K.09
6/30/95

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Reilly Tar and Chemical Corporation Site
Northern Area of the Platteville Aquifer
St. Louis Park, Minnesota

STATEMENT OF BASIS AND PURPOSE

This decision document represents the selected remedial actions for the Northern Area of the Platteville Aquifer, Reilly Tar and Chemical Corporation Site (the "Site"), developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, and to the extent practicable, the National Oil and Hazardous Substances Pollution Control Plan.

This decision is based upon the contents of the Administrative Record for the Site. The attached index identifies the documents which comprise the Administrative Record upon which the selection of the remedial action is based. The U.S. Environmental Protection Agency and the State of Minnesota agree on the selected remedy.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from the Northern Area of the Platteville Aquifer at this Site, if not addressed by implementing the response action selected in this Record of Decision, may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The objectives of the response actions approved for the Site are to protect public health, welfare, and the environment, and to comply with applicable federal and state laws.

The Northern Area of the Platteville Aquifer represents one operable unit within the overall Site strategy. This remedy addresses only the Northern Area of the Platteville Aquifer, and

will prevent the further spread of ground water contaminated with Polynuclear Aromatic Hydrocarbons in this aquifer.

The major components of the selected remedy include:

1) The interception and containment of contaminants by use of a gradient control well which will prevent the further spread of contaminated ground water in the Northern Area of the Platteville Aquifer.

2.) The discharge from the new well will initially be routed to the sanitary sewer for treatment at the Metropolitan Council Environmental Services wastewater treatment plant to remove contaminants from the collected ground water.

3.) Continued water level and water quality monitoring of the ground water contaminant plume during remediation activities.

4.) Within three to five years, it is anticipated that the water quality of ground water pumped from the gradient control well will be improved sufficiently to meet National Pollutant Discharge Elimination System (NPDES) limits. This would allow the city to route the ground water pumped from the gradient control well to a storm sewer for eventual discharge to Minnehaha Creek. If necessary, an off-site treatment facility will be built to treat ground water discharge from the gradient control well and a NPDES permit will be obtained for the discharge from such facility.

STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable and satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element. Because this remedy

will result in hazardous substances remaining on site above health-based levels, a review will be conducted within five years after commencement of remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment.

6/30/95
Date

Valdas V. Adamkus
Regional Administrator, Region V
U.S. Environmental Protection Agency

June 27, 1995
Date

Charles W. Williams
Commissioner
Minnesota Pollution Control Agency

DECISION SUMMARY FOR THE RECORD OF DECISION
REILLY TAR AND CHEMICAL COMPANY CORPORATION SITE

I. SITE NAME, LOCATION, AND DESCRIPTION

The Reilly Tar and Chemical site (the Site) is defined in Part C.1 of the Consent Decree and in Section 1.21 of the Remedial Action Plan (RAP) as the 80 acre property where Reilly Industries (Reilly) operated a coal tar refinery and wood preserving plant. The Site is located in the western part of the Twin Cities metropolitan area, in St. Louis Park, Minnesota (Figure 1). The approximate location of this Site is west of Gorham, Republic and Louisiana Avenues, south of 32nd Street, east of Pennsylvania Avenue and north of Walker Street.

This Record of Decision (ROD) addresses the contamination in the Northern Area of the Platteville Aquifer underlying the Site. The Northern Area is located adjacent to the Site and is bounded by West 32nd Street to the north, Alabama Avenue to the east, Highway 7 to the south, and Louisiana Avenue to the west. The Platteville Aquifer is composed of glacially deposited sand and gravel, and begins at 70 feet and extends to 100 feet below the ground surface. There are no wells that use the Northern Area of the Platteville Aquifer for drinking water.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

Site History

The Site history information summarized in this section is excerpted from the Proposed Plan for the Northern Area of the Platteville Aquifer Report dated May 1995.

Between 1917 and 1972, Reilly operated a coal tar distillation and wood treatment plant, known as the Republic Creosote Company, on 80 acres of land in St. Louis Park (the "City"). See Figure 1. Wastewater containing creosote and coal tar from plant operations was discharged to a ditch that drained to a swamp south of the Site.

Additional releases of creosote and coal tar resulted from drippings and spills onto the soil at the

Site. These releases led to extensive soil, surface water and ground water contamination, not only at the Site, but also in areas downstream and downgradient (i.e., south and east) from the Site (Figures 1 and 2).

The major constituents of coal tar are phenolic compounds and Polynuclear Aromatic Hydrocarbons (PAHs). Some PAH compounds are carcinogenic and are a concern when they occur as contaminants in a source or potential source of drinking water. As used here, "contaminated" or "contamination" means that PAHs or phenolics are present in the soil, surface water or ground water due to the wood treatment activities of Reilly at the Site.

Due to extensive residential development in the area around the Site in the 1940s and into the 1950s, complaints about shallow well contamination and odor (i.e., air quality) problems became common. As a result of the continuing problems with air emissions, and soil and surface water contamination, the City and the Minnesota Pollution Control Agency (MPCA) filed suit against Reilly in 1970. In 1972, the City purchased the Site from Reilly, and the plant was dismantled and removed. The City dropped its lawsuit against Reilly as a condition of the sale. The MPCA's suit was eventually dismissed as a part of a comprehensive settlement in 1986.

In the mid 1970s, Louisiana Avenue was constructed through the Site and some multi-family housing units were constructed on the northern half of the Site. In 1978, the Minnesota Department of Health (MDH) began a program to analyze water from municipal wells in the City and nearby communities for trace concentrations of PAHs. The City uses ground water from the St. Peter, Prairie du Chien-Jordan, and Mt. Simon-Hinckley Aquifers as sources of drinking water. Nearby communities, such as Hopkins and Edina, rely primarily on the Prairie du Chien-Jordan Aquifer for their drinking water. During the period from 1978 to 1981, the analytical program revealed unexpectedly high concentrations of PAHs in six city wells and one well in the city of Hopkins. As the PAH contamination in these municipal wells was discovered, the wells were closed.

In 1978, after results of the MDH program indicated that extensive ground water contamination had occurred, the MPCA amended its complaint in the lawsuit with Reilly to include claims for ground water contamination. Subsequent legal actions were taken by the U.S. Environmental Protection Agency and the Minnesota Pollution Control Agency (the Agencies) against Reilly under the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and Minnesota Environmental Response and Liability Act (MERLA). Both Agencies instituted administrative actions against Reilly pursuant to the applicable federal and state Superfund acts. In these actions the Agencies sought to compel Reilly to undertake necessary remedial actions. Following the administrative actions, negotiations resumed between the U.S. Environmental Protection Agency (EPA), MPCA, the City, and Reilly. A general agreement for the remediation of the Site was reached in the summer of 1985. However, because of

the complex nature of the agreement and the number of parties involved, final agreement was delayed until September 1986. The agreement is embodied in the Consent Decree/Remedial Action Plan (CD/RAP) entered by the U.S. District Court for the District of Minnesota in U.S. vs. Reilly Tar (Case No. 4-80-469).

The remedial action discussed in this ROD is the latest in a series of remedial actions at the Site. The remedy as described in this ROD is specifically intended to prevent the further spread of contaminated ground water in the Northern Area of the Platteville Aquifer, and, as such, is only one part of the overall remediation of the Site. The following is a list of completed and ongoing remedial actions that are required by the CD/RAP:

Ground Water Sampling (CD/RAP Section 3) A sampling plan, which specifies municipal and monitoring wells to be sampled during the coming calendar year, is submitted each year for Agencies' approval. Reilly may propose to cease monitoring certain wells, to change monitoring locations, to change analytical procedures, or to implement such other changes that may be effective in achieving the monitoring objectives of the RAP.

By March 15 of each year, an annual report presenting the analytical results of the previous year's sampling is submitted for the Agencies' approval.

Drinking Water Treatment Systems at St. Louis Park (SLP) Municipal Wells 10 & 15 (CD/RAP Section 4) Reilly submitted plans and specifications for the construction of a granular activated carbon (GAC) treatment system at SLP 10 & 15. The treatment system has been constructed and has been in operation and maintenance (O&M) since June 25, 1986. Monitoring of the treatment system is according to the Annual Sampling Plan.

Mt. Simon-Hinckley Aquifer (CD/RAP Section 5) Annual sampling of the Mt. Simon-Hinckley wells is ongoing. Municipal drinking water from this Aquifer will be treated with GAC if the monitoring data show that drinking water criteria (defined in Section VIII below) have been exceeded. Monitoring of the Mt. Simon-Hinckley Aquifer will continue for the duration of the CD/RAP according to the Annual Sampling Plan.

Ironton-Galesville Aquifer (CD/RAP Section 6) Source control well W105 began operating in November 1987. Having met the cessation criteria outlined in the CD/RAP, the Agencies granted the City's request to cease pumping, and the pump was turned off in December 1991. Monitoring of well W105 will continue for the duration of the CD/RAP according to the Annual Sampling Plan.

Prairie du Chien-Jordan Aquifer (CD/RAP Section 7) As noted above, drinking water from City Wells 10 and 15 currently undergoes treatment with GAC as outlined in a ROD issued on June 6, 1984, and according to Section 4 of the CD/RAP.

Source control well W23 has been pumping at a rate of 50 gpm since November 1987 to control the spread of contaminated ground water. Water from the well undergoes GAC treatment before being

discharged to Minnehaha Creek. Municipal Well SLP 4 has been pumping at a rate of 1200 gpm since August 19, 1992, for drinking water supply. In addition to providing drinking water, the pumping of SLP 4 also provides gradient control of the aquifer. Monitoring of wells in the Prairie du Chien-Jordan Aquifer is according to the Annual Sampling Plan.

St. Peter Aquifer (CD/RAP Section 8) Gradient control well W410 began pumping at a rate of 70 gpm in May 1991. Discharge from the well is currently being routed to the sanitary sewer for treatment. This remedial action was detailed in a September 28, 1990, ROD. Monitoring of wells in the St. Peter Aquifer is according to the Annual Sampling Plan.

Drift and Platteville Aquifers (CD/RAP Section 9.1 & 9.2) Drift source control well W420 and Platteville source control well W421 have been operating since October 1987 at the CD/RAP required pumping rates of 40 gpm and 25 gpm respectively. Discharge water from these wells undergoes GAC treatment and is subsequently released into Minnehaha Creek. Drift gradient control well W422 has been pumping since October 1987 at the CD/RAP required rate of 50 gpm with its discharge being routed to the sanitary sewer for treatment. Monitoring of wells in the Drift and Platteville Aquifers is according to the Annual Sampling Plan.

Drift Aquifer Northern Area (CD/RAP Section 9.3, 9.4 & 9.5) A ROD was issued by the Agencies on September 30, 1992, and the City has constructed the Remedial Action (RA) according to the Northern Area Drift Aquifer Gradient Control Well Plan approved on May 9, 1994. On December 15, 1994, the City notified the Agencies that the RA was complete. The MPCA inspected the gradient control well on January 3, 1995, and the RA began full-scale operation within ten days of the inspection date. Monitoring of wells in the Northern Area of the Drift and Platteville Aquifers is according to the Annual Sampling Plan.

Leaking Multi-Aquifer Wells (CD/RAP Section 10.1) Reilly has submitted an Investigation Plan for the multi-aquifer wells open to the Mt. Simon-Hinckley, Ironton-Galesville, or Prairie du Chien-Jordan Aquifers. The City received the Agencies' approval of the Plan on February 14, 1994. Reilly had one year from receipt of approval notification of the Plan to complete the investigation and submit a report to the Agencies for approval. The City has submitted the multi-aquifer report which the Agencies are presently evaluating.

Leaking Multi-Aquifer Wells (CD/RAP Section 10.2) Reilly has submitted an Investigation Plan for the multi-aquifer wells open to the St. Peter Aquifer. The City received the Agencies' approval of the Plan on February 14, 1994. Reilly had one year from receipt of approval notification of the Plan to complete the investigation and submit a report to the Agencies for approval. The City submitted the multi-aquifer report which the Agencies are presently evaluating.

Near Surface Contamination (CD/RAP Section 11) A contaminated wetland to the south of the Site was filled in 1986. A soil investigation conducted in September 1988 found no further soil contamination in the area of investigation defined in the CD/RAP. Before undertaking any construction or demolition activity onsite, a plan shall be submitted for Agency review according to

Part G of the Consent Decree.

Contingent Actions For Municipal Drinking Water Supply Wells (CD/RAP Section 12) If any analytical results of any samples taken from an active municipal drinking water well exceed a Drinking Water Advisory Level, this section identifies the requirements and contingency actions which shall be taken.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

Various community relations activities were conducted to solicit public comment on the proposed plan for the Northern Area of the Platteville Aquifer. A fact sheet of the Proposed Plan was mailed in May 1995 (Attachment 1). MPCA issued a news release on May 9, 1995 which indicated the availability of the Proposed Plan and also announced the duration of the public comment period (Attachment 2). The MPCA published an announcement of the public meeting and public comment period in the Star Tribune newspaper on May 9, 1995 (Attachment 3). The public comment period specified in the news release and the Star Tribune, was from May 10, 1995, through June 9, 1995.

The Agencies also held a public meeting on May 23, 1995, at the City Council chambers to present the Remedial Investigation and Feasibility Study (RI/FS) and the Proposed Plan for containing the spread of contaminated ground water. All of these documents are available at the St. Louis Park Public Library which is the repository for the Site. Comments received during the public comment period were to be considered in the Agencies' final decision in selecting a remedial alternative. No comments were received on the Proposed Plan during the comment period or public meeting.

IV. SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION WITHIN SITE STRATEGY

This ROD summarizes the alternatives considered for the Northern Area of the Platteville Aquifer and, in particular, formally evaluates the preferred alternative specified in the CD/RAP against the nine criteria identified in Section VIII of the ROD. The preferred remedy consists of using a gradient control well to prevent the further spread of contaminated ground water in the Northern Area of the Platteville Aquifer.

In accordance with the remedial objective stated in the CD/RAP of maintaining drinking water quality in the Northern Area of the Platteville Aquifer, this alternative addresses water quality in the Northern Area of the Platteville Aquifer. The CD/RAP specified that: "The Regional Administrator and The Director (Commissioner) may, for the purpose of preventing the further spread of ground water exceeding any of the drinking water criteria defined in Section 2.2, require Reilly to install and operate a gradient control well system consisting of one or more gradient control wells." The Northern Area of the Platteville Aquifer gradient control well will operate independently of other remedial actions required by the CD/RAP for the purpose of preventing the further spread of contamination. Remedial Actions (RAs) taken at other areas of the Site may, however, influence

the duration of this alternative.

The activities described in this ROD are intended to remediate the contamination in the Northern Area of the Platteville Aquifer, which is one of the six aquifers underlying the Site. The full range of site-related activities that address other remaining contamination issues is specified in the CD/RAP. This RA is the final major action required by the CD/RAP to address site contamination.

V. SUMMARY OF SITE CHARACTERISTICS

Contamination in the Northern Area of the Platteville Aquifer exists in the form of dissolved concentrations of PAHs in the ground water. PAHs may have arrived in the Northern Area of the Platteville Aquifer by dissolved PAHs following ground water flow patterns from the Drift-Platteville Aquifer. Migration of PAHs through this pathway has created the current plume of dissolved contaminants in the Northern Area of the Platteville Aquifer. Based on these conditions, the primary potential effects of contamination are on drinking water supplies and on the natural resource value of uncontaminated portions of the aquifer.

The Remedial Investigation (RI) goal was to define the area of ground water contaminated with PAHs above the drinking water criteria. The PAH and phenolic data results of ground water monitoring since 1988 show that, near the source of contamination, PAH concentrations in ground water are consistently in the range of several hundred nanograms per liter to high micrograms per liter. The trend of this data suggests that contaminant levels have fluctuated approximately ten percent in the past several years. Based on this ground water monitoring, the current interpretation of the extent of contamination in the Northern Area of the Platteville Aquifer is shown in Figure 2.

VI. SUMMARY OF SITE RISKS

The ground water, soil and surface waters on and near the Site have been impacted by site-related contaminants. This document represents the objectives of response actions for one operable unit, the Northern Area of the Platteville Aquifer, within the overall site strategy. The purpose of this section is to discuss the risks posed by contaminated ground water in the Northern Area of the Platteville Aquifer to human health and the environment.

The exposure pathway of greatest concern for human health is the ingestion of contaminated ground water through drinking or cooking. Presently, there are no drinking water wells in the Northern Area of the Platteville Aquifer. The main supply of drinking water for the City is obtained from the deeper bedrock aquifers. It is important to note that the Northern Area of the Platteville Aquifer is, in places, hydraulically and geologically connected to the Drift and St. Peter Aquifers. In addition, the Northern Area of the Drift-Platteville Aquifers provides recharge water for the bedrock aquifers. Because of these factors, and because of the potential for future use of the Northern Area of the Platteville Aquifer as a source of drinking water, exposure through ingestion of water from the

Northern Area of the Platteville Aquifer is a primary concern.

Actual or threatened releases of hazardous substances from the site if not addressed by implementing the response action selected in this ROD, may present an imminent and substantial endangerment to public health, welfare or, the environment. Drinking water criteria for site contaminants were developed to establish safe levels for the public water supply. See Section VIII of this ROD for actual drinking water criteria concentrations. The drinking water criteria for the site represent an excess lifetime cancer risk of approximately 1 x 10^{-6}. This means that a person using ground water at the site for drinking, showering, etc. would have a 1 in 1,000,000 chance of exposure to a carcinogenic compound.

During the investigation of the ground water in the Northern Area of the Platteville Aquifer, PAH concentrations ranging from several hundred nanograms per liter to high micrograms per liter were detected. The concentrations of contaminants which were detected significantly exceed the drinking water criteria and would thus pose an unacceptable risk to persons using this ground water. The Platteville Aquifer is not currently used for drinking water; however, the potential may exist for contamination to migrate down to deeper bedrock aquifers used for the public water supply.

The remedy will contain the spread of contaminated ground water through interception and containment effects created by the pumping of a gradient control well, identified as well W440. By containing the spread of contamination in the Northern Area of the Platteville Aquifer, the remedy will preserve and protect the quality of ground water in the rest of the Platteville Aquifer and will also reduce the potential for additional contamination of deeper aquifers currently used for drinking water supplies and on the natural resource value of uncontaminated portions of the aquifer.

VII. DESCRIPTION OF ALTERNATIVES

The purpose of the remedial action is to prevent, reduce, and control the spread of contamination in the Northern Area of the Platteville Aquifer. The objective of this section is to provide an understanding of the remedial alternatives developed for the Platteville Aquifer Northern Area of the Site and their specific components.

Alternative 1: No Action Alternative

The National Contingency Plan (NCP) requires that the "No Action Alternative" be developed and evaluated to serve as a baseline at every site for comparison with other alternatives. With this alternative, no remedial efforts would be made to mitigate the effects of or control the migration of ground water contaminants at the Reilly Tar and Chemical Corporation Site.

Alternative 2: Multiple Gradient Control Well(s).

This alternative includes the installation of four gradient control wells on the eastern edge of the

Northern Area. Gradient control wells are ground water extraction wells that would be installed in the downgradient portion of the Northern Area Platteville Aquifer to attempt to prevent contaminants from migrating from the area. The wells would be six-inches or larger in diameter and open to the Platteville Aquifer.

The discharge from the gradient control wells would be contaminated with PAHs and would initially be routed to the sanitary sewer for treatment at the Metropolitan Council Environmental Services (MCES) water treatment plant. The discharge would eventually be routed to the storm sewer or to surface water, provided that all effluent limitations set by the CD/RAP or by National Pollutant Discharge Elimination System (NPDES) permits are met. To meet discharge limitations, the discharge may require treatment with activated carbon at a treatment facility that will be constructed, if necessary. If this treatment facility is constructed off site, a NPDES permit will need to be obtained from the MPCA. One of the requirements for implementing this remedy is continued water level and water quality monitoring, not only to document the effectiveness of the remedy, but also to determine the need for off-site treatment.

Alternative 3: Single Gradient Control Well.

Alternative 3 consists of the installation of a single gradient control well near the south eastern edge of the Northern Area. This alternative utilizes the area with the highest aquifer transmissivity within the Northern Area. A pumping well located near existing well W428 is expected to provide the greatest degree of gradient control achievable. A new pumping well (designated W440), constructed using water-production optimizing techniques, such as an over-size well diameter to intercept more fractures in the Platteville Aquifer and/or gravel-packing the screen, will be utilized. The proposed pumping rate for Well W440 is 50 gallons per minute on a continuous basis. The size of the higher transmissivity zone near well W428 is not believed to be large enough to warrant additional pumping wells to provide a greater degree of control at this time. Additional pumping wells may be required if monitoring results warrant such action.

Similar to Alternative 2, the discharge from W440 would be contaminated with PAHs and will initially be routed to the sanitary sewer for treatment at the MCES water treatment plant. In three to five years, it is anticipated that the discharge will eventually be routed to the storm sewer or to surface water provided that all effluent limitations set by the CD/RAP and by NPDES permits are met. To meet discharge limitations, the discharge may require treatment with activated carbon at an off-site treatment facility, if necessary. If this treatment facility is constructed, an NPDES permit must be obtained from the MPCA. One of the requirements for implementing this remedy is continued water level and water quality monitoring, not only to document the effectiveness of the remedy, but also to determine the need for off-site treatment prior to discharge to the storm sewer or to surface water.

VIII. SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

This section summarizes the relative performance of the remedial alternatives the City developed in

the RI/FS. The alternatives were evaluated by the Agencies using EPA's nine criteria by comparing the advantages and disadvantages of each alternative to evaluation criteria to identify the alternative providing the best balance. The nine evaluation criteria are:

1.) Overall Protection of Human Health and the Environment addresses whether an alternative provides adequate protection and describes how risks are eliminated, reduced or controlled through treatment and engineering or institutional controls.

2.) Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) addresses whether an alternative will meet all of the applicable or relevant and appropriate requirements or provide grounds for invoking a waiver.

3.) Long-term Effectiveness and Permanence refers to the ability of an alternative to maintain reliable protection of human health and the environment, over time, once clean-up objectives have been met.

4.) Reduction of Toxicity, Mobility or Volume Through Treatment addresses the statutory preference for selecting remedial actions that employ treatment technologies that permanently and significantly reduce the toxicity, mobility and volume of hazardous substances as a principal element.

5.) Short-term Effectiveness involves the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until clean-up objectives are achieved.

6.) Implementability is the technical and administrative feasibility of an alternative, including the availability of goods and services needed to implement the remedy.

7.) Cost including capital costs, as well as O&M costs.

8.) Support Agency Acceptance indicates whether, based upon its review of the RI/FS and Proposed Plan, the support agency, in this case U.S.EPA, agrees with the selected alternative.

9.) Community Acceptance indicates the public acceptability of a given alternative. This criteria is discussed in the Responsiveness Summary.

The following is a detailed analysis of each of the evaluation criteria for the three alternatives considered:

Overall Protection of Human Health and the Environment

Alternative 1, No Action, provides no additional protection of human health and the environment.

The risks posed to human health would continue unabated. Contaminants would continue to migrate, uncontrolled, from the facility to downgradient areas, possibly impacting other aquifers and downgradient city water wells.

Alternatives 2 and 3 would provide protection of human health and the environment by restricting the further spread of contaminants from the Northern Area.

Alternative 3 provides the greatest overall protection of human health and the environment by limiting the further spread of contamination within the Northern Area of the aquifer. Well W440 is located in the area of greatest transmissivity known in the Northern Area. At this time there are no drinking water wells in the Platteville Aquifer and thus human exposure to the contamination is limited.

The primary function of gradient control wells is to provide overall protection to uncontaminated portions of the Northern Area of the Platteville Aquifer, a potential source of drinking water. Alternative 3 will also reduce the potential for contamination of deeper aquifers currently used for drinking water. By limiting the further spread of contamination, overall protection of the environment will be achieved.

Compliance With ARARS

ARARs are defined in the CD/RAP, Sections 2.2 and 2.5. These two sections of the CD/RAP define drinking water criteria and advisory levels, and surface water discharge criteria, respectively.

Drinking Water Criteria

	Advisory Level	Drinking Water Criterion
The sum of benzo(a)pyrene and dibenz(a,h)anthracene	3.0 ng/l*	5.6 ng/l*
Carcinogenic PAH	15 ng/l**	28 ng/l
Other PAH	175 ng/l	280 ng/l

* Or the lowest concentration that can be quantified, whichever is greater.
** ng/l = nanogram/liter (1 part per trillion)

The Safe Drinking Water Act (SDWA) specifies Maximum Contaminant Levels (MCLs) for drinking water from public water supplies. Since MCLs for PAH compounds were not developed through the SDWA regulations, it was necessary to derive Site-specific drinking water criteria. This was accomplished through consultations with representatives from MDH, MPCA and EPA. These drinking water criteria are not ARARs since they are not promulgated requirements. However, the

drinking water criteria are defined as a To Be Considered (TBC). TBCs are advisories, criteria, or guidance that were developed by EPA, other federal agencies or states that may be useful in developing CERCLA remedies. The drinking water criteria developed for the site are as shown above.

The Clean Water Act (CWA) and its implementing regulations are applicable to the proposed remedial activities concerning the discharge of extracted ground water, or contaminated surface water from the site, to either the surface water or the sanitary sewer. The CWA and its regulations set forth permitting requirements for point source discharges that implement minimum treatment technology standards and protect the quality of the receiving water. The conditions in the CD/RAP are intended to require full compliance with the CWA regarding NPDES permitting and pretreatment requirements. The NPDES discharge limits are as shown below.

Surface Water Discharge Criteria (SWDC)

	Daily Maximum Parameter Concentration	30-Day Average Concentration
Carcinogenic PAH	--	65 ng/l*
Other PAH	34 ug/l**	17 ug/l
Phenanthrene	2 ug/l	1 ug/l
Phenols	--	10 ug/l

*ng/l = nanogram/liter (1 part per trillion)

**ug/l = microgram/liter (1 part per billion)

RCRA may be an ARAR for the Site. If off-site treatment is required for the future discharge from W440, the process will probably generate "spent carbon." This term refers to GAC contaminated with PAHs. Spent carbon will be returned to the manufacturer for regeneration and reuse. If the testing of spent carbon indicates that the carbon is a hazardous waste as defined by RCRA, and if regulated quantities of spent carbon is generated, then the requirements of RCRA would be an ARAR for the Site. The Land Ban requirements of RCRA will not apply to the disposal of spent carbon since the carbon will be regenerated and re-used and no land disposal is contemplated.

Alternative 1 does not comply with the NCP requirements that ground water that is a current or a potential source of drinking water be remediated to MCLs. This alternative does not achieve the drinking water criteria, established for the site, which have been identified as TBCs.

Alternatives 2 and 3 would meet ARARs, TBCs or other limits established by the Agencies. The drinking water criteria will be used to assess the need for ground water control measures throughout the aquifer, while discharge options for extracted ground water will be evaluated against the SWDC.

Long Term Effectiveness and Permanence

Alternative 1 does not provide an effective or permanent means of achieving the goals of the CD/RAP. Significant risks would continue to be posed by site contaminants for a long time period. Contaminants from the site would continue to migrate into the aquifer, and subsequently through the aquifer, for an indefinite period of time. Over an extremely long time period, some natural attenuation of contamination in the aquifer would occur, as contaminants are spread over a larger area and concentrations decrease somewhat due to dispersion, and possibly some degradation of organic compounds. However, because of the environmental persistence of site contaminants and the potential presence of residual PAHs in subsurface saturated soils remaining at the site under this alternative, the time period required for natural attenuation to occur would be on the order of centuries.

Alternative 2, the pumping of four gradient control wells, will not be entirely effective in preventing the further spread of contamination, but can be used to reduce or limit the further spread of contamination. The effectiveness of these wells would be very limited based on the size of their capture zones. The variable transmissivity in the Northern Area precludes an accurate prediction of the capture zones for the four wells. The transmissivity is lowest in the northern portion. Pumping rates as low as 5 to 10 gallons per minute are not sustainable, and the resulting capture zones would only be a few feet wide. However, the southernmost well adjacent to Well W 428 has shown a relatively high transmissivity in short-term pump tests. The calculated capture zone of this location from the short-term pump test (approximately 5000 feet at a pumping rate of 200 gallons per minute) is unrealistic because the extent of the high transmissive zone is much less than 5000 feet, and is not known if the short-term test results are applicable to a permanent pumping activity. The variable transmissivity in this area leads to a range of predicted pumping rates of from less than 5 gallons per minute to 200 gallons per minute.

Alternative 3 is the best option for limiting the further spread of contamination within the Northern Area. Well W440 to be constructed near Well W428 in the southeastern corner of the Northern Area has shown the highest transmissivity in short-term pump tests. The production goal for W440 is approximately 50 gallons per minute on a continuous basis.

Once the response objective is met, and the further spread of contamination has been prevented, residual levels of PAHs will remain in the aquifer. On the basis of their relatively large volume and low mobility, residual PAHs are expected to remain in the aquifer for at least the 30-year life of the CD/RAP. Pumping will continue as long as it is necessary to prevent the further spread of contamination. The potential risks posed by residual contamination in the aquifer after plume

management activities are concluded are very small because the spread of contamination will be hydraulically controlled, and because the relatively low mobility of the PAH compounds will reduce their tendency to migrate.

The potential need for additional response actions in portions of the Northern Area of the Platteville Aquifer that are outside the influence of the pumping wells will be addressed based on future ground water monitoring results. Monitoring of available wells completed in the Northern Area of the Platteville Aquifer is ongoing.

Reduction of Toxicity, Mobility, or Volume Through Treatment

Alternative 1 includes no treatment and therefore, provides no reduction in toxicity, mobility and volume.

The most important feature of Alternatives 2 and 3 is the control exerted by the pumping well on the volume and mobility of contaminants within the aquifer. During pumping, the more mobile PAHs will be removed first, leaving less mobile PAHs in the aquifer.

Although treatment of the pumped water under Alternatives 2 and 3 will only destroy a relatively small portion of the total volume of contamination in the aquifer, alternatives 2 and 3 comply with EPA's statutory mandate of treatment to the maximum extent practicable.

Short-Term Effectiveness

Alternative 1 provides no short-term effectiveness.

The construction and implementation of Alternatives 2 and 3 does not present a great potential for worker or community exposure, and will not cause adverse environmental impacts. Alternative 2 potentially has four wells being installed versus one well for Alternative 3. During the short construction project, the well(s) will be constructed, well house(s) will be built and well pumps installed. During the construction activity, measures will be taken to minimize workers and community exposure. These alternatives present no other short-term risks to the community at large.

Implementability

Alternative 1 is technically implementable, since it requires no action. However, this alternative is not acceptable because it does not protect human health and the environment nor does it meet ARARS.

The heterogeneous and low transmissive nature of the Platteville Aquifer creates difficult conditions for siting new well locations in the Northern Area; however, short-term pump tests have identified the most feasible well siting locations. There are no outstanding issues relative to the technical

feasibility of implementing Alternative 2 or 3. The technology for pumping ground water is reliable, and easy to maintain. There should be little potential for schedule delays, or conflicts with other remedial actions taken at the Site. Repair work on system components will be similarly straightforward. Services and materials for this work are all available at competitive bid prices, and will not limit the implementability of this alternative.

There are no administration problems that would prevent implementation of the preferred alternative. Similar remedial actions are currently being practiced elsewhere at the Site. Other Agencies such as the MCES, the Minnesota Department of Natural Resources, and/or the Minnehaha Creek Watershed District have a precedent to follow in dealing with impacts from this remedial action.

Costs

Alternative 1 has no costs.

Project costs for Alternative 2 are estimated at $400,000 for capital costs for equipment, installation, engineering, permits, startup, and contingencies assuming four wells are installed. O&M, materials, energy, disposal of residues, purchased services, administrative costs, and other post-construction costs that may be required to ensure the effectiveness of this remedial action are estimated at no more than $120,000 per year. Major components of the annual O&M costs include: sewer charges of $32,000, electricity costs of $8,000 and labor costs of $80,000. If a treatment facility is required for surface water disposal, the capital cost of the facility is estimated at $ 500,000.

Costs identified for Alternative 3 in the FS for the installation of W440 are approximately $100,000. These costs would cover equipment, installation, engineering, permits, startup, and contingencies. O&M, materials, energy, disposal of residues, purchased services, administrative costs, and other post-construction costs that may be required to ensure the effectiveness of this remedial action are estimated at no more than $30,000 per year. Major components of the annual O&M costs include: sewer charges of $8,000, electricity costs of $2,000 and labor costs of $20,000. If a treatment facility is required for surface water disposal, the capital cost of the facility is estimated at $300,000.

If monitoring results indicate additional gradient control wells are needed for Alternatives 2 or 3, the above anticipated cost for Alternative 3 would be required for each additional well needed to achieve the remedial goals of the project.

Agency Acceptance

The Agencies concur with the remedy since it is protective of public health and the environment and satisfies the nine required evaluation criteria. The remedy is also consistent with the remedial action specified in the CD/RAP.

In summary, Alternative 3 provides the best balance of tradeoffs among available alternatives with respect to the criteria used to evaluate remedies. Based on information available at this time, the Agencies believe the selected alternative will protect human health and the environment, will comply with ARARs, will be cost-effective, and will utilize permanent solutions and alternative treatment technologies or resources recovery technologies to the maximum extent practicable. This alternative will satisfy the preference for treatment as a principal element to the maximum extent practicable.

Community Acceptance

There were no comments received during the public comment period on the Proposed Plan.

IX. SELECTED REMEDY

Alternative 3, which consists of the installation and pumping of well W440 to provide gradient control, is the selected remedy. The well will be pumped at a rate, depending on the extent of contamination in the aquifer as determined by ground water monitoring, to control the further spread of contamination in the Platteville Aquifer. The remedial action alternative involves the installation of the pumping well W440, building a new well house and installing appropriate pumping equipment in the well.

For the first five years following the effective date of this ROD, ground water samples will be collected on a semiannual basis from the following wells: W1, W18, W19, W20, W22, W27, W101, W120, W121, W124, W130, W131, W143, W420, W421, W422, W424, W426, W428, W431, W432, W433, W434, SLP3, and from the new gradient control well W440 constructed under this remedy. These samples will be analyzed for carcinogenic PAHs and other PAHs listed in Appendix A of the CD/RAP. The sampling results will be reported and summarized in table format in the Annual Monitoring Report, which is submitted to the Agencies by March 15th of each year.

The Platteville Aquifer wells to be sampled and the frequency of sampling will be re-evaluated after the five year period. Water level measurements will be taken at all the above wells on a quarterly basis for the first year, and semiannually thereafter. If the proposed range of pumping rates is not sufficient to control the spread of contamination, additional wells may be required for gradient control.

Well W440 will initially discharge to the MCES wastewater treatment plant for treatment of the contaminated ground water. The discharge will be monitored, as stated above, to determine if treatment is necessary to route the discharge to a storm water sewer within approximately three to five years. If necessary, an off-site treatment facility will be built to ensure that the ground water meets NPDES limits.

The selected remedy is consistent with the CD/RAP, Section 9.5 which specifies the installation and operation of one or more gradient control wells to prevent the further spread of ground water

exceeding any of the drinking water criteria defined in CD/RAP Section 2.2. Because the CD/RAP requires that the Potentially Responsible Parties (PRPs) control the gradient in the Northern Area of the Platteville Aquifer and specifies this particular remedial action, the analysis of this alternative builds on various earlier studies, referenced in the CD/RAP, that developed and screened alternatives.

X. STATUTORY DETERMINATIONS

The selected remedy must satisfy the requirements of Section 121 of CERCLA, which are:

1.) Protect human health and the environment;
2.) Comply with ARARs or justify a waiver;
3.) Be cost effective;
4.) Utilize permanent solutions and alternative technologies or resource recovery technologies to the maximum extent practical; and
5.) Satisfy the preference for treatment as a principal element or explain why preference was not satisfied.

Protection of Human Health and the Environment

The selected remedy provides overall protection of human health and the environment by limiting the spread of contamination within the aquifer. The most important effect of this remedy is to provide protection to uncontaminated portions of the Northern Area of the Platteville Aquifer, thus achieving overall protection of the environment.

Compliance with ARARs

The selected remedy will meet all ARARs of federal law or more stringent state laws. The following discussion provides details of the ARARs that will be met by this remedial action.

SDWA

As previously discussed in Section VIII of this ROD, the drinking water criteria developed for this Site are a TBC. The remedial action is required by the CD/RAP to prevent the spread of contaminated ground water in the aquifer that exceeds these drinking water criteria.

CWA

SWDC for the Site are set forth in Section VIII of this ROD. Treatment of the discharge from well W440 will initially occur at the MCES wastewater treatment plant. The discharge from the Site will comply with the pretreatment requirements of the CWA (40 CFR Part 403). In three to five years, the ground water from the gradient control wells may be discharged to a storm sewer. The

discharge to the storm sewer will require a NPDES permit which will incorporate the surface water discharge criteria identified above. An off-site treatment facility may be necessary so that the discharge from the wells will meet NPDES permit limits.

RCRA

RCRA may be an ARAR for the Site. If treatment is required for the discharge from the wells, the process will generate "spent carbon." This term refers to GAC contaminated with PAHs. "Spent carbon" will be tested before being returned to the manufacturer for regeneration and reuse. If the testing of the spent carbon determines it to be a hazardous waste as defined by RCRA, and if regulated quantities are generated, then the requirements of RCRA would be an ARAR for the Site. The Land Ban requirements of RCRA do not apply to the disposal of spent carbon since the carbon is to be regenerated and reused and no land disposal is contemplated.

Cost Effectiveness

The installation of W440 is approximately $100,000. These costs would cover equipment, installation, engineering, permits, startup, and contingencies. O&M, materials, energy, disposal of residues, purchased services, administrative costs, and other post-construction costs that may be required to ensure the effectiveness of this remedial action is estimated at no more than $30,000 per year. Major components of the annual O&M costs include: sewer charges of $ 8,000, electricity costs of $ 2,000 and labor costs of $20,000. If a treatment facility is required for surface water disposal, the capital cost of the facility is estimated at $300,000. The selected remedy was the most cost-effective of the alternatives evaluated, exclusive of the no action alternative.

Utilize Permanent Solutions and Alternative Technologies or Resource Recovery Technologies to the Maximum Extent Possible

The PAHs are expected to remain in the aquifer for at least the 30 year life of the CD/RAP. Pumping will continue as long as necessary to contain the spread of contamination in the aquifer above drinking water criteria levels. Pumping is a standard, reliable and proven technology for meeting remedial objectives. In three to five years, the discharge from the gradient control wells may be routed to the storm sewer at which time off-site treatment may be necessary to meet NPDES discharge limits.

Satisfy the Preference for Treatment as a Principal Element

The most important feature of this alternative is the control exerted by the pumping well on the volume and mobility of contaminants within the aquifer. During pumping, the more mobile PAHs will be removed first, leaving less mobile PAHs in the aquifer that will be released slowly over time. As previously indicated, this alternative is primarily intended to control the spread of contamination. However, the extracted ground water will be treated in a publicly-owned treatment works initially, and in an off-site treatment facility in the future, if surface water discharge near the

site is implemented.

Reilly Tar and Chemical Corporation
St. Louis Park Minnesota

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Responsiveness Summary

Introduction

This community responsiveness summary has been developed to document community involvement and concerns during the selection of a clean-up remedy for the Northern Area of the Platteville Aquifer at the Reilly Tar Superfund site in St. Louis Park, Minnesota, and to respond to comments received during the public comment period on the Feasibility Study/Proposed Plan.

Responsiveness Summary for the Record of Decision

I. Overview

The Minnesota Pollution Control Agency's (MPCA) and the U.S. Environmental Protection Agency's (EPA) recommended clean-up alternative for the Reilly Tar Site (Site) was announced to the community through a news release to local newspapers, a legal notice in the local newspaper of record, and a fact sheet mailed to the media and all interested parties. The recommended alternative is to install and operate an extraction well in the Northern Area of the Platteville Aquifer, with the discharge from the well going directly to the sanitary sewer system.

The Site has a long and complicated history of investigation and cleanup. The cleanup has been divided into a number of operable units, with the Northern Area constituting a relatively small part of the overall effort. Since the remedy is basically an expansion of actions already operating for Platteville Aquifer under the Consent Decree, it may be understandable that despite public notification and solicitation of comment, there has been almost no public interest in this proposal or operable unit.

Public interest does remain high in ensuring the safety of local drinking water supplies, and also in possible future remedial actions to address the source of the contamination; however, those issues are only indirectly related to this operable unit and are not addressed in this responsiveness summary.

Following is the chronology of community relations actions performed to support the selection of a remedy for this operable unit.

II. Background on Community Involvement

1.) Proposed Plan fact sheet mailed to media and interested parties, May 9, 1995, Attachment 1.

2.) News release for the Proposed Plan, May 9, 1995 (Attachment 2). Advertisement in Star Tribune newspaper of legal notice of Proposed Plan public meeting, May 9, 1995

(Attachment 3).

3.) Public meeting on Proposed Plan, May 23, 1995. (Following the execution of the ROD, a legal notice of its availability will be published in the local newspaper of record. It is anticipated this will occur in July 1995).

III. Public Comment on Proposed Plan/Feasibility Study

The public comment period on the Proposed Plan and Feasibility Study extended from May 10, 1995, to June 9, 1995. The Proposed Plan was summarized in a fact sheet distributed to local media, government officials, and interested parties. A public meeting on the Proposed Plan was held in St. Louis Park on May 23, 1995.

Only a few interested parties attended the meeting. A few questions were asked after the Agencies' presentation, but most of the questions were for clarification. The transcript of the meeting shows that no substantive comments were expressed that would require response from the MPCA or U.S. EPA.

No other comments were received by the Agencies either during or after the comment period.

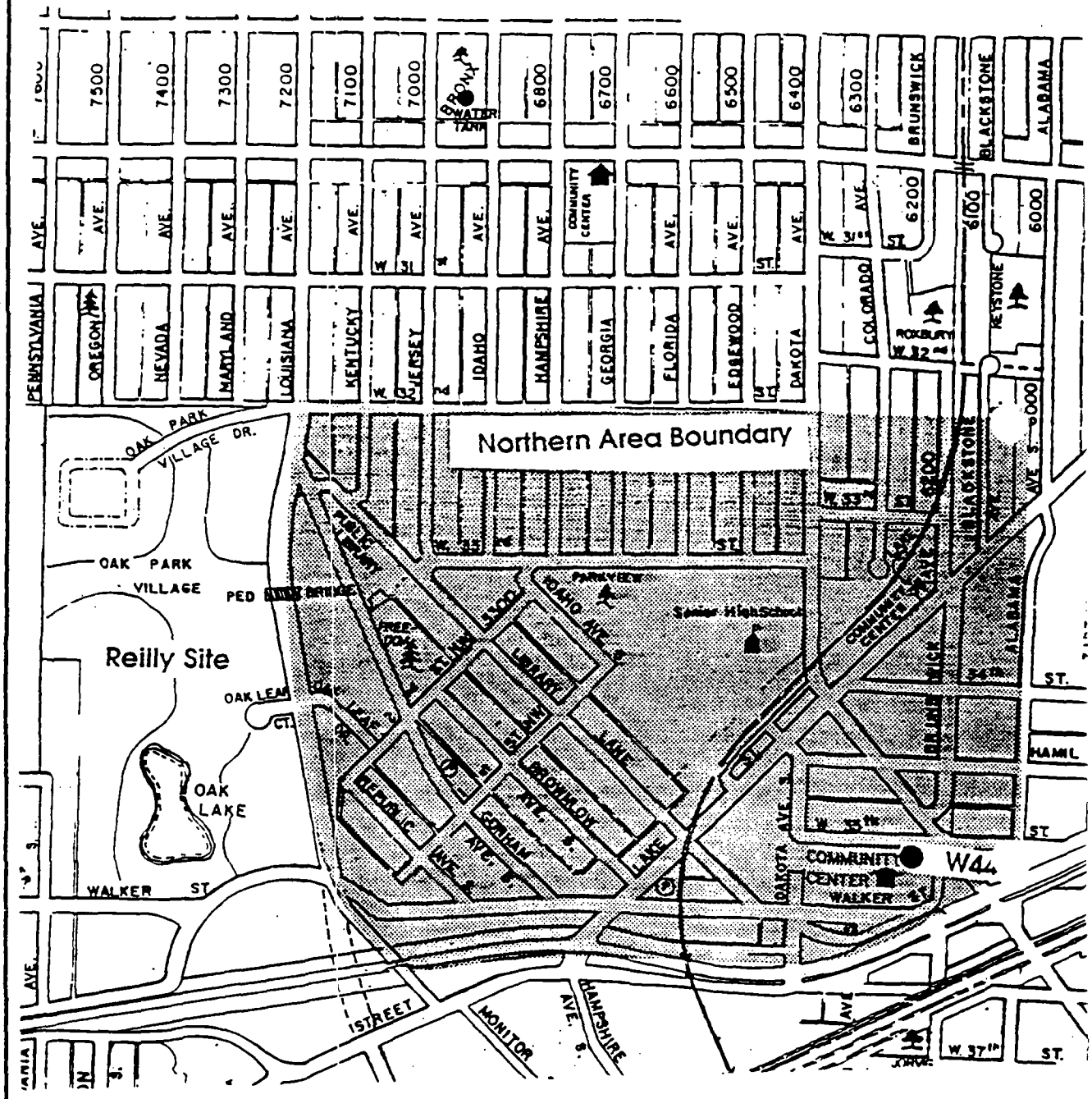
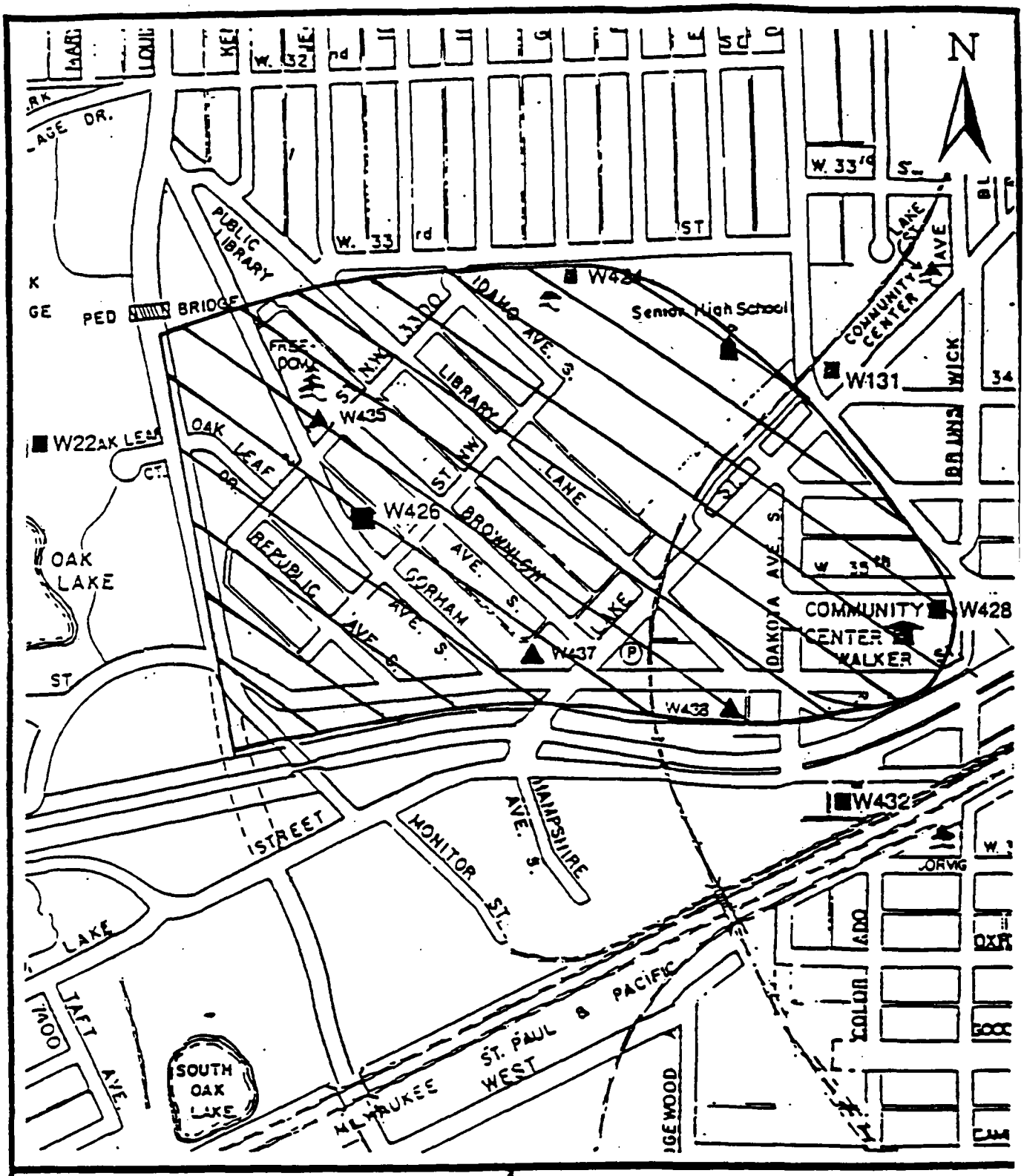


FIGURE 1

ENSR™ Consulting and Engineering

Location of Well W440
St. Louis Park, Minnesota

FILE: 1620-007	DATE: 2/27/95	PRJ. NO. 1620-007



▲ New Platteville Wells

■ Existing Platteville

Inferred Extent of Contamination in Northern Area of Platteville

ENSR™
Consulting and Engineering

Figure 2
Platteville Aquifer Wells for
Water Quality Monitoring
St. Louis Park, MN

DRAWN: LMG | DATE: 5/4/92 | PROJ. NO.: 1620-007

ATTACHMENT 1

Minnesota Pollution Control Agency

A Superfund Fact Sheet on

Reilly Tar and Chemical: Platteville Aquifer Northern Area

May 1995

This fact sheet summarizes the cleanup plan for the northern area of the Platteville aquifer, beneath the Reilly Tar and Chemical site, as proposed by the U.S. Environmental Protection Agency (EPA) and Minnesota Pollution Control Agency (MPCA). The proposed plan follows an extensive investigation of groundwater contamination in the Platteville aquifer northern area and a study of possible cleanup options.

This site in St. Louis Park is north of Highway 7 and west of Louisiana Avenue. Oak Park Village condominiums are located on the northern portion of the site.

What is the history of the site?

Between 1918 and 1972, Republic Creosote, a subsidiary of Reilly Tar and Chemical Corporation, operated a coal-tar distillation and wood-preserving plant on an 80-acre site in St. Louis Park. During those years, wastewater from the distillation process was disposed of in a series of ditches emptying into a swampy area south of the site. Spills and leaks also contaminated the surface soils, and tar-like materials were found deep in an on-site well.

The ground water in the area of the Reilly site is contaminated with creosote and polynuclear aromatic hydrocarbons (PAHs). Contamination was detected in public water supplies as early as 1974. The site has been the object of state and federal Superfund investigation and cleanup actions since the early 1980s. Although the immediate drinking-water problems have been resolved, ground water in the area is still contaminated.

In 1986, the former owners of the Reilly site, along with the City of St. Louis Park, signed a Consent Decree with the EPA and MPCA. Under this agreement, the parties responsible for the site are to continue investigating the extent of the problem and conduct necessary cleanup actions.

What is meant by the "Platteville aquifer" and the "Northern Area?"

The Reilly site is underlain by six separate aquifers (layers of earth and porous rock containing ground water). These aquifers are stacked on top of one another, separated by various confining layers, going down hundreds of feet below the surface. All of them are contaminated to varying degrees beneath the area of the site. Because

The MPCA wants your opinion

The public is invited to comment on this proposed plan between May 10 and June 9, 1995. The MPCA will present the plan at a public meeting on Tuesday, May 23, 1995, beginning at 7:00 p.m., at the St. Louis Park City Hall, 5005 Minnetonka Boulevard.

Comments will be accepted at the meeting, or by phone or mail during the above comment period.

For more information or to comment on the proposed plan, contact:

Doug Beckwith, Project Manager
MPCA Ground Water and Solid Waste Division
520 Lafayette Road
St. Paul, MN 55155

(612) 296-7792

Why was this plan chosen?

Remedies in Superfund cleanups are evaluated against a number of criteria. The proposed plan was carefully considered in light of the following criteria:

1. This remedy provides overall protection of human health and the environment by limiting the further spread of contamination within the aquifer.
2. The remedy complies with applicable local requirements. Ground water treated and discharged from the MWCC's treatment plant will meet state surface-water criteria.
3. The toxicity, volume, and mobility of the contaminants in the aquifer will be effectively reduced over time by the pump-out.
4. The remedy will provide long-term effectiveness and permanence by ensuring that the pump-out will continue as long as necessary to prevent the further spread of contamination in the aquifer.
5. The construction and implementation of this remedy presents no worker or community exposure, nor any adverse environmental impacts.
6. The technology for this remedy is proven, cost-effective, reliable, and easy to maintain.
7. The final criteria are state and community acceptance. The MPCA prefers this remedy, and now the community has an opportunity to review and comment on the proposed remedy before it becomes final.

How long will the pump-out need to continue?

Water coming from the pump-out wells would be tested periodically, and the pump-out would continue until the wells produce water that is within state guidelines for drinking water. This may take as long as 30 years, and possibly longer.

What is being done to clean up the other aquifers?

The other aquifers associated with the site have their own investigations and action plans. They are all in various stages of completion, but basically, the same type of ground-water pump-and-treat will be performed, with minor variations, for each aquifer. Ground water moves very slowly, and the cleanup is keeping ahead of the problem.

What is the next step?

The MPCA is holding a 30-day public comment period on this proposed plan, from May 10 to June 9, 1995. The comment period includes a public meeting (see box on first page) at which the MPCA will discuss the proposed plan. After considering the public's comments, the MPCA will finalize the cleanup alternatives for the northern area of the Platteville aquifer. The MPCA's response t comments will be available for review at the St. Louis Park Publ Library, along with the Record o Decision for the site, which documents the reasons for this cleanup plan.

Comments or questions?

The compete reports of the investigation and study of respon alternatives for the northern area the Platteville aquifer are availab for review at the MPCA's St. Pau headquarters at 520 Lafayette Ro In addition, the EPA maintains a Information Repository containin these documents at the St. Louis Park Public Library. The library located at 3240 Library Lane in S Louis Park, Minnesota.

For additional information or to comment on the proposed cleanu plan, please contact:

Doug Beckwith, Project Manage
Ground Water/Solid Waste Divis
MPCA
520 Lafayette Road
St. Paul, MN 55155

(612) 296-7792

Comments should be phoned in b 4:30 p.m. or postmarked no later than midnight Friday, June 9, 19

On request, this fact sheet can be made available in Braille, large type or audio tape.

ATTACHMENT 2

News Release

Minnesota Pollution Control Agency
520 Lafayette Road North, St. Paul, Minnesota 55155-4194

FOR RELEASE: May 9, 1995

Contact: Emmy Reppe, (612) 296-6706 (voice)
(612) 282-5332 (TTY)
Toll free 1-800-657-3864 (voice/TTY)

MPCA AND EPA PROPOSE CONTAINMENT PLAN FOR REILLY TAR'S PLATTEVILLE AQUIFER

The Minnesota Pollution Control Agency (MPCA) and the U.S. Environmental Protection Agency (EPA) today announced a proposed containment plan for the Platteville aquifer northern area, beneath the Reilly Tar and Chemical Superfund site in St. Louis Park. The agencies will present the plan for public comment during a public meeting on Tuesday, May 23, 1995, at 7:00 p.m. at the St. Louis Park City Hall, the MPCA said.

The 80-acre Reilly Tar and Chemical site was operated as a coal-tar distillation and wood-preserving plant from 1918 to 1972. As a result of these activities, ground water in the area is contaminated with creosote and polynuclear aromatic hydrocarbons (PAHs).

The site is underlain by six separate aquifers (layers of earth and porous rock containing ground water). All six aquifers, stacked on top of one another, are contaminated to varying degrees below the site. Each aquifer has or will have its own cleanup plan.

The current proposed plan deals only with the Platteville aquifer northern area, located approximately 70 to 100 feet beneath the surface. The plan calls for installing an extraction well to contain the spread of contaminated ground water. No drinking-water wells in the area use the Platteville aquifer northern area.

The MPCA and EPA seek public comment on the proposed plan during a comment period from May 10 to June 9, 1995, as well as at the public meeting. Comments may be submitted to Doug Beckwith of the MPCA at 520 Lafayette Rd., St. Paul, MN 55155; or call 612/296-7715 (toll-free in Minnesota, 1/800/657-3864). After comments are received at the public meeting and during the comment period, the MPCA and EPA will make a final decision on the proposed plan.

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ATTACHMENT 3

586B01600
CLASS #203
71 LINES

MN Pollution Control Agency
Attention: Emmy Reppe
520 Lafayette Rd. N.
St. Paul, MN 55155-4102

STAR TRIBUNE

a division of Cowles Media Company

THE MINNESOTA POLLUTION CONTROL AGENCY and the U.S. ENVIRONMENTAL PROTECTION AGENCY ANNOUNCE

a public comment period and public meeting regarding the Proposed Plan to control the spread of contaminated ground water at the REILLY TAR AND CHEMICAL SUPERFUND SITE in St. Louis Park, Minnesota

The Minnesota Pollution Control Agency (MPCA) and the U.S. Environmental Protection Agency (U.S. EPA) announce a public comment period and public meeting regarding the Proposed Plan to control the spread of contaminated ground water at the Reilly Tar and Chemical Superfund Site (Site). The Proposed Plan is for control of contaminated ground water in the Platteville aquifer, Northern Area. The MPCA and U.S. EPA propose adding a pump-out well in the aquifer to prevent further migration of contaminated ground water.

The public is invited to comment on this Proposed Plan between May 10 and June 9, 1995. The MPCA will present the plan at a public meeting on Tuesday, May 23 at 7:30 p.m. Comments are welcome at the meeting, or by phone or mail during the comment period. The meeting will be held at:

St. Louis Park City Hall
5005 Minnetonka Boulevard

The technical documents used to make this cleanup decision are available for public viewing at the St. Louis Park Public Library, 3240 Library Lane, St. Louis Park, Minnesota, and at the MPCA's Central Office at 520 Lafayette Road in St. Paul.

For more information or to comment on the Proposed Plan, contact:

Doug Beckwith
Ground Water and Solid Waste Division, MPCA
520 Lafayette Road
St. Paul, MN 55155
(612)296-7715
Toll-free in Minnesota at 1 (800) 657-3864

STATE OF MINNESOTA } ss.
COUNTY OF HENNEPIN } AFFIDAVIT OF PUBLICATION

Diane Kise, being duly sworn, on oath says she is and during all times herein stated has been an employee of the Star Tribune, publisher and printer of the newspaper, published 7 days a week, known as Star Tribune and has full knowledge of the facts herein stated as follows:

(1) Said Newspaper is printed in the English language in newspaper format and in column and sheet form equivalent in printed space to at least 1200 square inches. (2) Said newspaper is printed daily and is distributed at least five days each week. (3) Said newspaper has 25 per cent of its news columns devoted to news of local interest to the community which it purports to serve and does not wholly duplicate any other publication. (4) Said newspaper is circulated in and near the municipality which it purports to serve, has at least 500 copies regularly delivered to paying subscribers and has entry as second-class matter in its local post office. (5) Said Newspaper purports to serve the city of Minneapolis and vicinity in the County of Hennepin and has its known office of issue in the City of Minneapolis, in said county. (6) Said newspaper files a copy of each issue immediately with the State Historical Society. (7) Said newspaper is made available at single or subscription prices to any person, partnership or other unincorporated association requesting the newspaper and making the applicable payment. (8) Said newspaper has complied with all foregoing conditions for at least one year.

She further states on oath that the printed copy of the matter hereto attached as a part hereof was cut from the columns of the Star Tribune, and was printed and published therein in the English language, on the following days and dates: Tuesday, 9 May 1995; and that the following is a printed copy of the lower case alphabet from A to Z, both inclusive, and is hereby acknowledged as being the size and type used in the composition and publication of said notice, to wit:

abcdefghijklmnopqrstuvwxyz

Diane Kise
Diane Kise

subscribed and sworn to before me this 12 day of May, 1995

VICKI L. HUSOME
NOTARY PUBLIC - MINNESOTA
My Commission Expires Jan. 31, 2000

U.S. EPA ADMINISTRATIVE RECORD
REMEDIAL ACTION
REILLY TAR & CHEMICAL/DRIFT PLATTEVILLE AQUIFER
ST. LOUIS PARK, MINNESOTA
UPDATE #2
05/04/95

AR

DOC#	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	08/27/90	Gregg, W., ENSR	Beckwith, D., MPCA	Letter re: Addendum for Platteville Aquifer Pumping Test	3
2	04/12/91	Grube, J., City of St. Louis Park	Owens, D., U.S. EPA and Beckwith, D., MPCA; et al.	Letter re: Expedited Schedule for the Supplemental Northern Area RI/FS w/Attached ENSR Letter of April 9, 1991 to the City of St. Louis Park	4
3	02/03/92	Grube, J., City of St. Louis Park	U.S. EPA, MPCA, and Reilly Industries, Inc.	Letter re: Completion of the Installation of the Platteville Aquifer Monitor Wells and Changes in Field Activities	2
4	05/20/92	Grube, J., City of St. Louis Park	U.S. EPA, MPCA, and Reilly Industries, Inc.	Platteville Aquifer Northern Area Feasibility Study w/Attached Cover Letter	17
5	12/23/93	Beckwith, D., MPCA and Owens, D., U.S. EPA	City of St. Louis Park and Reilly Industries, Inc.	Letter re: MPCA/U.S. EPA's Review of the FS and Request for an Amended FS Plan	3
6	01/11/94	Grube, J., City of St. Louis Park	U.S. EPA, MPCA, and Reilly Industries	Letter re: City's Request for a 30 Day Extension to the Submittal of the Proposed List of Alternatives for the Amended FS and a 60 Day Extension to the Submittal of the Amended FS Plan	2
7	02/09/94	Beckwith, D., MPCA and Owens, D., U.S. EPA	City of St. Louis Park and Reilly Industries, Inc.	Letter re: MPCA/U.S. EPA's Approval for a 30 Day Extension for Submittal of a Proposed List of Alternatives to the FS and a 60 Day Extension for Submittal of the Revised FS	2
8	02/23/94	Grube, J., City of St. Louis Park	U.S. EPA, MPCA, and Reilly Industries, Inc.	Letter re: Proposed List of Alternatives to be Included in the Amended FS	3
9	03/14/94	Grube, J., City of St. Louis Park	U.S. EPA, MPCA, and Reilly Industries, Inc.	Platteville Aquifer Northern Area Feasibility Study w/Attached Cover Letter	37
10	07/18/94	Grube, J., City of St. Louis Park	U.S. EPA, MPCA, and Reilly Industries, Inc.	Letter re: City's Amendment to the March 14, 1994 FS	3
11	08/15/94	Grube, J., City of St. Louis Park	U.S. EPA, MPCA, and Reilly Industries, Inc.	Letter re: Request for Modification to Add Well W434 to the Drift Platteville Aquifer Gradient Control Well System	2

DOC#	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
12	09/29/94	Beckwith, D., MPCA and Owens, D., U.S. EPA	City of St. Louis Park and Reilly Industries, Inc.	Letter re: Approval of City's Request to Add Well W434 to the Drift Platteville Aquifer Grandient Control Well System	1
13	10/12/94	Beckwith, D., MPCA and Owens, D., U.S. EPA	City of St. Louis Park and Reilly Industries, Inc.	Letter re: MPCA/U.S. EPA's Approval of Amended Alternative 3 to the FS	1
14	02/28/95	Gregg, W., ENSR	Beckwith, D., MPCA	Letter Forwarding Attached "Location of Well W440" Map	2

GUIDANCE ADDENDUM
DOCUMENTS MAY BE VIEWED AT
U.S. EPA REGION 5
77 W. JACKSON BLVD.
CHICAGO, IL 60604-3590
05/04/95

DOC#	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	10/00/88	U.S. EPA/OERR	U.S. EPA	Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (OSWER Directive 9355.3-01; EPA/540/G-89/004)	0
2	07/00/89	U.S. EPA/OSWER	U.S. EPA	Interim Final Guidance on Preparing Superfund Decision Documents (OSWER Directive 9355.3-02)	0
3	03/08/90	Federal Register	Public	National Oil and Hazardous Substances Contingency Plan, Final Rule (Vol. 55: 8666-8865)	0
4	05/00/90	U.S. EPA/OSWER	U.S. EPA	A Guide to Developing Superfund Proposed Plans (OSWER Directive 9335.3-02FS-2)	0

U.S. EPA ADMINISTRATIVE RECORD
REMEDIAL ACTION
REILLY TAR & CHEMICAL/DRIFT PLATTEVILLE AQUIFER
ST. LOUIS PARK, MINNESOTA
UPDATE #3
05/08/95

DATES	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
05/00/95	U.S. EPA, MPCA		Superfund Program Proposed Plan for the Platteville Aquifer Northern Area	17

Alternative 1: Ground water monitoring with no pumping wells

Alternative 2: A combination of four pumping wells located in the eastern portion of the Northern Area

Alternative 3: A single pumping well located outside the Northern Area

The March 14, 1994, FS noted variable hydrogeologic conditions (aquifer transmissivity) in the Northern Area of the Platteville Aquifer that create difficulties in implementing a comprehensive gradient control network. Therefore, the March 14, 1994, FS recommended pumping a single well, W434, located downgradient from the Northern Area to mitigate downgradient impacts from contamination in the Northern Area.

Discussion: The benefits of pumping well W434 are recognized by the City and the Agencies, however, the well is outside the Northern Area and it cannot limit the further spread of contamination within the Northern Area. Therefore, gradient control using well W434 is not an option for satisfying the requirements of the Platteville Aquifer FS. Pumping well W434 will be proposed by the City in the near future.

The best option for limiting the further spread of contamination within the Northern Area is to provide gradient control in the area of highest aquifer transmissivity. A pumping well located in the vicinity of existing monitoring well W428 is expected to provide the greatest degree of gradient control achievable by a single pumping well located within the Northern Area. The size of the higher transmissivity zone in the vicinity of well W428 is not believed to be large enough to warrant additional pumping wells to provide a greater degree of control at this time.

Amendment: The City proposes to amend Alternative 3, substituting a new pumping well, to be constructed in the vicinity of monitoring well W428, for well W434. The proposed new well (designated W440) will be constructed using water-production optimizing techniques, such as an over-sized well diameter to intercept more fractures in the Platteville Aquifer, and/or gravel-packing the screen. The production goal for well W440 is approximately 50 gallons per minute on a continuous basis. The discharge from W440 will initially be routed to the sanitary sewer, with an evaluation of treatment options based on three to five years of monitoring data. A well house will be constructed to protect the well head, pumping equipment, and operating controls. Included with this alternative is continued water level and water quality monitoring to assess the impact of pumping well W440 on the Northern Area of the Platteville Aquifer. The discussions of the evaluation criteria provided in the March 14, 1994, FS for Alternatives 2 and 3 apply to this amended Alternative 3.

Recommended Alternative: Based on a review of the remedial options available, and on discussion with the Agencies, the amended Alternative 3 consisting of pumping well W440 to provide gradient control, is the recommended alternative to best meet the CD-RAP objective of limiting the further spread of contamination in the Northern Area of the Platteville Aquifer.

This letter is submitted as an amendment to the March 14, 1994, FS. The City respectfully requests that the Agencies' review of that document be inclusive of this letter. Any questions regarding this letter may be directed to this office.

Sincerely,

James N. Grube
Director of Public Works

cc: Elizabeth Thompson
Bill Gregg
Reilly File