.

The symbol "<" means "less than." The units are parts per billion (ppb). For example, <1.0 in the methylene chloride column means either that the water sample contained no methylene chloride, or that methylene chloride, if present, is at a concentration of less than 1 ppb. The laboratory instrument cannot detect the chemical at levels lower than this.

A number in a column means that the chemical was detected at that concentration. The analysis showed high levels of several contaminants. The results of the other samples I collected from your well are not yet available, but I expect similar results.

Based on the guideline numbers and proposed standards I have available, I have advised you to stop using this water for cooking or drinking. The MDH will officially advise you of their assessment of the health implications of consuming this water.

Please feel free to call me if you have any questions or concerns regarding this letter, the sample, or the case we are investigating. My telephone number is 612/297-3355. Thank you.

Sincerely,

Stephen Lee
Regulatory Compliance Section
Solid and Hazardous Waste Division

SJL/dc

Enclosure

cc: Mr. Les Proper, City of New Brighton

LAW OFFICES
BRIGGS AND MORGAN
PROFESSIONAL ASSOCIATION

2200 FIRST NATIONAL BANK BUILDING
SAINT PAUL, MINNESOTA 55101

2400 IDS CENTER
MINNEAPOLIS, MINNESOTA 55402

(612) 291-1213

July 12, 1983

ATTACHMENT D

MARIE R. MILLER
JEFFREY F. DRAW
DAVID G. GREENING
DAVID H. SAND
BETTY L. HUNT
CHARLES R. HATCO
RUSCO J. MAPPLE, JR.
ANDREA M. HUND
MARTIN H. FINE
JOHN BILTERA
RICHARD H. MARTIN
TRUDY J. HALLA
MARY L. LIPPEL
RODNY L. HANSEN
WILLIAM J. JOANIS
MARGARET K. SAYAGE
JEANNE M. FOMERIE
BRIAN G. BRISLE
TONY STENSENBERG
MARY SCHWARTZ EVINGER
MICHAEL H. STREATER
STEVEN T. HALLVERSON
JOHN B. LEVINTHON
RICHARD D. ANDERSON
SALLY A. SCODVIN
JAMES F. CHRISTOPPEL
BARBARA JEAN D'AGUILA
DAVID C. McDONALD
BRECE W. MOOT
VIRGINIA A. DUTYER
ERIC NILSSON
ANDREW R. KUTVINGOS
FREDERICK P. ASHBY
ROBERT L. LEE
TRUDY R. CASTRIZONO
ELIZABETH J. ANDREWS
PETER C. HALLS
PATRICK J. O'CONNOR, JR.
CHARLES B. HANSEN

OF COUNSEL
J. NEIL MORTON
RICHARD E. RYLE
SAMUEL H. MORGAN
FRANK N. GRABAN

REPLY TO Saint Paul

Ms. Karen Waldvogel
Region V
United States Environmental
Protection Agency
13th Floor
230 Dearborn Street
Chicago, Illinois 60604

Re: Clean Water for Owners of Private
Wells in New Brighton/Arden Hills

Dear Ms. Waldvogel:

Enclosed with this letter is a letter from Harry and Carol Werlein. Separate letters from other people we represent have been mailed to you directly. These letters are for the most part self-explanatory but we wish to summarize the principal points in this letter.

With respect to our clients Harry and Carol Werlein, they wish three minor modifications of the proposal submitted by CH2M Hill. These modifications are as follows:

1. A connection to the Arden Hills municipal water main rather than a connection to the Arden Manor Trailer Park water main;

MORGAN

Ms. Karen Waldvogel
July 12, 1983
Page Two

2. Use of a six inch pipe instead of a four inch pipe to provide water; and
3. The installation of an appropriate number of fire hydrants.

Considering the small additional cost of connecting the Werleins to the Arden Hills municipal water main rather than the Arden Manor water main, we believe that this additional cost is justified since the Werleins will have greater assurance of uninterrupted water supply if they are connected to a municipal system. Dependence on a private water supply will affect the marketability and value of their property and others similarly situated. We have also been informed that the additional cost of providing water through a six inch pipe instead of a four inch pipe is nominal. Use of a six inch pipe will allow installation of hydrants and will reduce the premiums the Werleins pay for fire insurance. The additional cost of fire hydrants is justified in order to better protect the Werlein's home from fire and are typically provided in residential areas on municipal water systems.

We would also ask the Environmental Protection Agency to consider providing water to the homes along the east shore of Round Lake, south of Highway 96. Our office represents several homeowners in this area directly south of the Werleins. By extending service to the homes to the south of Highway 96 on Long Lake, more of the 31 contaminated private wells identified to date by the Minnesota Department of Health and Minnesota Pollution Control Agency will have a safe, new water supply at relatively minimal additional cost.

Discernable levels of contamination have been found in many of the wells of these homeowners and the situation could become more acute. There appears to be an Arden Hills municipal water line running between these homeowners and Highway 10, and we believe that a connection to this water line would not be unduly expensive. It also would seem to make sense to do this work while connecting the homes north of Highway 96 to the Arden Hills system.

WUOAN
Ms. Karen Waldvogel
July 12, 1983
page Three

If we can be of any further assistance to you in this matter, please do not hesitate to call.

Sincerely,

David C. McDonald
David C. McDonald

DCM:srk
Enclosure
cc: Stephen J. Lee
Harry and Carol Werlein
Leonard and Cheryl Grudnoske

July 11, 1983

RECEIVED

JUL 18 1983

MINN. POLLUTION
CONTROL AGENCY

Conrad Beaulieu
4477 Old Hwy. 10
Arden Hills, MN, 551

Mr. Steve Lee
% MPCA
1935 W. County Road B-2
Roseville, MN. 55113

phones. home - 631 8401
work - 482354

Dear Sir(s),

This letter concerns the Public Comment Draft of the feasibility study for a temporary water supply in New Brighton and Arden Hills. (Assignment 22,5M40.0)

I would like to make an additional recommendation after reviewing the study. Another group should be designated, group 3, which is described as houses east of Round Lake, south of 96th Avenue and fronting on Old Highway 10 in Arden Hills. My recommendation is to add an 8-inch-main connecting the existing Arden Hills 8-inch-main and running south along Old Hwy. 10 to the next main.

This recommendation should be considered because:

- 1) A number of residents south of 96th Avenue on Old 10 already have trace amounts of pollutant in their water supply.
- 2) At one time the residents north of 96th Avenue on Old 10 did not suffer from contaminated water and now do. Also, the spread of the pollutant south of 96th Avenue is unavoidable.
- 3) The party or parties responsible for resolving the pollution problem would be well advised to plan to make city water available to the afore mentioned residents now, when work is being planned so nearby.

July 1, 1985 10:52

concerning the temporary water supply
feasibility study

- 4) The residents south of 95th Avenue on Old 10, group 3, realize the inevitability of using their well water as well as a loss in property value due to media coverage and the public fear of environmental pollutants. There would be no reason to make this recommendation now unless a real concern existed about this area.

Please consider my recommendation and keep me informed to the final resolution of this matter.

Note: Figure 2-1 is in error; The dashed line showing the Arden Hills 8-inch main extends too far south from 96th Avenue along Old Hwy. 10.

Respectfully Submitted,

Conrad Beaulieu

1920 Hwy 96
New Brighton, Minn. 55112
July 7 - 1983

Dear Sirs:

We were to the meeting of June 28
and they told us there, recommendations
was a new pipeline to the Arden Hill
water main.

We accept the city water.
Please contact us before putting it in.

Thank You
George Doolittle

RECEIVED

JUL 08 1983
MINN. POLLUTION
CONTROL AGENCY

K. Waldregal
U.S. EPA - 13th floor
230 S. Dearborn
Chicago, Ill. 60604

Dear Sir or Madam:

This letter is in regards to the study of a temporary water supply for private well users, New Brighton and Arden Hills, Minn., Assignment 22.5 M40.0, June 27, 1983.

We are Harry and Carol Werten, members of Group 2 in this study.

We appreciate all the efforts being made to supply us with a safe water supply. We have the following comments to make concerning our position in the matter.

1. We believe that being connected to the Arden Hills municipal water supply would be more appropriate and more beneficial than being connected to the Arden Manor Mobile Home Park water supply for the following reasons:

a. we would be able to deal directly with the city instead of trying to deal with a private concern, especially if any future problems arise.

b. our property value would remain low because of the private connection when there is a municipal supply already accessible.

c. if future problems would arise making it necessary for the Arden Manor to connect to municipal water, an added expense would be placed upon the homeowners in Group 2.

d. monthly water rates could change more often and be greater than those

2. the use of 6" pipe instead of 4" pipe would be to our advantage where fire insurance premiums are involved, and could possibly save added expenses later due to local or state code regulations.
3. fire hydrants should be installed for our protection should a fire ever occur.

With the municipal water supply connections being so accessible and comparing costs in the study, we do believe that the municipal connection would be the best, and in long term costs, the cheapest for everyone concerned, especially for us and the rest of the people in Group 2. This would also mean a permanent connection right away, not just temporary. This would also save money in the future.

We are thinking about the future of our children as well as ourselves. After all, their lives are just beginning, and why should they have to worry about water contamination years from now. That can be prevented with the proper action being taken now.

Thank you for your time.

Harry and Carol Warlick
4647 Hwy. 10
Arden Hills, Minn. 55112

Dr. H. Behrman

U.S. E.P.A. 15th Floor
333 South Dearborn
Chicago, Ill 606 04

From Mr. and Mrs. Richard Hewitt

46 E 1 Highway = 1
ST. Paul, Minn. 55102

Following a thought study of ("Public Comm. Draft, Feasibility Study, Preliminary Administrative, Assignment #32.5 M43.0 June 27, 1972)

① Pipe line Attenuator A. A. 1000 #215 (4" O.D. 150),

This seems to us the best alternative, but instead of the four 4" Trich. main we would purchase a 6" bit so that fire hydrants can be installed and it would increase the overall flow by only 5% and this in a long run would give us fire protection and a fire supply.

③ *Pipilo fuscatus* (L) Ashm. No. 1171 x 1350

This all in a top seems fine and cut is cheaper but
there are some drawbacks (A) the existing 4" pipe line is
just enough for the existing leakage and not high
pressure. Second, if we had some extra cut at all, even
it is at present would pull and we would be at an
emergency if the pipe failed to produce charges or cut pipe
water in the line. Third, it is a mistake to cut
the leakage and get some. This could cause fire
or being too high the fuel water supply.

Step III. Alternative 15' diam x 1,000 ft deep.
We feel as this alternative would be satisfactory as
that we would have a well close to continuous water
supply. But the well cost, location, field and maintenance
such a system would not be feasible for our house.

RECEIVED

JUL 6 1983

MINN. POLLUTION
CONTROL AGENCY

To Mr. Steve Lee
Minnesota Pollution Control Agency
1935 West County Road B, 2
Roseville, Minnesota, 55113 - 2785

From Mr. and Mrs. Richard D. Witt
4651 Highway #10
St. Paul, Minnesota, 55112

Following a thorough study of (Public Comm
Draft Feasibility Study, Private well users
Arden Hills, Minnesota. Assignment #22.5/1740.0
June 27, 1983.)

Section Four (4) (Preliminary Alternatives
Screening Alternatives one through eleven.)

After studying each and every alternative we
feel that only three of the eleven are feasible
following are the breakdown on each.

① Pipe line Alternative A Arden Hills (4" DIAM X 150
feet long)

This seems to us the best alternative, but instead
of the (4" MAIN) we would prefer a six (6") line
so that fire hydrants can be installed. Even with
the 5% increase this would give us fire protection
plus a line large enough, so at a later date we
wouldn't have to do the job over to increase the
line size, even so, this line will have to be
flushed periodically because it will be a dead end
main line.

② Pipe Line Alternative B Arden Manor 4" diam. x 1300'

This alternative would be acceptable but there are a few drawbacks, ① The existing 4" main line is just large enough for the existing hook ups and at times where high consumption exist they have had low water pressure and cut backs for use of water.

② ~~Being~~ ^{Since} it is a privately owned water system there is a good possibility that the water rate could be increased or pump problems causing complete shut down of water system.

③ If at some time we would decide to sell our home there could be some problems in selling if we were not hooked up to a City Water Supply.

③ Deep Well Alternative 10" DIAM. x 1000 ft. deep.

We agree that this alternative would be satisfactory in that we would have a good, clean, unlimited water supply to our home, but due to the cost, location of well and maintenance of such a system would not be feasible for our location.

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APR 6 1983

MINN. POLLUTION
CONTROL AGENCY



SHORT-ELLIOTT-HENDRICKSON, INC.
CONSULTING ENGINEERS

ST. PAUL, MINNESOTA

CHIPPEWA FALLS, WISCONSIN

July 6, 1983

RE: ARDEN HILLS, MN.
PUBLIC COMMENT DRAFT
FEASIBILITY STUDY
TEMPORARY WATER SUPPLY
PRIVATE WELL USERS
SEH FILE NO. 82011

Karen Waldvogel
Office of Super Fund
US E.P.A. Region 5
230 S. Dearborn
Chicago, Ill. 60604

The Minnesota Pollution Control Agency is soliciting comments from the City of Arden Hills on the above referenced report. The City of Arden Hills requested we act as an agent of the City and prepare such comments. The City of Arden Hills recognize the water quality problems described in your report. In order to provide a long term solution to the problem the City prefers the installation of a water system that will serve all the needs of Group 2, Stewart Lumber and Indykiewicz. The City believes the long term need can best be provided by connecting the existing city water system with pipe sizes that meet domestic supply needs plus fire flow protection. The comments listed in this letter provide past history for the area, current needs of the City and a request.

1. Arden Hills' 1967 Master Watermain Plan indicate a need for 12" diameter and 8" diameter watermain extended along the west side of Highway 10 between Highway 96 and Stewart Lumber Company. There is approximately 2,400 feet of 12" diameter watermain in the southerly portion of the reach and 400 feet of 8" diameter watermain in the northerly portion extending to Stewart Lumber. The watermain is sized on the basis of fire, domestic and commerical flows and on land use.
2. The 4" and 3" diameter watermain, proposed in the EPA report is below the minimum standards recommended for waterworks adopted by the State of Minnesota. The minimum recommended pipe size is 6" in diameter. The City should not approve installation of a system less than 6" in diameter.

3. The water system in the Arden Manor mobil home park is a singly owned private system serving mobile home lots owned and operated by the owners of Arden Manor. The extension of the Arden Manor water system beyond the mobile home park boundary would create a private water system and would place the outside users at the mercy of the owners of Arden Manor. The City should not be placed in a position where future problems could occur due to a private water system being operated in the City.
4. The owners of Arden Manor have not requested, or has the City accepted operation maintenance of the interior water system in Arden Manor. The owners of Arden Manor did not want to pressure test the distribution system. Therefore, it has not been determined whether or not the Arden Manor system could withstand higher pressures if a connection was made to the City system. Furthermore, it was determined that the Arden Manor system did not have sufficient supply or pressure to provide adequate fire flow protection. The fire department will not connect to the fire hydrants within Arden Manor.
5. A temporary minimum size water system, if installed as proposed in the EPA report, will soon be considered a permanent system by the benefiting abutting property owners. They will strongly oppose future improvements if the City later needs to increase the size of the system for fire flow protection.
6. Arden Hills request the EPA fund a minimum 6" system with fire hydrants and allow Arden Hills to construct a system in accordance with their watermain master plan. If the EPA approves such request, the Arden Hills Council may consider undertaking a public improvement under Minnesota Statutes 429. This improvement would include the extension of watermain between Highway 96 and Stewart Lumber Company west of Highway 10. Arden Hills could finance the improvement through EPA funds and other sources of City funds.

7. When Arden Hills installed watermain along Highway 96 a 1" service was extended to the Indykiewicz property line. The Indykiewicz problem could simply be resolved by connecting his home to the 1" service at the property line. He was assessed for the water service.

We are available to answer any questions regarding this matter.

Sincerely,



D. G. Christoffersen
City Engineer

gfc

cc: City of Arden Hills
cc: Stephen Lee, MPCA