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UNITED STATES DISTRICT COURT DISTRICT OF MINNESOTA FOURTH DIVISION

UNITED STATES OF AMERICA,

Civil No. 4-80-469

CONSENT DECREE

Plaintiff,

L. .

and

STATE OF MINNESOTA, by its Attorney General Hubert H. Humphrey, III, its Department of Health, and its Pollution Control Agency,

Plaintiff-Intervenor,

vs.

REILLY TAR & CHEMICAL CORPORATION; HOUSING AND REDEVELOPMENT AUTHORITY OF ST. LOUIS PARK; OAK PARK VILLAGE ASSOCIATES; RUSTIC OAKS CONDOMINIUM INC.; and PHILIP'S INVESTMENT CO.,

Defendants,

and

CITY OF ST. LOUIS PARK,

Plaintiff-Intervenor,

vs.

REILLY TAR & CHEMICAL CORPORATION,

Defendant,

and

CITY OF HOPKINS,

Plaintiff-Intervenor,

¥8.

REILLY TAR & CHEMICAL CORPORATION,

Defendant.

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CONSENT DECREE

The Parties having STIPULATED and AGREED that a judgment may be entered in this action, incorporating the following terms and conditions, and the Court being fully advised in the premises, now before the taking of any testimony and upon the pleadings herein, it is hereby ORDERED, ADJUDGED AND DECREED:

A.

JURISDICTION

The Court has jurisdiction of the subject matter of this action pursuant to 28 U.S.C. § 1331, 28 U.S.C. § 1345, 42 U.S.C. § 6973, 42 U.S.C. §§ 9606, 9607, and 9613, and the doctrine of pendent jurisdiction, and has jurisdiction over the Parties herein.

в.

PARTIES

The Parties to this Consent Decree are:

 The UNITED STATES OF AMERICA on behalf of the United States Environmental Protection Agency and, with respect to natural resources damages only, the U.S. Department of Interior ("United States");

2. The STATE OF MINNESOTA, by its Attorney General Hubert H. Humphrey, III, its Department of Health and its Pollution Control Agency ("State");

3. REILLY TAR & CHEMICAL CORPORATION ("Reilly"), an Indiana corporation;

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4. The CITY OF ST. LOUIS PARK ("St. Louis Park"), a municipal corporation organized and existing under the laws of the State of Minnesota;

5. The CITY OF HOPKINS ("Hopkins"), a municipal corporation organized and existing under the laws of the State of Minnesota;

6. The HOUSING AND REDEVELOPMENT AUTHORITY OF ST. LOUIS PARK, a municipal corporation organized and existing under the laws of the State of Minnesota;

7. OAK PARK VILLAGE ASSOCIATES, a limited partnership existing under the laws of the State of Minnesota;

8. PHILIP'S INVESTMENT CO., a Minnesota corporation.

This Consent Decree shall apply to and be binding upon the Parties, their officials, officers, directors, agents, servants, employees, subsidiaries, successors and assigns.

С.

BACKGROUND

 From 1917 until 1972, Reilly was engaged in the business of coal tar distillation and pressure treatment of wood products at its plant site at 7200 Walker Street, St.
 Louis Park, Hennepin County, Minnesota (hereinafter "the Site"). The Site encompassed an eighty (80) acre tract, which consists of Lot 1, Block 1; Lot 1, Block 2; Lot 1, Block 3; Lot 1, Block 4; Lot 1, Block 5; Lot 1, Block 6; Lot 1, Block 7; Lot
 l, Block 8; Lot 1, Block 9; Lot 1, Block 10; all in Oak Park

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Village according to the plat thereof on file in the office of the County Recorder of Hennepin County, Minnesota.

2. On or about October 2, 1970, the State, through its Pollution Control Agency, and St. Louis Park, filed a complaint in the Hennepin County District Court of the State of Minnesota alleging violations by Reilly of state and municipal pollution control laws and regulations. <u>State of Minnesota by the Minnesota Pollution Control Agency, and the City of St.</u> Louis Park v. Reilly Tar & Chemical Corporation, Hennepin County District Court, Civil File No. 670767 (hereinafter "Hennepin County Lawsuit").

3. On April 14, 1972, St. Louis Park agreed to purchase the Site from Reilly. The purchase agreement included a promise by St. Louis Park to obtain dismissals with prejudice by the State and by St. Louis Park of the Hennepin County Lawsuit. The purchase agreement also provided for acceptance by St. Louis Park of the property in an "as is" condition, including "any and all questions of soil and water impurities and soil conditions," and an agreement by St. Louis Park "to make no claim against Reilly for damages relative to soil and water impurities, if any, in any way relating to the premises sold herein, or relative to any other premises in which the City of St. Louis Park holds an interest. . . ."

4. A closing was scheduled on the property for June 19, 1973. However, the State did not execute a dismissal

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of the Hennepin County Lawsuit. Accordingly, the City of St. Louis Park agreed that it would "hold Reilly harmless from any and all claims which may be asserted against it by the State of Minnesota, acting by and through the Minnesota Pollution Control Agency, and will be fully responsible for restoring the property, at its expense, to any condition that may be required by the Minnesota Pollution Control Agency". The City of St. Louis Park and Reilly executed and filed dismissals with prejudice of their claims in the Hennepin County Lawsuit, and the closing took place thereafter.

5. On June 21, 1973, the property was conveyed by quitclaim deed from St. Louis Park to the Housing and Redevelopment Authority of St. Louis Park, Minnesota, which thereafter conveyed part of the property to Oak Park Village Associates, Rustic Oak& Condominium, Inc. and Philip's Investment Co.

The Agreement for Purchase and Sale of Real Estate dated October 4, 1977 and the First Addendum to the Agreement dated October 6, 1977 between the St. Louis Park Housing and Redevelopment Authority and Diversified Equities Corporation [Oak Park Village Associates] regarding Lot 1, Block 3, Oak Park Village, Hennepin County, Minnesota, provides as follows:

14. Environmental Matters

The Agency [St. Louis Park Bouaing and Redevelopment Authority] shall prepare and shall incur all expenses for any environmental approvals, assessments, environmental impact

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statements or such other environmental review documents deemed necessary or desirable by governmental authority.

Agency [St. Louis Park Housing and Redevelopment Authority] agrees to indemnify and save Redeveloper harmless from and against any and all loss or damage Redeveloper or successors may suffer from damage to improvements constructed on the Property as a result of claims, demands, costs or judgments against and arising out of soil or ground water contamination existing as of the date hereof, or caused by conditions existing as of the date hereof.

The Agreement for Purchase and Sale of Real Estate dated June 1, 1979 by and between the Housing and Redevelopment Authority of St. Louis Park and Ben Weber [Philip's Investment Co.] and the City of St. Louis Park regarding Lot 1, Block 6, Oak Park Village, Hennepin County, Minnesota, provides as follows:

14. Environmental Matters.

a. Both the City and the Redeveloper agree that the Stipulation between the City and the PCA dated April 19, 1977, is capable of a possible variety of interpretations. As between the Agency [St. Louis Park Housing and Redevelopment Authority], the City and the Redeveloper, as an inducement to the City and Agency to allow the Redeveloper to develop the Property and as security against the Redeveloper, or its assigns or successors in interest, claiming the right to benefit from a broader interpretation of said Stipulation and as an inducement to the Redeveloper to develop the Property and as security against the City or Agency claiming the right to benefit from a narrower interpretation of said Stipulation, the City, Agency and Redeveloper agree that, as between the parties to this Agreement, this paragraph 14 shall constitute the sole remedy available to Redeveloper against the City and Agency for any action or claim against or loss or damage to the

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Redeveloper which is based on, derived from, or related to the soil or groundwater conditions of the Property, and shall constitute, as between the parties to this agreement, their interpretation of the Stipulation.

b. The City will not require the Redeveloper to excavate soil from the Property in question because of soil or groundwater contamination resulting from the operations of the former Republic Creosote Plant.

c. The City will indemnify the Redeveloper from damage consisting of physical destruction or injury to improvements on the property due solely to soil excavation on the Property required by public agencies. This indemnification shall not include consequential damage, lost income, lost profit or other forms of indirect loss or damage nor shall it include damage arising from personal injury. Indemnification shall be on a replacement cost less depreciation basis.

d. The indemnification granted by this agreement shall be secondary to any other rights or potential rights which the Redeveloper may have to compensation for any damage or loss whether through eminent domain, grants or otherwise. The Redeveloper shall exercise good faith effort to seek and obtain such compensation before presenting a claim under this indemnification agreement. Any compensation from any other source for damages indemnified herein shall reduce the indemnification liability of the City dollar per dollar.

e. This indemnification and agreement shall not be assignable except to the first mortgagee and shall terminate on January 1, 1985. All claims to indemnification under this agreement must be made in writing and received by the City Clerk of the City prior to January 2, 1985.

6. In April, 1978, the State moved to amend its complaint in the Hennepin County Lawsuit, alleging that PAH substances contained in Reilly's coal tar and creosote wastes had entered the ground water beneath the Site and that their

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further migration threatened to contaminate aquifers relied on for public water supply. At the same time, St. Louis Park moved to intervene as a plaintiff. The motions were granted and interlocutory review was denied by the Minnesota Supreme Court. Reilly subsequently tendered defense of the action to St. Louis Park and counterclaimed against St. Louis Park, asserting that St. Louis Park was responsible for dealing with this problem under the hold harmless agreement made at the time of its purchase of the Site.

7. On or about September 4, 1980, the United States commenced this action by filing a complaint under Section 7003 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6973, alleging, <u>inter alia</u>, the existence of an imminent and substantial endangerment to health and the environment due to the handling, treatment, storage, transportation, disposal and presence of hazardous waste at the Site. On or about October 15, 1980, the State and St. Louis Park were granted leave to intervene in the RCRA Section 7003 claim and to assert additional claims under Minnesota law. On or about June 16, 1981, Hopkins was granted leave to intervene in the RCRA Section 7003 claim and to assert additional claims under Minnesota law.

8. On or about September 9, 1981, the United States
filed an amended complaint, alleging in addition to the RCRA
\$ 7003 claim, claims under Sections 106 and 107 of the

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Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. §§ 9606 and 9607.

9. On or about May 27, 1981, the State filed an amended complaint, asserting claims under Section 7003 of RCRA,
42 U.S.C. \$ 6973, Section 107 of CERCLA, 42 U.S.C. \$ 9607,
Minn. Stat \$\$ 115.061, 115.07, 115.071, and Minnesota Rule WPC
4(b) [Minn. Rule Part 7100.0020], and Minnesota common law.

10. On or about August 31, 1981, and October 16, 1981, respectively, St. Louis Park and Hopkins filed amended complaints alleging, <u>inter alia</u>, claims under Section 7003 of RCRA, 42 U.S.C. § 6973, Section 107 of CERCLA, 42 U.S.C. § 9607, Minn. Stat. Chapter 116B, and Minnesota common law.

11. On or about April 5, 1985, the Court granted the State's motion for leave to file a second amended complaint, adding claims under the Minnesota Environmental Response and Liability Act ("MERLA"), Minn. Stat. Ch. 115B. The State subsequently filed such a second amended complaint. Pursuant to stipulations, St. Louis Park and Hopkins later also filed second amended complaints, each of which added MERLA claims.

12. Reilly, in its answers to the various complaints referenced above, has denied and continues to deny liability, has raised several affirmative defenses, and has asserted a counterclaim against St. Louis Park. Various other Parties have asserted cross-claims, including a cross-claim by St. Louis Park against the State, a cross-claim of Oak Park Village

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Associates against the Housing and Redevelopment Authority of St. Louis Park and a cross-claim of Philip's Investment Co. against Reilly.

13. Since 1969, a number of studies and/or reports, chemical analyses and field investigations relating to the Site have been undertaken. By listing the items below, the Parties do not necessarily endorse the accuracy, correctness, precision, quality, or validity of the information and opinions contained therein. These analyses, investigations and studies include but are not limited to the following:

(a) Studies and/or Reports

- (1) "Ground Water Investigation Program at St. Louis Park, MN," by E. A. Hickok & Associates, Inc., September, 1969.
- (3) "An Assemblage of Analytical Data Regarding the Reilly Tar & Chemical Property, St. Louis Park, Minnesota," by the St. Louis Park Health Department, August 1, 1972.
- (4) "Status Report on Creosote Site and TexaTonka Area", prepared by the St. Louis Park Planning Department, January 11, 1973.
- (5) "Surface and Subsurface Ground Reclamation; Republic Creosote Site, City of St. Louis Park", prepared by OSM Consulting Engineers, April 23, 1973.

- (6) "Storm Water Study; Public Improvement #72--43 (Republic Creosote Area)," prepared by OSM Consulting Engineers, August 6, 1973.
- (7) "Geology of the St. Louis Park Area A Review by the Minnesota Geological Survey; Report on Investigation of Municipal Water Supply, St. Louis Park," prepared by the Minnesota Department of Health, March 1974.
- (8) "Soil Investigation; Proposed Storm Sewer and Holding Ponds near Highway 7 and Louisiana Avenue, St. Louis Park," prepared by Soil Exploration Co., April 16, 1974.
- (9) "Hydrogeologic Study of the Republic Creosote Site," prepared by Gerald Sunde, Consulting Engineer, July, 1974.
- (10) "Report on Investigation of Phenol Problem in Private and Municipal Wells in St. Louis Park, Minnesota," prepared by Minnesota Department of Health, September, 1974.
- (11) Memorandum from F. F. Heisel, Minnesota Department of Health, to P. Gove, Minnesota Pollution Control Agency. "St. Louis Park Creosote Contamination Study," November 14, 1975.
- (12) "Data Regarding The History and Development of a Storm Sewer System for the City in the Area of the Former Republic Creosote Property," prepared by the City of St. Louis Park, November 15, 1974.
- (13) "Memorandum on Groundwater Contamination, St. Louis Park, MN," by Minnesota Pollution Control Agency, (MPCA Board Item) November 19, 1974.
- (14) "Memorandum on St. Louis Park Groundwater Situation," by the Minnesota Pollution Control Agency, (MPCA Board Item) December 13, 1974.

- (15) "Soil and Ground Water Investigation Coal Tar Distillation and Wood Preserving Site, St. Louis Park - Phase I Report," prepared by Barr Engineering Co., May 1976.
- (16) "Stability Study of Para Benzo Quinone for the City of St. Louis Park," prepared by Sanitary Engineering Laboratories Inc. (SERCO), June 1976.
- (17) "Soil Boring and Chemical Analysis of the Northern Portion of Oak Park Village," prepared by National Biocentric, Inc., September 17, 1976.
- (18) "Soil Contamination by Creosote Wastes," prepared by National Biocentric, Inc., November 1, 1976.
- (19) "Development Plan, Northern Portion, Oak Park Village," prepared by St. Louis Park, December 2, 1976.
- (20) "Review of Recent Studies of Soil Contamination at the Former Republic Creosote Site - Recommendations to City's Proposed Development Plan," by Minnesota Pollution Control Agency, December 28, 1976.
- (21) "Soil and Ground Water Investigation Coal Tar Distillation and Wood Preserving Site, St. Louis Park - Phase II Report," prepared by Barr Engineering Co., June 1977.
- (22) "Assessment of Possible Human Health Effects Resulting from Contamination of the Former Republic Creosote Site," prepared by the Minnesota Department of Health, October 1977.
- (23) "Soil Report; Prepared by Oak Park Village, St. Louis Park, Minnesota," prepared by Soil Testing Service of Minnesota, Inc., January 5, 1978.
- (24) "Recommendations for Plugging or Modification of Abandoned Wells in the

Area of the Former Republic Creosote Plant," prepared by the City of St. Louis Park, January 11, 1978.

- (25) "Report of Well Water Survey, St. Louis Park, Minnesota," prepared by Sanitary Engineering Laboratories, Inc., (SERCO) June-July 1978.
- (26) "Report on the Existing Creosote Problem in St. Louis Park, Minnesota," prepared by James Bailey, Agricultural Engineering, University of Minnesota, July 1, 1978.
- (27) "Health Implications of Polynuclear Aromatic Hydrocarbons in St. Louis Park Drinking Water," prepared by the Minnesota Department of Health, November 1978.
- (28) "Status Report to the MPCA: Proposed Development, Oak Park Village," prepared by St. Louis Park, November 14, 1978.
- (29) "Water Quality Development in Oak Park Village," prepared by St. Louis Park Planning Department, December 15, 1978.
- (30) "Letter Report Tabulating Information on Existing Wells in St. Louis Park," prepared by United States Geological Survey, February 6, 1979.
- (31) "Status Report: St. Louis Park Development," by the Minnesota Pollution Control Agency (MPCA Board Item), March 27, 1979.
- (32) "Progress Report: Investigation of Coal Tar Derivatives in Ground Water -St. Louis Park," prepared by the United States Geological Survey, April 13, 1979.
- (33) "Epidemiologic Investigation of Third National Cancer Survey Data for St. Louis Park, Edina, Richfield and Minneapolis St. Paul SMSA with a

Historical Review of St. Louis Park's Water Supply," prepared by Kari Dusich, September 1979.

- (34) "Emergency Pumpout Well For Reilly Tar Site, St. Louis Park, Minnesota," prepared by Ecology and Environment, Inc., 1980.
- (35) "Examination of Cost Estimate For Three Tasks to be Completed For The Reilly Tar and Chemical Project, St. Louis Park, MN," prepared by Ecology and Environment, Inc., 1980.
- (36) "Summary Report on the City of St. Louis Park Activated Carbon Pilot Plant Study," prepared by Sanitary Engineering Laboratories, Inc., (SERCO), January 11, 1980.
- (37) "Cancer Rates in a Community Exposed to Low Levels of Creosote Components in Municipal Water," prepared by Dusich, Sigurdson, Hall, Dean, <u>Minnesota</u> <u>Medicine</u>, November 1980.
- (38) "Preliminary Evaluation of Ground Water Contamination by Coal Tar Derivative, St. Louis Park, MN," prepared by the United States Geological Survey, January 1981.
- (39) "Report on Drinking Water Treatment and Remedy Evaluation for St. Louis Park, MN," prepared by Eugene A. Hickok and Associates, Inc., April 1981.
- (40) "Report and Statistic Water Quality: Results of St. Louis Park Water Samples," prepared by H. Taylor, United States Geological Survey, June 10, 1981.
- (42) "Dispersion and Sorption of Hydrocarbons in Aquifer Material," by

G. Cohn (thesis) University of Minnesota, 1982.

- (43) "Terminating An Endless Search: An Action Approach to Solving the Water Problem," prepared by St. Louis Park, January 11, 1982.
- (44) "Request for Authorization to Negotiate and Enter into Cooperative Agreement with the U.S. EPA to Obtain Funds for Additional Cleanup Work at the Reilly Tar Site, St. Louis Park," by the Minnesota Pollution Control Agency (MPCA Board Item), May 25, 1982.
- (45) "Degradation of Phenolic Contaminants in Ground Water by Anaerobic Bacteria: St. Louis Park, MN," prepared by Erlich, Goerlitz, Godsy & Hult, United States Geological Survey, November 1982.
- (46) "Evaluation of Groundwater Treatment and Water Supply Alternatives for St. Louis Park, MN," prepared by CH2M Hill, 1982-1983.
- (47) "Recommended Plan for a Comprehensive Solution of the Polynuclear Aromatic Hydrocarbon Contamination Problem in the St. Louis Park Area," prepared by Environmental Research & Technology, Inc. for Reilly Tar & Chemical Corporation, April 1983, plus Errata, June 27, 1983 and November 27, 1984.
- (48) "Health Risk Assessment and Environmental Effects of Compounds Contaminating St. Louis Park Groundwater: Selected Two - and Three - Ring Heterocycles and Indene," prepared by Stephen M. Mabley, Minnesota Department of Health, Section of Health Risk Assessment, July 1983.
- (49) "Evaluation of Activated Carbon Treatment Alternative for Polynuclear Aromatic Hydrocarbon Removal for Groundwater in the St. Louis Park Area," prepared by Calgon Carbon Corporation, November 18, 1983.

- (50) "Request for Authorization to Negotiate and Execute an Amendment to the Current Cooperative Agreement with the U.S. Environmental Protection Agency for Investigation and Remedial Action at the Reilly Tar and Chemical Company Hazardous Waste Site in St. Louis Park," by the Minnesota Pollution Control Agency (MPCA Board Item), November 22, 1983.
- (51) "Assessment of Groundwater Contamination by Coal Tar Derivatives, St. Louis Park Area, MN", prepared by M. F. Hult, United States Geological Survey, Open File Report 84-867, 1984.
- (52) "Record of Decision, Remedial Action Alternative Selection," prepared by the United States Environmental Protection Agency, June 6, 1984.
- (53) "Evaluation of Granular Activated Carbon for the Removal of Polynuclear Aromatic Hydrocarbons from Municipal Well Water in St. Louis Park, MN," prepared by Calgon Carbon Corporation, September 10, 1984.
- (54) "Sampling and Analysis Plan for Calgon Accelerated Column Testing of SLP 15 Water," prepared by Environmental Research & Technology, Inc., October 25, 1984.
- (55) "Request for Issuance of a Request for Response Action to the Reilly Tar and Chemical Corporation Regarding Contamination At and Around the Reilly Tar Hazardous Waste Site in St. Louis Park," by the Minnesota Pollution Control Agency (MPCA Board Item), December 18, 1984.
- (56) "Ground-water Flow in Prairie du Chien Jordan Aquifer Related to Contamination by Coal Tar Derivatives, St. Louis Park, MN," prepared by J. R. Stark and M. F. Hult, United States Geological Survey, 1985.

- (57) "Calgon ACT Study: Initial Results from the Accelerated Column Test of PAH Removal Performance for Activated Carbon Treatment of Water From SLP 15," prepared by Twin City Testing, January 11, 1985.
- (58) "Calgon ACT Study: Further Results From the Study of PAH Removal by Activated Carbon Treatment," prepared by Twin City Testing, January 30, 1985.
- (59) "Reilly Tar and Chemical: Analysis of Water From Three St. Peter Wells," prepared by Twin City Testing, January 31, 1985.
- (60) "Accelerated Column Test for Removal of Polynuclear Aromatic Hydrocarbons from Contaminated Groundwater," prepared by Calgon Corporation, March 8, 1985.
- (61) "PAH Analysis by GCMS," prepared by Twin City Testing March 26, 1985
- (62) "Draft Work Plan RI, Reilly Tar Site, St. Louis Park, Minnesota," prepared by CH2M Hill and Ecology & Environment, April 27, 1985.
- (63) "Predesign Memorandum Evaluation of Granular Activated Carbon System Alternatives For Removal of Polynuclear Aromatic Hydrocarbons From Municipal Well Water in St. Louis Park, Minnesota", prepared by Ch₂M Hill, May 29, 1985.
- (64) "PAH Threshold Odor Determination in St. Louis Park Municipal Supply Water," prepared by Environmental Research and Technology, Inc., May 30, 1985.
- (65) "Volatile Organic Analysis of the St. Louis Park Municipal Drinking Water Supply System, March, 1985," prepared by Environmental Research & Technology, Inc., May 30, 1985.
- (66) Feasibility of Community-Wide Epidemiologic Studies of Drinking Water and Health: St. Louis Park and New Brighton", prepared by the Minnesota Department of Health, December 31, 1985.

- (b) Field investigations and chemical analyses of water (surface and/or ground water) and soils, including associated field notes, chain of custody records, raw data sheets, sampling analysis protocols, boring and well logs and water level measurements. In general, the results of soil borings and water samples are found in the list of studies and/or reports under Part C. 13(a). (Dates listed usually reflect the time of the investigation.)
 - (1) Preliminary soil investigation for the engineering properties of the soil, performed by Soil Engineering Services, Inc., October 13, 1969.
 - (2) Mellon-Rice data on well water and plant wastewater samples, Carnegie-Mellon University and C.W. Rice Division, NUS, November 5, 1970.
 - (3) Soil sample analyses, Tri-City Public Health Lab, 1971 and 1973.
 - (4) Analysis of soil and water samples from the St. Louis Park area, by the Minnesota Department of Health, 1973 to present.
 - (5) Analysis of soil and water samples by Twin Cities Testing and Engineering Laboratory, Inc., and Soil Exploration Company, 1974 to present.
 - (6) Analysis of soil and water samples by Sanitary Engineering Laboratories, Inc. (SERCO), 1975, 1976, 1977, 1978 and 1982.
 - (7) Soil borings performed by Braun Engineering, 1974, 1979, 1980, and 1982.
 - (8) Well investigations pursuant to well abandonment program performed by Minnesota Department of Health, 1978-present.
 - (9) Analysis of soil and water by United States Geological Survey, 1978-present.

- (10) Analyses of groundwater, by Pace Laboratories, Inc., 1978-1980, 1983-1984 (1983-1984 analyses performed by Rocky Mountain Analytical Laboratory).
- (11) "Results of Analysis of Water Samples, and Soil Samples for Polynuclear Aromatic Compounds (Hydrocarbons, Azarene, Phenols)", by Midwest Research Institute, October 7, 1981.
- (12) Analyses of Ground Water, by Capsule Laboratories, Inc., 1981, 1982, and 1983.
- (13) Soil borings and analyses by GCA Corp., 1982-1983.
- (14) Water analyses by Monsanto Research Corp., 1982-1984.
- (15) Water analyses by Environmental Testing and Certification Corporation, 1983.
- (16) Soil boring and chemical analyses by National Biocentric, Inc., 1976.
- (17), St. Louis Park area water well search and inventory questionnaires, prepared by E. A. Hickok and Associates, Inc., 1982-1983.
- (18) Progress reports on the investigation and clean-out of W23 and W105, E.A. Hickok & Associates, Inc., 1982 to present.
- (19) Water samples and analyses by CH2M Hill, 1982 and 1983.
- (20) Water samples and analyses by Environmental Research and Technology, Inc., 1982 to present.
- (21) Water samples and analyses by Acurex Corporation, 1984 to present.
- (22) Water analyses by United States Environmental Protection Agency 1977 and 1981-1982.

14. The United States, the State, St. Louis Park, Hopkins, Reilly, the Housing & Redevelopment Authority, Oak Park Village Associates and Philip's Investment Co. desire to reach a mutually satisfactory settlement in this action.

15. It is in the public interest, the interest of the Parties and the interest of judicial economy for this case to be resolved without protracted litigation.

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DEFINITIONS

Unless otherwise explicitly stated, the definitions provided in CERCLA, 42 U.S.C. § 9601 <u>et seq.</u>, shall control the meaning of the terms used in this Consent Decree. As used in this Consent Decree, the following words and phrases shall have these meanings:

1. <u>Additional Carcinogenic PAH</u>: Means compounds not initially included in Appendix A of the Remedial Action Plan (RAP) as a Carcinogenic PAH but which are later determined as Additional Carcinogenic PAH through the procedures set forth below:

a. The Assistant Administrator for Solid Waste and Emergency Response ("Assistant Administrator") of EPA may, upon written notice, inform Reilly, St. Louis Park and the Commissioner of an EPA determination that a PAH compound is a carcinogen and propose such a PAH compound as an Additional Carcinogenic PAH. Such proposal shall set forth the basis and scientific evidence supporting the EPA determination.

b. Within thirty (30) Days of receipt of such notice, Reilly, St. Louis Park or the Commissioner may respond to the proposal by stating, in writing, the reasons why the proposal should be accepted, rejected or modified and within sixty (60) additional Days thereafter may supplement such response in writing. The Assistant Administrator (or his designee), Reilly, St. Louis Park and the Commissioner shall provide the

D.

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opportunity to consult with each other during this period or such extension as they agree upon. In any consultation, the EPA shall have present one or more persons who are technically qualified to discuss the basis and scientific evidence supporting the determination and who participated in evaluating the scientific basis of EPA's determination.

c. Any Additional Carcinogenic PAH shall be subject to the Advisory Level and Drinking Water Criterion for Carcinogenic PAH in Section 2.2 in the RAP, unless there is substantial scientific evidence on which to base a separate Advisory Level or Drinking Water Criterion for that substance, either when it is present without any other Carcinogenic PAH or when it is present in a mixture of Carcinogenic PAH.

d. Within sixty (60) Days from the end of the time provided in Part D.1.b., above, the Assistant Administrator shall notify Reilly, St. Louis Park and the Commissioner of the final EPA determination with respect to its proposal to include a PAH compound as an Additional Carcinogenic PAH. Such EPA determination shall be applicable to all aspects of programs related to CERCLA and the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 <u>et seq</u>. However, rulemaking shall not be required for such determination.

e. If Reilly, St. Louis Park or the Commissioner disagree with the final determination, any of them may, within twenty (20) Days of receipt of the final determination,

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petition the Court for review. On such review, the petitioner shall bear the burden of proof that EPA's final determination is not supported by substantial evidence. Should the Court uphold EPA's determination, the PAH compound shall be deemed to be an Additional Carcinogenic PAH for all purposes of this Consent Decree, and shall be effective in accordance with the final order of the Court. For the purposes of operating any drinking water treatment plant under Sections 4 or 12 of the RAP, the EPA's determination shall, during the pendency of any Court review, be treated as if it had been approved by the Court.

f. If Reilly, St. Louis Park or the Commissioner do not appeal the final determination of the EPA within the time period set forth in Part D.l.e., above, the PAH compound shall be deemed to be an Additional Carcinogenic PAH.

g. Within sixty (60) Days of receipt of the EPA determination, or final order of the Court if the EPA determination is appealed to the Court, Reilly shall submit to the Regional Administrator, the Director and the Commissioner, a plan for accommodating the Additional Carcinogenic PAH into the provisions of the RAP.

h. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree.

2. <u>Advisory Level</u>: Means the concentrations of Carcinogenic PAH, Other PAH or the sum of benzo(a)pyrene and

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dibenz(a,h)anthracene as defined in Section 2.2 of the RAP or concentrations of Additional Carcinogenic PAH which may be established under the procedures of Part D.1.

3. <u>And/or</u>: Means, when used in the phrase "Regional Administrator and/or Director", the Regional Administrator or the Director or both.

4. <u>Carcinogenic PAH</u>: Means those PAH compounds listed in Appendix A of the RAP as being suspected human carcinogens and those Additional Carcinogenic PAH compounds added pursuant to Part D.1 of this Consent Decree. For Monitoring purposes, the concentration of Carcinogenic PAH shall be the sum of the concentrations of all compounds listed in Parts A.1.1. and A.2. of Appendix A of the RAP.

5. Chemical Substances: Means

(a) The following items to the extent used, produced or stored by Reilly at or on the Site: coal tar, including horizontal and vertical retort tar; water gas and oil gas tar; creosote, other coal tar distillates, coal tar pitch, coke, and refined tars; wood and the constituents of wood; pentachlorophenol; zinc chloride; Arban; sulfuric acid; paint; fuel oil; petroleum distillate; salt; grease; benzene; boiler treatment chemicals; sodium hydroxide; maintenance substances including but not limited to solvents and degreasers; xylene and toluene as laboratory reagents;

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sewage; bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote, pentachlorophenol, and other wood treating substances; wastewaters from the refining and processing of coal tar products; and solid wastes from the refining and processing of coal tar products; and

- (b) asphalt originating from the asphalt plant located on the portion of the Site leased from Reilly; and
- (c) PAH, Phenolics and other chemical constituents of the products, materials and substances set forth in Part
 D.4. (a) and (b) above; and
- (d) quinone, total chlorine residuals, zinc, cadmium,
 copper, nickel, lead and ammonia;
 only to the extent that each item listed in Part D.4. (a)

through (d) above are Known To a Party.

6. <u>Commissioner</u>: Means the Commissioner of the Minnesota Department of Health, or his/her authorized representative.

7. <u>Contamination or Contaminants</u>: Means PAH and Phenolics resulting from activities of Reilly at the Site when found in the ground water or the soil.

8. <u>Day</u>: When used in the Consent Decree to indicate a deadline for a required action, means a calendar day. Whenever a submittal or action required by the Consent Decree falls on a Saturday, Sunday or Federal or Minnesota State legal holiday, the submittal or action shall be due upon the next following day of business.

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9. <u>Director</u>: Means the Executive Director of the Minnesota Pollution Control Agency, or his/her authorized representative. 10. <u>Drinking Water Criteria</u>: Means concentrations of Carcinogenic PAH, Other PAH or the sum of benzo(a)pyrene and dibenz(a,h)anthracene as defined in Section 2.2 of the RAP or concentrations of Additional Carcinogenic PAH which may be established under the procedures in Part D.1.

11. <u>Effective Date</u>: Means the effective date of the Consent Decree.

12. <u>EPA</u>: Means the United States Environmental Protection Agency.

13. <u>HRA</u>: Means the Housing and Redevelopment Authority of St. Louis Park.

14. Information Known To a Party or Known To a Party or Known To or Known: Means data and other information identified and discussed in (1) the chemical analyses, documents, studies and investigations enumerated in Part C.13.; (2) any documents, studies or investigations in the possession of a Party or of which a Party was aware on or before the Effective Date; (3) any written assessments, reports, memoranda or other written documents prepared by or for a Party, on or before the Effective Date; (4) discovery responses, including deposition testimony, interrogatory answers and responses to requests for admissions in this case or in the Hennepin County Lawsuit; (5) documents produced by or to that Party in this case or in

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the Hennepin County Lawsuit; and (6) pleadings and all other documents lodged with the Courts in this case or in the Hennepin County Lawsuit.

The term "a Party" as used in this definition refers specifically to the Party to whom knowledge is attributed and has the meaning given it in Part B, except that (a) when referring to the United States, the term "Party", as used in this definition only, means the U.S. Environmental Protection Agency, the Department of Interior, and the Land and Natural Resources Division of the U.S. Department of Justice; and (b) when referring to the State, the term "Party", as used in this definition only, means the Minnesota Pollution Control Agency, the Minnesota Department of Health, the Minnesota Department of Natural Resources and the staff of the Minnesota Attorney General's Office assigned to these agencies.

 MDH: Means the Minnesota Department of Health.
 MWCC: Means the Metropolitan Waste Control Commission.
 Monitor: Means to collect a sample and analyze for Carcinogenic PAH and Other PAH, as well as for any other parameters specified, in accordance with the sampling and analytical plans required under Section 3 of the RAP.
 MPCA: Means the Minnesota Pollution Control Agency.
 Other Law: Means, when used in Parts G, H, I, M, N and Q, CERCLA, RCRA, Minnesota Statutes Chapters 115, 115B and 116.
 This definition does not apply to Part T.

20. Other PAH: Means PAH compounds other than those which are listed in Appendix A to the RAP as suspected human carcinogens. For Monitoring purposes, the concentration of Other PAH is defined as the sum of the concentrations of all compounds listed in Part A.1.2. of Appendix A.

21. <u>PAH (polynuclear aromatic hydrocarbons)</u>: Means chemical compounds consisting of carbon and hydrogen atoms contained in two or more fused aromatic rings, with each ring consisting of five or six carbon atoms. This term also includes alkyl-substitued, aryl-substituted and heterocyclic PAH (compounds in which one or more carbon atoms in a ring are replaced with nitrogen, oxygen, and/or sulfur atoms). This term also includes biphenyl and alkylated biphenyls.

22. <u>Phenolics</u>: Means aromatic organic compounds substituted with one or more hydroxyl groups, which are detected by the 4-aminoantipyrene method, EPA method 420.1 or 420.2, cr other method as approved by the Regional Administrator and the Director in accordance with Part G or H.

23. <u>Regional Administrator</u>: Means the Regional Administrator of the EPA Region in which the Site is located (currently Region V), or his/her authorized representative.

24. <u>Site</u>: Means the Republic Creosote site in St. Louis Park, operated by the Reilly Tar & Chemical Corporation from 1917 to 1972, which consists of the property identified in Part C.1. The Site is bounded by an imaginary line extending south from

the terminus of Pennsylvania Avenue south of 31st Street on the west; an imaginary line extending westward from the intersection of Louisiana Avenue and 32nd Street on the north; Louisiana Avenue from 32nd Street to Gorham Street, Gorham Street from Louisiana Avenue to 2nd Street NW, 2nd Street NW from Gorham Street to Republic Avenue, Republic Avenue from 2nd Street NW to 1st Street NW, and 1st Street NW from Republic Avenue to Walker Street on the east; and Walker Street on the south.

25. <u>Standard Deviation</u>: Means the measure of statistical variability calculated from the equation

$$s = \int_{\frac{1}{1} = 1}^{\frac{n}{2}} (x_{1} - \overline{x})^{2} \int_{\frac{1}{2}}^{\frac{1}{2}} \frac{1}{2}$$

Where S is the calculated standard deviation; n is the number of samples;

 X_i is the value of the i'th sample; and

X is the arithmetic mean of the values of all samples. 26. <u>Total PAH</u>: The sum of the concentrations of all Carcinogenic PAH and Other PAH listed in Parts A.l.l., A.l.2., and, if detected, Part A.2. of Appendix A to the RAP.

Ε.

PURPOSES OF CONSENT DECREE

The purposes of this Consent Decree are to avoid prolonged litigation; to permit expeditious implementation of the activities described herein; to protect the public health and welfare and the environment from the risks alleged to arise from releases and threatened releases of hazardous and other Chemical Substances at, on or from the Site; and to provide for implementation, if necessary, of future contingent actions which are reasonably foreseeable possibilities but whose precise need cannot be determined from present information.

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Entry into this Consent Decree does not constitute, and shall not be construed as, any admission of liability, wrongdoing, violation of law or fault on the part of any Party hereto. It is further understood and agreed that liability, wrongdoing, violation of law and fault are in all respects specifically denied by Reilly and any other Party hereto, that any actions taken or any payments by Reilly or any other Party hereto under the provisions of this Consent Decree are made only for the purpose of compromise and avoidance of the expense of litigation, and that this Consent Decree shall not constitute or be construed as an adjudication or finding on the merits of any liability, fault, violation of law or any other wrongful conduct or practice on the part of Reilly or any other Party.

The Parties agree that they shall not use this Consent Decree as evidence of Reilly's or St. Louis Park's liability or Reilly's consent to the appropriateness of the remedy described in Part F below in any other judicial or administrative

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proceeding involving Reilly or St. Louis Park, except any judicial or administrative proceeding relating to the implementation or enforcement of this Consent Decree.

F.

REMEDIAL ACTION PLAN

This Consent Decree contains a program designed to protect the public health and welfare and the environment from the Known releases, or threatened releases, of Chemical Substances at, on or from the Site, and includes contingent measures, the need for which cannot be determined from present information but is a reasonably foreseeable possibility. This program is set forth in Exhibit A to this Consent Decree, and is titled and constitutes the Remedial Action Plan ("RAP"). Exhibit A is made an integral and enforceable part of this Consent Decree. The term "Consent Decree" shall include the RAP whenever used in this document.

Except where performance by another Party is expressly provided in the RAP, Reilly hereby commits to implement the requirements of the RAP.

G.

REVIEW OF SUBMITTALS

1. Plans or reports, except progress reports required by Part K, submitted by Reilly, its employees, contractors or assigns, pursuant to this Consent Decree shall be subject to the approval of both the Regional Administrator and the Director.

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2. The Regional Administrator and the Director shall review and confer on all submittals made by Reilly within thirty (30) Days of receipt and, by the thirtieth Day, shall notify Reilly of their approval, modification or disapproval of the submittal. Either the Regional Administrator or the Director may, upon written notice to Reilly, extend the date for response hereunder by an additional thirty (30) Days.

3. The United States, the State and Reilly shall provide the opportunity to consult with each other during the review of submittals or modifications.

4. United States and State Concyr As to Submittal

a. The Regional Administrator and the Director shall provide Reilly a single letter with their signatures whenever the response of both is required and the Regional Administrator and Director concur as to approval, or disapproval and modifications. If such letter approves the submittal in its entirety as made, the submittal shall become an integral and enforceable part of the Consent Decree.

b. In the event that the Regional Administrator and the Director concur in disapproving the submittal in whole or in part, the letter shall specify the inadequacies and the necessary modifications.

c. Within twenty (20) Days of the date of receipt by Reilly of any single notice of disapproval and

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modifications under Part G.4.b., Reilly shall (1) submit the required modifications or (2) state in writing the reasons why the submittal, as originally submitted, should be approved.

d. If within fourteen (14) Days from receipt of the response under Part G.4.c. above the Parties have not reconciled all issues in disagreement, and the Regional Administrator and the Director concur, they shall propose modifications to the submittal to Reilly as they deem necessary by means of a single letter with their signatures.

e. If Reilly disagrees with the proposed modifications under Part G.4.d., it may, within twenty (20) Days of receipt thereof, petition the Court for review of the dispute.

f. In any review by the Court of a dispute related to RAP submittals under Part G.4.e., Reilly shall have the burden of showing that its submittal better meets the purposes and requirements of this Consent Decree and the National Contingency Plan (40 C.F.R. Part 300) than does the Regional Administrator's and Director's proposed modification. During the period dispute resolution is before the Court, the time schedules and obligations imposed on Reilly by this Consent Decree with respect to the matter in dispute shall be suspended, provided however, the Court may award payments for failure to perform under

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Part M hereof or Other Law if it finds that the dispute was not brought in good faith.

g. If Reilly elects not to request Court review under Part G.4.e., the proposed modifications under Part G.4.d. shall become an integral part of this Consent Decree and binding upon the Parties.

5. United States and State Do Not Concur

a. In the event the Regional Administrator and Director do not concur as to the approval, modification or disapproval of the submittal either after initial consultation under Part G.2. or consultation under Part G.4.d., each shall provide Reilly a response describing its approval, modification or disapproval within the applicable time requirements specified in Part G.2. or Part G.4.d.

b. Any Party may, thereafter, proceed in accordance with the dispute resolution provisions of Part I.

6. United States and/or State Fail to Notify Reilly

If the Regional Administrator and/or the Director fail to notify Reilly under any provision of this Part G, Reilly may proceed in accordance with the dispute resolution provisions of Part I.

7. Effect of Failure to Concur or Failure to Notify

If the Regional Administrator and the Director do not concur in any response required under this Part G or if either or both fail to notify Reilly as required under this Part G,

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such failure to concur or failure to notify shall not be deemed an approval. However, with respect to the matter for which a failure to concur between the Regional Administrator and Director exists or no notice was given, during the pendency of the resulting delay and until Reilly receives notice that the Regional Administrator and Director concur or until Reilly receives the delinquent notice(s), whichever is later, (a) no payments under Part M or Other Law shall accrue or be payable for failure to perform the matter for which a failure to concur between the Regional Administrator and Director exists or no notice was given; and (b) the time schedules and performance obligations related to said matter shall be suspended.

8. To the extent that submittals are required by the Consent Decree to be submitted to both the Commissioner and the Director, the procedures for review by the Director provided in this Part G shall also apply to review by the Commissioner. Whenever both are required to review a submittal, the Director and the Commissioner shall coordinate their reviews and responses and, consistent with the requirements of this Part G, they shall make a joint statement specifying their respective responses.

9. Whenever submittals are made solely to the Commissioner, the review of the Commissioner shall proceed in accordance with this Part G; except that nothing in this Part G shall create any obligation upon the Commissioner to consult with the Regional Administrator or the Director.

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10. Where the RAP calls for submittals to be made to the Regional Administrator or Director by a Party other than Reilly, the procedures in this Part G shall apply to that Party as if it were Reilly.

Η.

OTHER DETERMINATIONS BY THE REGIONAL ADMINISTRATOR

AND DIRECTOR

Except as to decisions under Parts M, N and BB, the following provisions shall apply to decisions made by the Regional Administrator and/or Director under the terms of this Consent Decree that are not in response to a submittal made by Reilly or another Party:

1. The Regional Administrator and the Director shall confer on all decisions required under the terms of the Consent Decree not in response to a submittal made by Reilly, and shall notify Reilly of their decision as described herein.

2. The Regional Administrator, the Director and Reilly shall provide the opportunity to consult with each other during the decisionmaking process.

3. United States and State Concur As to Decision

a. The Regional Administrator and the Director shall provide Reilly a single letter with their signatures whenever decision of both is required and the Regional Administrator and Director concur as to the decision.

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b. Within twenty (20) Days of the date of receipt by Reilly of any single notice of decision, pursuant to Part H.3.a., Reilly may respond to the decision by stating in writing the reasons why the decision should be modified.

c. If within fourteen (14) Days from the receipt of Reilly's response under Part H.3.b. above the Parties have not reconciled all issues in disagreement, and the Regional Administrator and Director concur, they shall submit notice of any modifications or notice of no modifications to the decision to Reilly by means of a single letter with their signatures.

d. If Reilly disagrees with the decision or any modifications under Part H.3.c., it may, within twenty (20) Days of receipt of notice under Part H.3.c., petition the Court for review of the dispute.

e. In any review by the Court of a dispute related to decisions of the Regional Administrator and Director under Part H.3.d., Reilly shall have the burden of showing that their decision does not meet the purposes and requirements of this Consent Decree and is inconsistent with the National Contingency Plan (40 C.R.F. Part 300). During the period dispute resolution is before the Court, the time schedules and obligations imposed on Reilly by this Consent Decree with respect to the matter in dispute shall be suspended, provided however, the Court may award payments for failure to perform under Part M hereof or Other Law if it finds that the dispute was not brought in good faith.

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f. If Reilly elects not to request Court review under Part H.3.d., the decision and any modifications shall become an integral part of this Consent Decree and binding upon the Parties.

4. United States and State Do Not Concur

a. In the event the Regional Administrator and Director do not concur as to the decision either after initial consultation under Part H.1. or consultation under Part H.3.c., each shall provide Reilly a letter describing its decision within the applicable time requirements specified in Part H.

b. Any Party may, thereafter, proceed in accordance with the dispute resolution provisions of Part I.

5. United States and/or State Fail to Notify Reilly

If the Regional Administrator and/or the Director fail to notify Reilly under any provision of this Part H, Reilly may proceed in accordance with the dispute resolution provisions of Part I.

6. Effect of Failure to Concur or Failure to Notify

If the Regional Administrator and the Director do not concur on any decision or modification required under this Part H or if either or both fail to notify Reilly as required under this Part H, such failure to concur or failure to notify shall not be authorization to proceed. However, with respect to the matter for which a failure to concur between the Regional Administrator and Director exists or no notice was given,

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during the pendency of the resulting delay and until Reilly receives notice that the Regional Administrator and Director concur or until Reilly receives the delinquent notice(s), whichever is later, (a) no payments under Part M or Other Law shall accrue or be payable for failure to perform the matter for which a failure to concur between the Regional Administrator and Director exists or no notice was given; and (b) the time schedules and performance obligations related to said matter shall be suspended.

7. To the extent that decisions are to be made by both the Commissioner and the Director, the procedures for decisions by the Director provided in this Part H shall also apply to decisions by the Commissioner. Whenever both are required to make the decision, the Director and the Commissioner shall coordinate their decision making and, consistent with the requirements of this Part H, they shall make a joint statement specifying their respective decisions.

8. Whenever decisions are made solely by the Commissioner, the decision of the Commissioner shall proceed in accordance with this Part H; except that nothing in this Part H shall create any obligation upon the Commissioner to consult with the Regional Administrator or the Director.

I.

RESOLUTION OF DISPUTES

This Part I establishes the procedures for resolving disputes which may arise under this Consent Decree, including

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the Exhibits to this Consent Decree, but does not establish procedures for resolving disputes which arise under Part D.1. (Additional Carcinogenic PAH); Part G.4. (Review of Submittals); Part H.3. (Other Determinations of the Regional Administrator and Director); Part M (Payment upon Failure to Perform); Part N (Delay of Performance and Extensions of Schedules); Part Z (Financial Responsibility); and Part BB (Duration of Consent Decree).

A dispute arises when one Party notifies the other Parties in writing that a dispute exists with respect to the meaning, application, interpretation, amendment or modification of this Consent Decree, or with respect to any Party's compliance herewith, or with respect to the review of submittals or resubmittals as provided in Part G (except G.4.) or with respect to decisions or modification of decisions as provided in Part H (except H.3.). A dispute shall in the first instance be the subject of informal negotiations within no more than thirty (30) Days of receipt of said notice that a dispute exists. This period for negotiations may be extended by mutual agreement among the Parties to the dispute.

If the Parties cannot resolve the dispute, any Party may petition the Court for appropriate resolution upon written notice to all other Parties. No payments for failure to perform under Part M hereof or Other Law shall accrue with respect to issues in dispute during the time period of the

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informal negotiations unless the Court finds that invocation of the resolution of dispute provision was not in good faith. During the resolution of any dispute Reilly shall continue to implement all portions of the RAP which can be reasonably implemented while the matter in dispute is under consideration.

During the period dispute resolution is before the Court, except in disputes between Reilly and St. Louis Park under Exhibit B, the time schedules and obligations imposed on Reilly by this Consent Decree with respect to the matter in dispute shall be suspended, provided however, the Court may award payments for failure to perform under Part M hereof or Other Law if it finds that the dispute was not brought in good faith.

J.

-CREATION OF DANGER

In the event the EPA On-Scene Coordinator (Project Leader), the MPCA Project Leader, or Reilly's Project Leader determines that activities implementing or in non-compliance with this Consent Decree, or any other circumstances or activities relating to the Site, may create or contribute to a threat to the health or welfare of the people on the Site or in the surrounding area or to the environment, the EPA On-Scene Coordinator, the MPCA Project Leader, or Reilly's Project Leader may stop or may order Reilly to stop further implementation of this Consent Decree, or portions thereof, for

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such period of time as is needed to abate the danger. If implementation of this Consent Decree is stopped by any person authorized to do so under this Part, that person shall immediately notify all other Project Leaders of the stoppage and reasons therefor. During any stoppage of implementation of the Consent Decree pursuant to this Part J, the Regional Administrator and the Director, in accordance with Part N, shall extend the time schedules and obligations imposed on Reilly by this Consent Decree as the circumstances of endangerment require, except where the endangerment is the consequence of negligent or willful actions by Reilly, its contractors or assigns. Any dispute concerning Reilly's stoppage of work under this Part shall be resolved in accordance with Part N.3 with Reilly bearing the burden of proof that the endangerment was not a consequence of negligent or willful actions by Reilly, its contractors or assigns.

K.

REPORTING

Reilly shall submit written progress reports to the Regional Administrator and the Director which describe the actions it has taken during the previous calendar quarter in implementation of the requirements of this Consent Decree. Such written progress reports shall also describe the activities scheduled to be taken during the upcoming reporting period. The progress reports shall be submitted by the tenth

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Day of the first month of each calendar quarter following the Effective Date for the first year.

Thereafter, progress reports shall be submitted on an annual basis by March 15 of each year. The progress reports shall include a detailed statement of the manner and extent to which the procedures and dates set forth in the Consent Decree are being met. In addition, the progress reports shall include copies of all analytical data sheets relating to the subjects of this Consent Decree received during the previous reporting period.

The Regional Administrator and the Director may direct in writing that reports be submitted at different intervals, but no more frequently than quarterly, or that no further reports need be submitted.

L.

NOTICES

Whenever, under the terms of the Consent Decree, notice is required to be given or a report or other document is required to be forwarded by one Party to another, it shall be directed to the individuals, at the addresses specified below, by certified mail or equivalent receipt, unless those individuals or their successors give notice in writing to the other Parties of another individual designated to receive such communications. Except as provided in Section 11.3 of the RAP, notice to the individuals listed below shall constitute

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complete satisfaction of any notice requirement of the Consent Decree with respect to the United States, including the Regional Administrator and EPA On-Scene Coordinator; the State, including the Director, the MPCA Project Leader, and the Commissioner; St. Louis Park; and Reilly; including their respective Project Leaders; and Hopkins; the Housing and Redevelopment Authority of St. Louis Park; Oak Park Village Associates; and Philip's Investment Co.:

> Director, Waste Management Division U.S. EPA, Region V Attn: Hazardous Waste Enforcement Branch 230 So. Dearborn Street Chicago, Illinois 60604

Commissioner Minnesota Department of Health 717 Delaware Street S.E. Minneapolis, Minnesota 55440

Director, Solid and Hazardous Waste Division Minnesota Pollution Control Agency Attn: Site Response Section 1935 West County Road B-2 Roseville, Minnesota 55113

City Manager City of St. Louis Park 5005 Minnetonka Boulevard St. Louis Park, Minnesota 55416

City Manager City of Hopkins 1010 South 1st Street Hopkins, Minnesota 55343

President Reilly Tar & Chemical Corporation 1510 Market Square Center 151 North Delaware Street Indianapolis, Indiana 46204 Executive Director The Housing and Redevelopment Authority of St. Louis Park 5005 Minnetonka Boulevard St. Louis Park, Minnesota 55416

Oak Park Village Associates Diversified Equities Corporation 114 5th Street S.E. Minneapolis, Minnesota 55414 Attn: Mr. Jon Dickerson

Philip's Investment Co. 3401 Louisiana Avenue South St. Louis Park, Minnesota 55426

Whenever any Party petitions the Court pursuant to any Part of this Consent Decree, it shall also notify the following officials at their then current addresses: Assistant Attorney General, Land and Natural Resources Division, United States Department of Justice (present address: 10th & Pennsylvania Avenue, N.W., Washington D.C. 20530), United States Attorney for the District of Minnesota (present address: 234 Federal Courthouse, 110 S. Fourth Street, Minneapolis, Minnesota 55401) and Attorney General, State of Minnesota (present address: 102 State Capitol, St. Paul, Minnesota 55155).

Μ.

PAYMENTS UPON FAILURE TO PERFORM

This Part M establishes the procedures and standards for requiring Reilly (1) to make payments to the United States and/or the State for failure to make timely submittals under this Consent Decree and (2) to make payments to the United States for all other failures to comply with this Consent

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Decree. For such "other failures", the State reserves the authority to petition this Court for civil penalties against Reilly under Other Law.

1. Failure to Make Timely Submittals

Upon determination by the Regional a. Administrator and/or the Director that Reilly has failed to make a submittal in accordance with the time schedules which are contained in the Consent Decree or are subsequently developed or allowed under this Consent Decree, the Regional Administrator and/or the Director shall promptly give written notice to Reilly of such failure, specifying the provisions of the Consent Decree which are the bases for the determination. The Regional Administrator and/or the Director shall provide Reilly at Reilly's request, an opportunity within fifteen (15) Days of Reilly's receipt of the notice to explain why the noncompliance upon which the payment is based should be excused. Unless excused by the Regional Administrator, Reilly shall pay into the Hazardous Substance Response Trust Fund, within 30 Days of receipt of such notice from the Regional Administrator, \$500 per day for each of the first 30 days of lateness and \$1,500 per day for each day of lateness after the thirtieth day. Unless excused by the Director, Reilly shall pay into the Environmental Response, Compensation and Compliance Fund of the Treasury of the

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State of Minnesota, within 30 Days of receipt of such notice from the Director, \$500 per day for each of the first 30 days of lateness and \$1,500 per day for each day of lateness after the thirtieth day. All payments begin to accrue from the date on which the submittal was to have been made. All payments under this paragraph shall cease to accrue upon the submission of the required submittal to the Regional Administrator and the Director.

b. Reilly may dispute the determination that a submittal has not been made in a timely fashion by petitioning this Court within 30 Days after receipt of notice under Part M.I.a. The filing of a petition by Reilly shall stay the obligation to make payment within 30 Days of receipt of notice as provided in Part M.I.a., above, but shall not toll the running of payments from the first date of noncompliance. The filing of a petition by Reilly shall not alter in any other way Reilly's obligations under this Consent Decree.

c. Nothing in this Part M.l. shall be construed as prohibiting or in any way limiting the ability of the United States to elect to seek civil penalties under RCRA or CERCLA in lieu of the payments provided under this Part M.l. Nothing in this Part M.l. shall be construed as prohibiting or in any way limiting the ability of the State to seek civil penalties for any noncompliance with this

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Consent Decree, other than noncompliance with the schedules for making submittals to which this Part M.1. applies.

2. All Other Failures: United States Options

Upon determination by the Regional a. Administrator that Reilly has failed to implement any requirements of this Consent Decree or any requirements which are subsequently developed or altered under this Consent Decree, the Regional Administrator shall promptly give written notice to Reilly of such failure, specifying the provisions of the Consent Decree which are the bases for the determination. The Regional Administrator shall provide Reilly an opportunity, at Reilly's request, within fifteen (15) Days of Reilly's receipt of the notice to explain why the noncompliance upon which the payment is based should be excused. Unless excused, Reilly shall pay into the Hazardous Substance Response Trust Fund, within 30 Days of receipt of such notice, \$750 for each of the first thirty days of failure and \$1,500 for each day of failure after the first thirty days. The payments begin to accrue from the first date of failure. Payments under this Part M.2.a. shall cease to accrue upon the curing of the failure.

b. Reilly may dispute the determination that it has failed to implement the requirements of this Consent Decree or any requirements which are subsequently developed or altered under this Consent Decree by petitioning the

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Court within 30 Days after receipt of notice under Part M.2.a. The filing of a petition by Reilly shall stay the obligation to make payment within 30 Days of receipt of notice as provided in Part M.2.a., above, but shall not toll the running of payments from the first date of failure. The filing of a petition by Reilly shall not alter in any other way Reilly's obligations under this Consent Decree.

c. Nothing in this Part M.2. shall be construed as prohibiting or in any way limiting the ability of the United States to elect to seek civil penalties under RCRA or CERCLA in lieu of the payments provided under this Part M.2.

3. General Provisions

a. In any Court review of payments assessed under this Part M, Reilly shall not assert as a defense the invalidity of Part M.

b. Any payment made under this Part M shall not be tax deductible.

c. This Part M does not limit the Court's authority to use its equitable and inherent powers to achieve the purposes of this Consent Decree.

d. Reilly shall be excused from paying amounts under this Part M or Other Law for failure to meet interim deadlines if it meets a final completion date for the work

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specified in the RAP or in any work plan approved in accordance with the RAP for which the payment was assessed. This excuse does not apply to open ended obligations in the RAP (e.g., gradient control well operations or operation of drinking water treatment) for which a completion date is not specified in the RAP or in any approved work plan. Where Reilly anticipates being excused under this Part M.3.d., it shall so notify the Regional Administrator and Director and no payment need be made until Reilly is directed to pay by the Regional Administrator and/or the Director.

e. Reilly's obligations to implement this Consent Decree shall not be suspended on account of the pendency of a dispute concerning the assessment of payments for failure to perform under Part M or Other Law.

f. The Regional Administrator and/or Director shall excuse payments in accordance with Parts N.3. and N.4. Court review of the decision of the Regional Administrator and/or Director to excuse payments shall be in accordance with Part N.3. The Regional Administrator and/or Director may exercise such nonreviewable discretion pursuant to Part N.4 as they deem appropriate.

N.

DELAY OF PERFORMANCE AND EXTENSIONS OF SCHEDULES

This Part N establishes the procedures and standards for granting extensions of schedules ("extension") and excusing

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delay in performance obligations ("excuse") required under this Consent Decree.

1. In order to obtain an extension or excuse pursuant to Part N.3 or N.4, Reilly shall submit a request in writing to the Regional Administrator and the Director. Each request shall be submitted no later than three (3) business days after discovery of the need for an excuse or an extension. Each request shall specify (a) the reason(s) therefor; (b) the date(s) for which the extension or excuse is sought (with direct reference to the relevant portions of the Consent Decree); (c) the length of time of the requested excuse or extension; (d) measures taken or to be taken by Reilly to avoid or minimize the need for the excuse or extension. A request for an extension shall not be required for extensions which are provided for in Parts G, H, I or J above.

2. The Regional Administrator and the Director shall review Reilly's request for an extension or excuse and shall confer with each other prior to responding to the request. The Regional Administrator and Director shall provide Reilly with written notices informing Reilly that they have conferred and of their decisions regarding the request. Such notices shall be mailed to Reilly no later than ten Days following receipt of the request. Failure by either the Regional Administrator or the Director to mail the required notice within this time period does not result in an automatic approval of the

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requested extension or excuse of delay. However, if Reilly has received no notice of disapproval from either the Regional Administrator or Director within this period, for such period of time until Reilly receives a disapproval from either the Regional Administrator or the Director, such failure to notify does toll the accumulation of any payments under Part M or Other Law for failure to timely perform the requirements of the Consent Decree for the period of time until a notice of disapproval is received.

3. If Reilly submits a timely request pursuant to Part N.l. for an excuse or extension for a cause beyond Reilly's control, the Regional Administrator and the Director shall each approve the request for an excuse or extension for such period of time as they each determine is attributable to a cause beyond Reilly's control. If the Regional Administrator and Director approve excuses or extensions of different duration, the shorter shall apply. If an excuse or extension is approved, no payments which may have accrued for failure to perform under Part M or Other Law shall be payable, except for such payments which may have accrued between the date a timely request should have been made and the date the request was actually made. Reilly may appeal directly to the Court within 30 Days of receipt of any refusal to grant a requested extension or excuse under this Part N.3. and if the Court finds that the cause is beyond Reilly's control, no payments which

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may have accrued under Part M or Other Law for failure to timely perform the requirements of the Consent Decree shall be payable, except for such payments which may have accrued between the date a timely request should have been made and the date the request was actually made. Reilly shall bear the burden of proof in any dispute that its request was based upon causes beyond its control. A failure to timely perform any requirement of this Consent Decree shall not be excused solely on the basis that such performance would be more costly than had been anticipated. Reilly shall not be entitled to an extension or excuse simply because weather conditions are more severe at the work site than anticipated; however, Reilly shall be entitled to an extension or excuse pursuant to this Part N.3. if Reilly can demonstrate that weather conditions at the work site are so severé as to prevent performance of the work without extreme and unreasonable difficulty.

4. Any other requested extension or excuse may be granted in the discretion of the Regional Administrator and the Director if the request is submitted in a timely fashion and they determine that good cause exists for granting the extension or excuse. There shall be no court review of the decisions of the Regional Administrator and the Director regarding requests for an extension or excuse made under this Part N.4.

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PROJECT LEADERS

Reilly, St. Louis Park, the EPA, and the MPCA shall each designate a Project Leader and an alternate for the purposes of overseeing the implementation of this Consent Decree, and shall notify the other Parties in writing as to the designation of its Project Leader and alternate within twenty (20) Days of the Effective Date. Any Party may change its designated Project Leader and alternate by notifying the other Parties, in writing, of the change.

To the maximum extent possible, communications among the Parties concerning the implementation of this Consent Decree shall be made through the Project Leaders. Each Project Leader shall be responsible for assuring that all communications from the other Project Leaders are appropriately disseminated to the Party it represents.

The Project Leaders and alternates shall have at least the authority to (1) take samples or direct that samples be taken; (2) observe, take photographs and make such other reports on the progress of the work as the Project Leader or alternate deems appropriate; (3) review records, files and documents relevant to the RAP; and (4) make or authorize minor field modifications in the RAP or in techniques, procedures or designs utilized in carrying out the RAP which are necessary to the completion of the project. All field modifications must be

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approved orally by both the EPA and MPCA Project Leaders before they can become effective. Representations regarding field modifications by either the EPA or MPCA Project Leaders as to the approval or disapproval by the other may be relied upon by Reilly. Within forty-eight (48) hours following the modification, the Project Leader who requested the modification shall prepare a memorandum detailing the modification and shall provide or mail a copy of the memorandum to the other Project Leaders.

The EPA Project Leader under this Part is the On-Scene Coordinator and shall have the authority vested by the National Contingency Plan (40 C.F.R. Part 300).

Ρ.

ACCESS

1. Reilly shall, within sixty (60) Days of the Effective Date, use its best efforts to provide the Regional Administrator and Director with copies of access agreements for the Site and all other property upon which monitoring wells, multi-aquifer wells, pumping wells (which include gradient control wells and source control wells) or treatment facilities required by this Consent Decree will be located, except where access agreements relating to this Consent Decree have been obtained by another Party on the Effective Date and to the extent that such locations have been established. For monitoring wells, multi-aquifer wells, pumping wells or

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treatment facilities whose location is determined more than sixty (60) Days after the Effective Date, Reilly shall provide access agreements in accordance with this Part P.1. within sixty (60) Days after the location is determined. Reilly shall not be required to pay any fee solely for access as part of its best effort to obtain access prior to invoking the assistance of the MPCA and the MDH. Reilly shall be responsible for restoring any property to which access has been granted to substantially its original condition. The access agreements shall provide authority for Reilly and its assigns, the EPA, the MDH and MPCA or their authorized employees, agents or representatives to enter the Site and all other property upon which monitoring wells, multi-aquifer wells, pumping wells, or treatment facilities will be located at all reasonable times for the purposes of: implementing the RAP; reviewing the progress of implementation of the RAP; conducting such tests as the Regional Administrator, the Director, the Commissioner or their Project Leaders or Reilly's Project Leader or St. Louis Park's Project Leader deem necessary; and verifying data submitted.

With respect to property upon which monitoring wells, pumping wells, or treatment facilities are located, the access agreement shall also provide that no conveyance of title, easement, or other interest in the property shall be consummated without provision for the continued operation of

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the monitoring wells, pumping wells or treatment facilities installed on the property pursuant to this Consent Decree. The access agreements shall also provide that the owners of either the Site or of any property where monitoring wells, pumping wells or treatment facilities are located shall notify Reilly, the Regional Administrator, the Director, the Commissioner, and St. Louis Park by certified mail, prior to any conveyance of the property owners' intent to convey any interest in the property and of the provisions made for the continued operation of the monitoring wells, pumping well(s) or treatment facilities installed pursuant to the RAP. No such conveyance shall occur for at least thirty (30) Days after receipt of such notice.

Where access agreements have been obtained by another Party on the Effective. Date, that Party shall assure that the access agreement contains the authority provided for in this Part P and shall provide a copy of the access agreement to Reilly, the Regional Administrator, the Director and the Commissioner within sixty (60) Days of the Effective Date.

If Reilly is unable to obtain access using its best efforts, the MPCA and the MDH agree to use their authority under the statutes and regulations they administer to assist Reilly, its contractors, employees, or assigns in obtaining access to property necessary for the implementation of this Consent Decree. If Reilly, its contractors, employees, agents

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or assigns shall be designated agents of the State such designation shall be for the sole purpose of obtaining access to property for purposes of taking investigative or response actions necessary for the implementation of this Consent Decree. In the event of such designation, Reilly and its assigns shall indemnify and save and hold the State, its agents, and employees harmless from any and all claims or causes of actions arising from or on account of the performance of such investigative or response actions by Reilly, its contractors, employees, agents or assigns.

2. Certain activities undertaken to implement the RAP may require access to the property(s) of St. Louis Park, Hopkins, the Housing and Redevelopment Authority of St. Louis Park, Oak Park Village Associates and/or Philip's Investment Co. These Parties hereby agree to grant the other Parties reasonable access to and use of their properties for purposes of implementation and oversight of the RAP without compensation therefor, except that Oak Park Village Associates and Philip's Investment Co. only grant access for the following activities:

- a. Taking soil borings;
- Investigation of existing wells; except well W59 located on the property of Philip's Investment Co.;
- c. Installation of monitoring wells, appurtenant piping,
 necessary utilities, and protective fencing or posts;
- d. Installation of pumping wells, appurtenant disposal lines, necessary utilities and protective fencing or posts;

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- Operation, maintenance and sample collection from any such wells;
- f. Removal and closure of any such borings and wells, and restoration of their sites.

In the event that access is required to any of the properties above-named, Reilly shall provide the owner reasonable advance notice and opportunity for consultation. Consistent with the purposes for which access is needed, Reilly shall make best efforts to minimize disruption to current use and enjoyment of the property. Disputes between Reilly and the property owner concerning access shall be subject to dispute resolution under Part I.

If it is necessary in order to implement the RAP to perform other activities on the property of Oak Park Village Associates or Philip's Investment Co. which would cause greater interference with the use and enjoyment of these properties, Reilly shall negotiate with the owner as required under Part P.1. above. If Reilly is unable to obtain access using its best efforts, the United States or the State may petition this Court, or use administrative procedures, to obtain supplemental access, including access to well W59 located on the property of Philip's Investment Co., to allow performance of these activities on the property of Oak Park Village Associates or Philip's Investment Co. Nothing in this Consent Decree, including Part U, shall be construed to prevent such a

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petition, or administrative process, for supplemental access or to prevent any Party from seeking in the appropriate forum, damages, contribution, indemnification or other relief, except any fee solely for access, to the extent permitted by law, from any other Party in connection with activities conducted pursuant to any supplemental access.

This Part P.2. does not relieve Reilly of any of its responsibilities under the Consent Decree to perform any activities which it may be required to carry out on the properties of Oak Park Village Associates or Philip's Investment Co., nor does it create any rights in Oak Park Village Associates or Philip's Investment Co. for damages, contribution, indemnification or other relief, including any fee solely for access, which they would not otherwise have under law.

Q.

REILLY AGREEMENT WITH ST. LOUIS PARK

Attached to this Consent Decree as Exhibit B, is an agreement between Reilly and St. Louis Park, under which Reilly delegates certain of its rights and responsibilities under this Consent Decree to St. Louis Park. Exhibit B is an integral and enforceable part of this Consent Decree only as to the rights and responsibilities between Reilly and St. Louis Park. No other Party to this Consent Decree is a party to Exhibit B. Exhibit B is not a novation or release of the responsibilities

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imposed upon Reilly by this Consent Decree to the United States, the State or Hopkins, and Reilly shall retain all of its rights and responsibilities to the United States, the State and Hopkins for and during the duration of the Consent Decree. Reilly shall remain responsible to St. Louis Park to perform all of its responsibilities under the Consent Decree, except those delegated to St. Louis Park under Exhibit B, so long as St. Louis Park remains in compliance with Exhibit B.

To the extent St. Louis Park performs any responsibility imposed upon Reilly under the Consent Decree, it is understood among the Parties that St. Louis Park is acting on behalf of Reilly as its delegate and that Reilly remains responsible to the United States, the State and Hopkins for the performance of the responsibilities imposed upon Reilly by the Consent Decree. The United States and the State agree to review, evaluate, and respond to any submittals and performances made by St. Louis Park as Reilly's delegate under Exhibit B. In regard to such performance by St. Louis Park, the United States and the State shall correspond with St. Louis Park and due dates shall run from receipt of notice by St. Louis Park. Copies of all such notices to and other correspondence with St. Louis Park shall be sent contemporaneously to Reilly. The United States' or the State's acceptance of any performance by St. Louis Park of any responsibility imposed upon Reilly by the Consent Decree, shall

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not create a novation. The Parties further agree that the use of any review or dispute provisions under the Consent Decree by St. Louis Park in performing any of Reilly's responsibilities pursuant to Exhibit B, binds Reilly to the result of the review or the dispute resolution. Any Court review sought by St. Louis Park in carrying out Reilly's responsibilities under the RAP shall include notification in St. Louis Park's petition for review that it is acting on Reilly's behalf as its delegate, and Reilly shall be bound by the Court's determination, provided Reilly had timely notice thereof. The United States and the State may rely on St. Louis Park's representation that Reilly has been notified.

The United States and the State agree that where St. Louis Park is performing, as Reilly's delegate, a responsibility imposed upon Reilly under the Consent Decree, and this responsibility is not performed in a satisfactory or timely manner, or it is anticipated that this responsibility will not be performed in a satisfactory or timely manner, the Regional Administrator or Director shall notify Reilly in writing of such failure of performance or anticipated failure of performance. Reilly shall be excused from making any payments under Part M or Other Law with respect to such a failure in performance unless such failure continues more than thirty (30) Days after receipt of notice, in which case Reilly shall only make payments under Part M or Other Law for each day

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such failure continues beyond the thirtieth Day after receipt of notice. However, failure to provide Reilly with such written notice shall not relieve Reilly of any of its responsibilities to the United States or the State under the Consent Decree, except the responsibility to make payments under Part M or Other Law for each day of failure of performance prior to the thirtieth day after receipt of notice. Reilly's performance of any activities delegated to St. Louis Park under Exhibit B shall not prejudice its right to recover the costs thereof from St. Louis Park.

For purposes of this Consent Decree, Reilly shall be considered to be in compliance with this Consent Decree as long as the tasks required of Reilly are being implemented in a timely and satisfactory manner, whether by Reilly or St. Louis Park, or are excused by the provisions of Parts G, H, I, J or N.

Exhibit B provides for the establishment of the St. Louis Park Contingency Fund ("Contingency Fund"). This Contingency Fund is to be used, as more fully stated in Exhibit B itself, for certain expenditures under the RAP. Exhibit B also provides, pursuant to Paragraph 15 thereof, that the Agreement itself, except as provided in Paragraph 6(c) thereof, may become null and void and all performance and/or funding obligations of St. Louis Park shall be discharged under the stated circumstances. In the event Paragraph 15 of Exhibit B

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then the Contingency Fund shall come under the control of the Court. Monies shall thereafter be disbursed from the Contingency Fund only upon order of the Court after hearing the comments of the United States, the State, St. Louis Park and any other affected city. Monies shall be disbursed from the Contingency Fund only for the funding of tasks or measures required of Reilly by the RAP, including noncontingent measures. Upon the termination of the Consent Decree, the Parties agree and stipulate that the Court shall disburse whatever funds remain in the Contingency Fund to St. Louis Park for use by St. Louis Park without restriction as to purpose.

R.

PAYMENTS BY REILLY

Reilly shall pay:

1. To the United States Hazardous Substance Response Trust Fund One Million Six Hundred Eighty Thousand and no/100 (\$1,680,000.00) Dollars, payable in three equal installments of principal. The first installment shall be paid within 30 Days of the Effective Date. The second installment shall be paid within one year and thirty Days of the Effective Date. The third installment shall be paid within two years and thirty Days of the Effective Date. Interest on the unpaid balance shall accrue from the

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thirtieth Day after the Effective Date at the rate established under 28 U.S.C. § 1961. Accrued interest shall be paid with the second and third installments. Reilly shall make an additional payment of forty thousand dollars (\$40,000.00) into the United States Hazardous Substance Response Trust Fund within 30 Days of the Effective Date.

2. To the Environmental Response, Compensation and Compliance Fund of the Treasury of the State of Minnesota the sum of One Million and no/100 (\$1,000,000) Dollars, to be paid on the last business day of:

December, 1985	\$155,000
February, 1986	\$ 37,500
June, 1986	\$155,000
December, 1986	\$155,000
February, 1987	\$ 37,500
June, 1987	\$155,000
December, 1987	\$155,000
February, 1988	\$ 37,500
February, 1989	\$ 37,500
February, 1990	\$ 37,500
February, 1991	\$ 37,500

Any payments due pursuant to this schedule prior to the Effective Date shall be paid within thirty (30) Days of the Effective Date.

Payment of these sums shall be in full and complete satisfaction of all past civil monetary claims of the United States, the State, St. Louis Park, Hopkins, the Housing and Redevelopment Authority of St. Louis Park, Oak Park Village Associates, and Philip's Investment Co., and for future expenditures of the United States, the State, St. Louis Park, Bopkins, the Bousing and Redevelopment Authority of St. Louis Park, Oak Park Village Associates, and Philip's Investment Co. associated with implementation of this Consent Decree. Payment of these sums shall not be considered payment of future claims of Oak Park Village Associates and Philip's Investment Co. in accordance with Part U.9. Payment of these sums does not include any response or enforcement costs incurred by the United States and/or the State as the result of Reilly's noncompliance with this Consent Decree or as provided in Parts U.4, U.5, U.6 and U.7.

s.

OTHER CLAIMS

Nothing herein is intended to bar or release any claims, causes of action or demands in law or equity by or

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against any person, firm, partnership, corporation or governmental entity not a Party to this Consent Decree which concerns liability arising out of or relating in any way to the generation, storage, treatment, handling, transportation, disposal or presence of any hazardous or other Chemical Substances at, to, from, or in the vicinity of the Site. Except as specifically provided in Part U below, this Consent Decree shall not estop or limit any legal claims of the State or the United States, including, but not limited to, claims related to releases of any hazardous or other Chemical Substances at, to, from or in the vicinity of the Site. Neither the State nor the United States shall be held as a party to any contract entered into by Reilly or St. Louis Park to implement activities pursuant to this Consent Decree.

Parts R and U shall not resolve the rights and defenses of or among the Parties with respect to unasserted claims which may be subsequently brought by a person not a Party to this Consent Decree. Nothing herein is intended to abrogate the doctrine of sovereign immunity, the doctrine of discretionary immunity, the Federal Tort Claims Act or the Minnesota Tort Claims Act.

T.

OTHER APPLICABLE LAWS

All actions required to be taken pursuant to this Consent Decree shall be undertaken in accordance with the

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requirements of all applicable local, state and federal laws and regulations, including laws and regulations related to occupational safety and health, permits for surface water discharge, dredge and fill, and disposal of materials in implementation of the Consent Decree, unless an exemption from such requirements is specifically provided by the administering unit of government. Any offsite disposal of hazardous substances in implementation of the Consent Decree shall be to a facility legally permitted to accept such waste and shall be approved by the Regional Administrator and Director. In the event there is a conflict in the application of federal or state law or regulations, the more stringent of the conflicting provisions shall apply.

The EPA, MPCA, the MDH, and St. Louis Park and Hopkins agree to use their best efforts consistent with statutes and regulations they administer to assist Reilly, its contractors, employees and assigns in obtaining permits or approvals from local, state or federal agencies, in accordance with the provisions of this Consent Decree.

U.

SETTLEMENT OF LITIGATION AND ADMINISTRATIVE PROCEEDINGS

To avoid further litigation between the Parties hereto and to resolve the issues presently existing among them based on Information Known To the Parties when settling this matter, the United States, the State, St Louis Park, Hopkins, the

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Housing and Redevelopment Authority of St. Louis Park, Oak Park Village Associates, Philip's Investment Co. and Reilly stipulate that:

- 1. The commitments made by the Parties in this Consent Decree, including the commitment to implement and fulfill the requirements of the RAP, constitute full settlement of the civil claims, crossclaims and counterclaims asserted in this action up to the date of lodging of this Consent Decree and all claims arising out of the administrative actions described below. Except as limited elsewhere in Part U, below, this settlement covers such claims related to:
 - a. the use, production, handling, treatment, storage, transportation, presence, disposal, release, threat of release, migration or discharge of Chemical Substances at, on, or from the Site;
 - all administrative, enforcement, remedial and removal costs incurred by the Parties prior to the lodging of this Consent Decree, including but not limited to any civil penalties, attorneys fees and other litigation expenses;
 - c. all administrative costs incurred by the Parties in implementation of this Consent Decree;
 - d. all damages to natural resources;

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- e. the previous sales of all or part of the Site;
 and,
- f. any claims which could have been brought to enforce EPA's Administrative Order of August 1, 1984, pursuant to Section 106 of CERCLA and the State's Request for Response Action (RFRA) of December 18, 1984, pursuant to Minn. Stat. ch. 115B, including claims for penalties and treble damages.

Further, this settlement covers natural resources damage claims which the Parties could have asserted under Section 107(a) of CERCLA with respect to activities of Reilly at the Site and which the Parties, other than the United States and the State, could have asserted under Minnesota Statutes and common law.

- 2. Within forty-five (45) days of the Effective Date, St. Louis Park and the State shall execute and obtain a dismissal with prejudice and without costs of the Hennepin County Lawsuit, which dismissal shall be submitted to that Court in the form attached hereto as Exhibit C.
- 3. The United States, the State, St. Louis Park, Hopkins, the Housing and Redevelopment Authority of St. Louis Park, Oak Park Village Associates, Philip's

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Investment Co. and Reilly each specifically covenant not to bring against any other Party to this Consent Decree any civil or administrative actions authorized by federal, state or local law relating to the use, production, handling, treatment, storage, transportation, discharge, disposal, presence, release, threat of release or migration at, on or from the Site of Chemical Substances so long as that other Party remains in compliance with the requirements of this Consent Decree.

- 4. However, each of the Parties specifically retains the authority to enforce the terms of this Consent Decree against any Party which fails to maintain compliance with this Consent Decree. In the case of failure of a Party to maintain compliance, all Parties retain authority to take removal or remedial action and recover their costs authorized by federal or state law in regard to such failure.
- 5. Nothing in this Consent Decree, including Part U.3., shall be construed to limit the authority of the United States, the State or Hopkins to undertake any action against any Party, in response to conditions which may present an imminent and substantial endangerment to the public health, welfare or the environment, for any release, threatened release or migration:

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where the existence or location of the release. а. threatened release or migration was not Known to the United States, the State or Hopkins at the time of the lodging of this Consent Decree except to the extent that the action or actions to be taken in response to such release, threatened release or migration are being adequately provided for by specific and/or contingent measures undertaken pursuant to the RAP; b. which release, threatened release or migration was Known but involves pollutants, contaminants, or hazardous substances which were not Known To the United States, the State or Hopkins at the time of the lodging of this Consent Decree, except to the extent that the action or actions to be taken in response to such release, threatened release or migration are being adequately provided for by specific and/or contingent measures undertaken pursuant to the RAP; or, c. which action, except designation of Additional Carcinogenic PAH as provided for in Part D.1., is necessitated because of information that was learned after the Effective Date and relates to a scientific determination upon which this Consent Decree is premised.

6. Nothing in this Consent Decree, including Part U.3., shall be construed to limit the authority of the

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United States, the State or Hopkins to take response actions, and to seek recovery of the cost thereof from any Party for any release, threatened release or migration:

a. where the existence or location of the release, threatened release or migration was not Known To the United States, the State or Hopkins at the time of the lodging of this Consent Decree, except to the extent that the action or actions to be taken in response to such release, threatened release or migration are being adequately provided for by specific and/or contingent measures undertaken pursuant to the RAP; b. which release, threatened release or migration was Known but involves pollutants, contaminants, or hazardous substances which were not Known to the United States, the State or Hopkins at the time of the lodging of this Consent Decree, except to the extent that the action or actions to be taken in response to such release, threatened release or migration are being adequately provided for by specific and/or contingent measures undertaken pursuant to the RAP; or c. which response action, except designation of Additional Carcinogenic PAH pursuant to Part D.1., is necessitated because of information that was learned after the Effective Date and relates to a scientific determination upon which this Consent Decree is premised. -72-

- 7. Nothing in this Consent Decree, including Part U.3, shall be construed to affect the liability (or defenses thereto) of any Party resulting from its off site disposal of hazardous substances in implementation of this Consent Decree.
- 8. In the event that any action permitted under Part U.5 or U.6 is taken by the United States, the State or Hopkins against any Party, nothing in this Consent Decree shall be construed as in any way limiting the rights of any such Party to assert against any other Party in any such action any defenses, claims, crossclaims or counterclaims relating to the subject matter of any such action, including those previously asserted and pending in this action or the Hennepin County Lawsuit prior to the Effective Date.
- 9. It is understood and agreed that Oak Park Village Associates and Philip's Investment Co., each and both of them, settle all of their claims which were asserted or which could have been asserted up to the date of lodging of this Consent Decree. Nothing in this Consent Decree, including Part U.3, shall preclude a claim, during the term of this Consent Decree, by Oak Park Village Associates or Philip's Investment Co., against any other Party, except the United States and the State, for diminution of property value from the value of the property at the time

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purchased by Oak Park Village Associates and Philip's Investment Co. which may accrue after the Effective Date and which is the result of the use, production, handling, treatment, storage, transportation, discharge, disposal, presence, release, threat of release or migration at, on or from the Site of hazardous substances, pollutants or contaminants. With regard to paragraph 14 of the Agreement for Purchase and Sale of Real Estate dated June 1, 1979, by and between the Housing and Redevelopment Authority of St. Louis Park and Philip's Investment Co., it is understood that if Philip's Investment Co. releases any damage claim against the United States, Reilly or the State by virtue of this settlement, such release shall not bar indemnification claims because of paragraph 14(d). Additionally, it is understood that all other rights, remedies and obligations, procedural and substantive, of that paragraph 14 are left for future determination, if necessary.

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RETENTION OF AUTHORITY

Notwithstanding anything in this Consent Decree, the United States and the State retain their authority to undertake response actions authorized by law. However, the right to recover response costs for such response actions from the

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Parties to this Consent Decree shall be governed by Part U (Settlement of Litigation and Administrative Proceedings.)

W.

PRODUCTION OF DATA

Reilly agrees to provide the Regional Administrator and the Director and the Regional Administrator and Director agree to provide to Reilly within thirty (30) Days of the Effective Date copies of all data in any form satisfactory to the receiving Party relating to this case on soil, groundwater conditions and contamination in St. Louis Park and adjoining communities in their possession, custody, or control including that possessed by consultants who have worked on this case, which have not previously been produced in the course of the litigation to either the United States, the State or Reilly.

X.

NO CLAIMS AGAINST STATE AND FEDERAL SUPERFUND

Reilly, St. Louis Park, Hopkins, the Housing and Redevelopment Authority of St. Louis Park, Oak Park Village Associates, and Philip's Investment Co. agree to make no claims for expenses related, directly or indirectly, to this litigation and this Consent Decree against the Federal Hazardous Substance Response Trust Fund established under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601, <u>et seq</u>. or the Environmental Response, Compensation and Compliance Fund established under the Minnesota Environmental Response and Liability Act,

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Minn. Stat. Chapter 115B. The State agrees to make no claims under Sections 111 and 112 of CERCLA, 42 U.S.C. §§ 9601 <u>et</u> <u>seq</u>., for costs and expenses related, directly or indirectly, to this litigation, the Rennepin Court Lawsuit and this Consent Decree against the Federal Hazardous Substance Response Trust Fund. Any claims that the United States may have against Reilly under past and present cooperative agreements with the State related to the Site are resolved in Part R.

Y.

LIABILITY INSURANCE

Within thirty (30) Days of the Effective Date, Reilly shall provide the Regional Administrator and Director with current certificates of insurance certifying coverage for general liability which may arise in carrying out this Consent Decree with minimum limits of One Million and no/100 Dollars (\$1,000,000.00) per occurrence, an annual aggregate of at least Two Million and no/100 Dollars (\$2,000,000.00), exclusive of legal defense costs, for bodily injury and property damage liability combined, and containing the provision that the insurance shall not be cancelled for any reason except upon thirty (30) days written notice to Reilly, the Regional Administrator and Director.

These insurance limits are not to be construed as maximum limits. Reilly is solely responsible for determining the appropriate amount of insurance it should carry for

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injuries or damages that may result from the implementation of this Consent Decree.

z.

FINANCIAL RESPONSIBILITY

1. By May 31 of each year, Reilly shall deliver to the United States and the State, a certificate prepared by Reilly's certified public accounting firm which sets forth whether Reilly's consolidated performance is in accord with the requirements set forth below.

The certificate shall include the results of four tests which are applied to Reilly's audited financial statements. The four financial tests are defined below:

a. Current ratio, defined as:

Current ratio = <u>Current Assets</u> Current Liabilities

where

Current Assets	-	All of end-of-period (previous calendar year) current assets as reported on balance sheet in accordance with standard accounting conventions
		accounting conventions

Current Liabilities = All end-of-period current liabilities plus the current portion of any long-term debt held by Reilly

b. Net Working Capital defined as:

Net Working Capital	-	End-of-period current assets
- -		minus end-of-period current
		liabilities

c. Total Liabilities/Tangible Net Worth Ratio, defined as:

<u>Total Liabilities</u> = Tangible Net Worth	Net	<u>Total Liabilities</u> Worth - Intangible Assets
Net Worth	=	End-of-period owner's preferred and common equity including retained earnings and paid-in capital
Intangible Assets	=	End-of-period book value of any nonphysical or financial assets such as patents, trademarks, and goodwill
Total Liabilities	=	End-of-period total assets minus end-of-period net worth

d. Retained Earnings, defined as:

Retained Earnings	=	Cumulative internally
		generated earnings available
		to common stock shareholders
		and not paid out as dividends

2. The certificate given by Reilly to the United States and the State shall state whether Reilly has failed any of the four tests. The failure criteria for the four tests are listed below:

a. Reilly's Current Ratio, as defined above, is lower than 1.75.

b. Reilly's Net Working Capital, as defined above, is less than 70 percent of its 1984 end-of-period value.

c. Reilly's Total Liabilities/Net Worth ratio, as defined above, is greated than 1.1.

d. Reilly's Retained Earnings, as defined above, is less than 70 percent of its 1984 end-of-period value._*_/

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^{*/} If Reilly should choose to recapitalize its equity in the future in some manner which influences the continuity of reported retained earnings, the United States and the State will be informed and the earnings will be restated on a December 31, 1984 basis and that basis will be used for determining subsequent compliance.

Reilly will be deemed to have failed the short-term requirement if it fails either the Current Ratio test or the Net Working Capital test. Reilly will be deemed to have failed the long-term requirement if it fails either the Total Liabilities/Net Worth ratio test or the Retained Earnings test.

3. If Reilly fails the short-term requirement, it shall provide to the United States and the State within sixty (60) Days of notification to the United States and the State of such failure, a letter of credit, surety bond, or other assurance for an amount equal to the estimated cost of the remedial actions which Reilly is required to take in the next two years under the RAF. If Reilly passes the short-term requirement for the year immediately following a year for which the short-term requirement was failed, it may reduce the amount of the letter of credit, surety bond, or other assurance to one-half of its original amount. If Reilly again passes the short-term requirement for the following year, it may further reduce the amount of the letter of credit, surety bond or other assurance to zero and discontinue them. However, if Reilly fails the short-term requirement in successive years, the amount of any letter of credit, surety bond or other assurance shall be adjusted each year to equal the estimated cost of remedial actions to be undertaken in the next two years.

If Reilly fails the long-term requirement, it shall provide to the United States and the State within sixty (60)

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Days of notification to the United States and the State of such failure a letter of credit, surety bond, or other assurance for an amount equal to the estimated cost of all the remaining remedial actions to be undertaken in all future years as imposed upon Reilly by the RAP, including the cost of contingencies. Reilly may reduce the amount of the letter of credit, surety bond, or other assurance to zero and discontinue them if it passes the long-term requirement in two successive years after having failed the long-term requirement for successive years. The amount of any letter of credit, surety bond or any other assurance shall te adjusted each year to equal the estimated costs of the remedy, including the costs of contingencies.

If Reilly fails the short-term requirement for the same year for which it fails the long-term requirement, the conditions applying to the failure of the long-term requirement, as described in the immediately preceding paragraph, shall take precedence over the conditions described for failure of the short-term requirement.

If Reilly fails the long-term requirement, the estimated remedial action costs shall be composed of three parts: (1) capital construction costs, which if relevant, shall be based on estimated construction costs required to complete construction, (2) operation and maintenance costs, which shall be based, if possible, on historical operation and maintenance costs adjusted for inflation, and (3) an additional amount to

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cover contingencies. The additional amount will be determined by the United States and the State according to apparent costs and likelihood of additional remedial actions. The amount then in the St. Louis Park Contingency Fund created in Exhibit B shall constitute a credit against the amount of any letter of credit, surety bond or other assurances which Reilly is obligated to provide in the event it fails the long-term requirement. However, because the United States and the State did not participate in negotiating Exhibit B, they have not agreed that the amounts payable to the St. Louis Park Contingency Fund are adequate to cover the estimated cost of contingencies in the event Reilly fails the long-term

If there is a dispute among the Parties as to the estimated amount of the remedial actions under the RAP, including the costs of contingencies, any of those Parties may request an expedited hearing before the Court to determine the appropriate amount. Such expedited hearing shall be completed within 45 Days of May 31 of that year subject to the availability of the Court. Nonetheless, Reilly shall provide a letter of credit, surety bond or other assurances for the lower of the disputed amounts within sixty (60) Days of May 31 and shall augment that letter of credit, surety bond or other assurances to reflect the decision of the Court within sixty (60) Days of that decision.

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If Reilly does not provide a letter of credit, surety bond, or other assurance of its access to credit in appropriate amount within the time periods required by this Part, Reilly shall within twenty (20) Days pay the amount required by this Part to be covered by any letter of credit, surety bond or other assurances into the registry of the Court. Reilly may petition the Court to release the funds at any time it can demonstrate that it has a letter of credit, surety bond or assurances in the appropriate amount, or has satisfied the appropriate requirement for the appropriate number of years so that a letter of credit, surety bond or other assurance would not otherwise be required.

4. The United States, the State, or Reilly may, based on new information, petition the Court once each year between May 31 and July 31 to adjust the amount necessary to cover remaining actions imposed upon Reilly by the RAP as contained in the letter of credit, surety bond or trust fund.

In the event that Reilly enters into default on any of its short-term or other fixed loans, whether challenged by its creditors or not, Reilly shall inform the United States and the State of said event and shall be obligated to respond to requests from the United States or the State for additional explanatory information.

5. All information submitted by Reilly concerning its financial status for which Reilly claims confidentiality shall

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be afforded the protection specified in 5 U.S.C. § 552(b)(4). 18 U.S.C. § 1905, 42 U.S.C. § 9604(e)(2)(A) and 40 C.F.R. Part 2, subpart B by EPA, and the protection of Minn. Stat. §§ 13.37(b), 115B.17(5) and 116.075, subd. 2 by the State. Information which is properly determined to be confidential by EPA and by the State, shall only be provided to such employees, agents, and contractors of the United States and the State who would use the information to oversee implementation of this Consent Decree. Each such employee, agent, or contractor shall te provided with a copy of this Part Z and shall sign a statement that he or she shall abide by the confidentiality provisions of this Part Z. Notwithstanding these confidentiality provisions, if the information submitted by Reilly may provide evidence of a violation of federal, state or local law, the United States or the State may provide that information to the appropriate enforcement agency. Information concerning the actual or estimated cost of implementing the RAP will not be claimed confidential by Reilly and may be made public.

6. Reilly shall provide each year by May 31 to the United States and the State, the information which, as of the Effective Date, would be required under 40 C.F.R. § 264.143(f)(3). Based on this information, or any other information about Reilly's financial condition which comes to the attention of the United States or the State, the United

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States or the State may petition the Court for additional financial assurances from Reilly.

AA.

MODIFICATION

Except as otherwise provided herein, this Consent Decree and its Exhibits may be amended by written agreement of the Parties and shall become effective upon approval by the Court.

BB.

DURATION OF CONSENT DECREE

1. This Consent Decree shall remain in effect until the remedial elements specified in Parts BB.2(a) through (f) and BB.3. have been certified as complete in the manner herein provided and the plan specified in Part BE.7 is approved and any financial guarantee thereunder is in place, but in any event, not less than thirty (30) years after the Effective Date.

2. At any time, starting six months before the thirtieth anniversary of the Effective Date, Reilly may request certification from the Regional Administrator and the Director that any of the following remedial elements of the RAP have been completed as demonstrated by attainment of the applicable cessation criteria and that the results of the most recent five years of post cessation Monitoring immediately prior to the certification request have not exceeded the applicable cessation criteria.

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- a. Operation of the drinking water treatment system at SLP 10 and 15, as specified in Section 4 of the RAP.
- b. Operation of the Ironton-Galesville source control well as specified in Section 6 of the RAP.
- c. Operation of the source and gradient control well system in the Prairie du Chien-Jordan aquifer, including wells W23, SLP4, W48 and any additional wells required by the Regional Administrator and Director, as specified in Section 7 of the RAP.
- d. Operation of any remedial measures determined for the St. Peter aquifer under Section 8 of the RAP.
- e. Operation of source and gradient control wells in the Drift and Platteville aquifers under Section 9 of the RAP.
- f. Operation of any drinking water treatment system installed under Section 12 of the RAP.

Each of the foregoing remedial elements shall include the Monitoring requirements associated with it in the RAP.

3. At any time starting six months before the thirtieth anniversary of the Effective Date, Reilly may request certification from the Regional Administrator and the Director that the requirements of Section 10.3 of the RAP have been completed.

4. Any request for certification of completion pursuant to Parts BB.2 or BB.3 shall bear the caption of this case and shall be served upon the Assistant Attorney General, Land and Natural Resources Division, United States Department of Justice; the United States Attorney for the District of Minnesota; and the Minnesota Attorney General, as well as the other persons identified in Part L. The Regional Administrator

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and Director shall notify Reilly, St. Louis Park and certify to the Court which, if any, of the remedial elements listed in Parts BB.2 or BB.3 have been completed. With respect to each remedial element and associated contingent action(s) certified as completed by both the Regional Administrator and the Director pursuant to Parts BB.2 and BB.3, the Consent Decree shall be terminated by the Court; with respect to all such remedial elements and associated contingent action(s) not so certified, the Consent Decree will remain in effect.

5. If, following Reilly's requests, the Regional Administrator and/or Director decline to certify that any remedial element of the RAP is completed, they shall notify Reilly, St. Louis Park and the Court of their decision. Within thirty (30) Days of receipt of such notification, Reilly may petition the Court to review the Regional Administrator's and/or Director's decision. Upon such petition for review, the issues before the Court with respect to the remedial elements in Part BB.2(a) through (f) shall be limited to whether the analytical data demonstrate that the cessation criteria for that remedial element have been met and whether the analytical data demonstrate that there have been five years of post cessation monitoring and that the results of post cessation monitoring for the most recent five years prior to the certification request do not necessitate resumption of the remedial element.

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6. All Monitoring and other requirements of the RAP not associated with any of the remedial elements listed in Part BB.2(a) through (f), BB.3 or BB.7 shall terminate thirty (30) years after the Effective Date.

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7. Except for any action under Part BB.2(f) in the Mt. Simon-Hinckley aguifer, the Consent Decree shall terminate with respect to the Mt. Simon-Hinckley aguifer when the plan specified in Section 5.2. of the RAP is approved and any financial guarantees thereunder are in place.

8. Any disputes under this Part BB shall be resolved by petition to the Court. The Consent Decree as a whole shall terminate when the Regional Administrator and Director have certified to the Court and the Court has approved: that each of the remedial elements identified in Parts BB.2(a) through (f) and BB.3 has been completed; that the plan specified in Part BB.7 has been approved and financial guarantees thereunder are in place; and all payments due have been paid and all disputes pending have been resolved.

cc.

PUBLIC NOTICE AND WITHDRAWAL OF CONSENT

The Parties acknowledge that entry of this Consent Decree by the Court is subject to the requirements of 28 C.F.R. § 50.7, which establishes the policy of the Department of Justice to afford persons who are not named as parties to an action to comment on proposed judgments prior to their entry by the Court. Consistent with this policy, the State, through its

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Attorney General, prior to entry of judgment of this Consent Decree or some earlier specified date, also will review any written comments submitted to the Department of Justice under 28 C.F.R. § 50.7. The State, through its Attorney General, reserves the right to withdraw or withhold its consent to the proposed judgment if (1) the comments received by the Department of Justice disclose facts or considerations which indicate that the proposed judgment is inappropriate, improper or inadequate and (2) the comments disclosing such facts or considerations were not considered by the State prior to execution of the Consent Decree.

In addition, all parties acknowledge that if the Department of Justice withholds or withdraws its consent pursuant to 28 C.F.R. § 50.7, this Consent Decree shall be null and void. In such an event, no Party shall be bound by the requirements of this Consent Decree.

DD.

INTERPRETATION OF CONSENT DECREE

The Parties agree that prior drafts of this Consent Decree and its Exhibits shall not be used to aid in the interpretation of this Consent Decree and its Exhibits. The Parties further agree that Exhibit B shall not be used to aid in the interpretation of this Consent Decree, including Exhibit A.

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EE.

EFFECTIVE DATE

This Consent Decree is effective upon the date of its entry by the Court.

FF.

CONTINUING JURISDICTION OF THE COURT

This Court specifically retains jurisdiction over both the subject matter hereof and the Parties hereto for the duration of this Consent Decree for the purposes of enforcing or modifying the terms of this Consent Decree, or for granting any other relief not inconsistent herewith which the Court deems appropriate and just.

IT IS SO ORDERED:

Dated:

United States District Judge

The parties hereto consent to the entry of this

Consent Decree.

REILLY TAR & CHEMICAL CORP. Defendant By_ By Thomas E. Reilly, President Edward J. Sch artzbauei Dorsey & Whitney Attorneys for Reilly The & Chemical Corporation

UNITED STATES OF AMERICA Plaip

F. Henry Habicht II Assistant Attorney General Land & Natural Resources Division U.S. Department of Justice

By 🗭

David Hird, Attorney Land & Natural Resources Division U.S. Department of Justice

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STATE OF MINNESOTA Plaintiff-Intervenor

Βv Duane Dahlberg Chairperson, MPCA

T VAI

By Thomas J. Kalitows

Director, MPCA

Βv Mary Madonna Ashtor St/.

Commissioner, MDH

JERÓME G LD Unated St Attorney alte B

Francis X. Hermann Asst. United States Attorney

<By

Assistant Administrator Office of Enforcement and Compliance Monitoring (Acriv) U.S. Environmental Protection Agency

Hubert H. Humphrey, Attorney General

By

Stephen Shakman Special Assistant Attorney General

CITY OF ST. LOUIS PARK Plaintiff-Intervenor

By

By

Wayne G. Popham Popham, Haik, Schnobrich, Kaufman & Doty, Ltd. Attorneys for City of St. Louis Park

By /V

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

By

Robert E. Leińinger Assistant Regional Counsel U.S. Environmental Protection Agency Region V

CITY OF HOPKINS Plaintiff-Intervenor By Ø X Mayor Gary Hanseh Doharty, Rumble & Butler Attorneys for City of Hopk ins

THE HOUSING AND REDEVELOPMENT AUTHORITY OF ST. LOUIS PARK

By By Chai By C Wayne G. Popham

Popham, Haik, Schnobrich, Kaufman & Doty, Ltd. Attorneys for the Housing and Redevelopment Authority of St. Louis Park

PHILIP'S INVESTMENT CO.

By President By ma

Thomas W. Wexler Peterson, Engberg & Peterson Attorneys for Philip's Investment Co.

OAK PARK VILLAGE ASSOCIATES BY DIVERSIFIED EQUITIES CORP. ITS GENERAL PARTNER BY A

President, Diversified Equities Corp.

By Timothy H_ Butler

Lindquist & Vennum Attorneys for Oak Park Village Associates

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1997 - 19 and 1988

EXHIBIT A REMEDIAL ACTION FLAN

INTRODUCTION AND PURPOSE

The objectives of this Remedial Action Plan (hereinafter referred to as RAP) are to accomplish the following: provide a safe drinking water supply in sufficient quantity for the City of St. Louis Park and surrounding communities; to control the spread of Contamination in the Drift-Platteville, St. Peter, Prairie du Chien-Jordan, Ironton-Galesville, and Mt. Simon-Hinckley aquifers resulting from activities at the Site which was owned and operated by the Reilly Tar 4 Chemical Corporation, and whose present ownership is described in Part C of the Consent Decree; to allow for the safe, reasonable, and beneficial use of the Site and adjacent Contaminated areas; and to preserve and protect ground water resources for present and future use.

These objectives will be accomplished by installation of a granular activated carbon (GAC) drinking water treatment system at St. Louis Park municipal wells numbers 10 and 15; a system of pumping wells designed to remove and/or control the flow of PAH and Phenolic Contaminants in aquifers beneath St. Louis Park; remedial actions at and around the Site which will reduce the infiltration of water, thus controlling the

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movement of PAH and Phenolics from Contaminated surficial geological deposits and allowing for safe use of the Site and adjacent Contaminated areas; Monitoring of Contaminants in all aquifers and in drinking water for St. Louis Park and selected neighboring communities to track the movement of Contaminants and monitor their occurrence in drinking water; and other actions which will be implemented if Contaminants are found to move in a manner which is not anticipated at this time. The specifics of these actions are contained in this RAP.

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DEFINITIONS

1.

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As used in this RAP, the following words and phrases shall have these meanings:

1.1. Additional Carcinogenic PAH: Means the compounds designated pursuant to Part D.1. of the Consent Decree.
1.2. Advisory Levels: Means the concentrations of Carcinogenic PAH, Other PAH or the sum of benzo(a)pyrene and dibenz(a,h)anthracene as defined in Section 2.2. of this RAP, or concentrations of Additional Carcinogenic PAH which may be established under the procedures of Part D.1. of the Consent Decree.

1.3. <u>Carcinogenic PAH</u>: Means those PAH compounds listed in Appendix A as being suspected human carcinogens and those Additional Carcinogenic PAH Compounds added pursuant to Part D.1. of the Consent Decree. For Monitoring purposes, the concentration of Carcinogenic PAH shall be the sum of the concentrations of all compounds listed in Parts A.1.1. and A.2. of Appendix A.

1.4. <u>Commissioner</u>: Means the Commissioner of the Minnesota Department of Health, or his/her authorized representative.
1.5. <u>Contamination or Contaminants</u>: Means PAH and Phenolics resulting from activities of Reilly at the Site when found in the ground water or the soil.

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1.6. <u>Day</u>: When used in this RAP to indicate a deadline for a required action, means a calendar day. Whenever a submittal or action required by this RAP falls on a Saturday, Sunday or Minnesota State or Federal legal holiday, the submittal or action shall be due upon the next following day of business.
1.7. <u>Director</u>: Means the Executive Director of the Minnesota Pollution Control Agency, or his/her authorized representative.
1.8. <u>Drinking Water Criteria</u>: Means concentrations of Carcinogenic PAH, Other PAH or the sum of benzo(a)pyrene and dibenz(a,h)anthracene as defined in Section 2.2. of the RAP, or concentrations of Additional Carcinogenic PAH which may be established under the procedures in Part D.1. of the Consent Decree.

1.9. <u>Effective Date</u>: Means the effective date of the Consent Decree.

1.10. EPA: Means the United States Environmental Protection Agency.

1.11. <u>HRA</u>: Means the Housing and Redevelopment Authority of St. Louis Park.

1.12. MDH: Means the Minnesota Department of Health.
1.13. MWCC: Means the Metropolitan Waste Control Commission.
1.14. Monitor: Means to collect a sample and analyze for
Carcinogenic PAH and Other PAH, as well as for any other
parameters specified, in accordance with the sampling and
analytical plans required under Section 3 of this RAP.

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1.15. MPCA: Means the Minnesota Pollution Control Agency. 1.16. Other PAH: Means PAH compounds other than those which are listed in Appendix A to the RAP as suspected human carcinogens. For Monitoring purposes, the concentration of Other PAH is defined as the sum of the concentrations of all compounds listed in Part A.1.2. of Appendix A. 1.17. PAH (polynuclear aromatic hydrocarbons): Means chemical compounds consisting of carbon and hydrogen atoms contained in two or more fused aromatic rings, with each ring consisting of five or six carbon atoms. This term also includes alkyl-substituted, aryl-substituted and heterocyclic PAH (compounds in which one or more carbon atoms in a ring are replaced with nitrogen, oxygen, and/or sulfur atoms). This term also includes biphenyl and alkylated biphenyls. 1.18. Phenolics: Means aromatic organic compounds substituted with one or more hydroxyl groups, which are detected by the 4-aminoantipyrene method, EPA method 420.1 or 420.2 or other method as approved by the Regional Administrator and Director in accordance with Part G or H of the Consent Decree. 1.19. <u>Regional Administrator</u>: Means the Regional Administrator of the EPA Region in which the Site is located (currently Region V), or his/her authorized representative. 1.20. Reilly: Means the Reilly Tar & Chemical Corporation. 1.21. Site: Means the Republic Creosote Site in St. Louis Park, operated by the Reilly Tar & Chemical Corporation from

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1917 to 1972, which consists of the property identified in Part C.1. of the Consent Decree. The Site is bounded by an imaginary line extending south from the terminus of Pennsylvania Avenue south of 31st Street on the west; an imaginary line extending westward from the intersection of Louisiana Avenue and 32nd Street on the north; Louisiana Avenue from 32nd Street to Gorham Street, Gorham Street from Louisiana Avenue to 2nd Street NW, 2nd Street NW from Gorham Street to Republic Avenue, Republic Avenue from 2nd Street NW to 1st Street NW, and 1st Street NW from Republic Avenue to Walker Street on the east; and Walker Street on the south. 1.22. <u>Standard Deviation</u>: Means the measure of statistical variability calculated from the equation

$$s = \left[\frac{\sum_{i=1}^{n} (x_i - \overline{x})^2}{\sum_{i=1}^{n-1}}\right]^{1/2}$$

where: S is the calculated standard deviation;

n is the number of samples;

 X_i is the value of the i'th sample; and

 \overline{X} is the arithmetic mean of the values of all samples. 1.23. <u>Total PAH</u>: Means the sum of the concentrations of all Carcinogenic PAH and Other PAH listed in Parts A.l.l., A.l.2., and, if detected, Part A.2. of Appendix A.

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GENERAL PROVISIONS

2.

2.1. Well Numbering

Each well referenced in this RAP by a number preceded by "W" or "P" refers to the well identified by this unique number in the report, "Preliminary Evaluation of Ground-Water Contamination by Coal Tar Derivatives, St. Louis Park Area, Minnesota", by M. F. Hult and M. E. Schoenberg, United States Geological Survey, Water Supply Paper 2211, 1984, or otherwise assigned by the United States Geological Survey. Each well referenced in this RAP by a number preceded by "SLP" refers to the municipal water supply well of St. Louis Park having this unique number. For convenience in this RAP and in subsequent reports, project numbers using the USGS numbering system may be assigned to new wells required by this RAP and to other wells not having a USGS designation. Wells not designated in this RAP may receive project numbers upon concurrence of all Project Leaders as defined in Part O of the Consent Decree.

2.2. Drinking Water Criteria and Advisory Levels

The Drinking Water Criteria and Advisory Levels defined below shall apply to drinking water which is treated to remove PAH and to ground water which is Monitored as required by this RAP:

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Parameter		visory evel	Drinking Water Criterion				
The sum of benzo (a) pyrene and dibenz(a,h)anthracene	3.() ng/1*	5.0	5 ng/1			
Carcinogenic PAH	15	ng/1**	28	ng/1**			
Other PAH	175	ng/l	280	ng/l			

- * Or lowest concentration that can be quantified, whichever is greater.
- ** Different concentrations for Additional Carcinogenic PAB may be established in accordance with the procedures specified in Part D.1 of the Consent Decree.

The Commissioner may require that the use of any drinking water supply well whose water exceeds any of these Drinking Water Criteria, as determined in accordance with Section 12.1., be discontinued until such time as the Drinking Water Criteria are met by treatment or other means. Compliance with these Drinking Water Criteria shall be determined at the point at which the water in question is introduced to the water supply distribution system but before dilution with water from any other source. The Advisory Levels for Carcinegenic PAH and the sum of benzo(a)pyrene and dibenz(a,h)anthracene are used in Section 4 as operational and cessation criteria for drinking water treatment systems. The Advisory Levels are also used in this RAP to trigger increased Monitoring requirements.

2.3. Quinoline

In the event quinoline is detected in any sample, and no other Carcinogenic PAH compound listed in Parts A.l.l. and

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A.2. of Appendix A or added pursuant to Part D.1. of the Consent Decree is detected in the same sample, it shall be limited under the criterion for Other PAH compounds.

2.4. Well Construction and Abandonment

All wells installed, reconstructed or abandoned in compliance with the requirements of this RAP shall be constructed or abandoned in accordance with all applicable provisions of the MDH well construction code (Minn. Rules Parts 4250.2500-4250.3000 (1983)) and future amendments thereto, including requirements for notification of and approval by the Commissioner.

2.5. Surface Water Discharge Criteria

In each case where Reilly is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for a surface water discharge which is part of a remedial action implemented under this RAP, the Director shall prepare a draft NPDES permit in accordance with Minn. Rules Part 7001.0100, Subp. 2 (1984 Supp.). The draft permit shall contain the following effluent limitations:

Parameter	Daily Maximum Concentration	30-day Average Concentration					
Carcinogenic PAH Other PAH Phenanthrene	34 ug/1 2 ug/1	311 ng/l 17 ug/l 1 ug/l					
Phenolics	***	10 ug/1					

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These limitations may be adjusted in the draft permit to allow for dilution if the discharge is to a stream which does not have a seven day-ten year low flow (7010) of zero. The draft permit is subject to change in accordance with Minn. Rules Ch. 7001 (1984 Supp.) and subject to EPA authority pursuant to the Federal Water Pollution Control Act, 33 U.S.C. § 1251 <u>et seq</u>. In the event the limitations are changed for any discharge required by this RAP, and the reasons for changing the limitations are applicable to discharges for which NPDES permits are subsequently proposed in accordance with this RAP, the Director may propose these changed limitations in the subsequent permits. In the draft permit, the Director shall propose weekly Monitoring for the first month, monthly Monitoring for the next quarter, and quarterly Monitoring thereafter.

2.6. Schedule for Contingent Actions

On or before the date specified in the RAP for a contingent action or, where no date is specified, not later than 90 Days following receipt of notification by the Regional Administrator and Director in accordance with Part H of the Consent Decree that a contingent action is necessary, Reilly shall submit to the Regional Administrator and Director a plan for the required contingent action, including design specifications and an implementation schedule. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree.

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2.7. Plans and Submittals

All plans and submittals pursuant to this RAP are to be prepared and reviewed in accordance with the purposes and requirements of the Consent Decree and the National Contingency Plan (40 C.F.R. Part 300).

2.8. Special Analytical Service

Reilly shall provide the Regional Administrator, the Director, and the Commissioner the results of all Monitoring performed in response to an exceedance of any Advisory Level or Drinking Water Criterion pursuant to Sections 4.3.1.(B), 4.3.2., 4.6. or 12.1. within 21 Days of taking the samples. 2.9. Discontinuing Sanitary Sewer Discharges

Reilly, at any time, may submit a plan to the Regional Administrator and Director to change the discharge to the storm sewer or a surface water body of any source control or gradient control well that is required to be discharged to the sanitary sewer by the provisions of this RAP. The plan shall describe the proposed construction and operation of the revised discharge, including any treatment required in order to meet the effluent limitations specified in Section 2.5. or other effluent limitations specified in NPDES permits as contemplated in Section 2.5., and shall include a permitting and implementation schedule and proposed cessation criteria for any treatment. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree and approval shall not be unreasonably withheld.

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SAMPLING AND QUALITY ASSURANCE

3.

3.1. Applicability

All Monitoring required by the provisions of this RAP shall be done in accordance with approved plans, as required by this Section.

3.2. Initial Sampling Plan

Within 30 Days of the Effective Date, Reilly shall submit to the Regional Administrator and Director a sampling plan for 1986 for the Mt. Simon-Hinckley, Ironton-Galesville, Prairie du Chien-Jordan, St. Peter, and Drift-Platteville aquifers. The plan shall incorporate requirements of Sections 4.3., 5.1., 6.1.4., 7.3., 8.1.3., 9.1.3, 9.2.3., 9.3.3., and 9.6. below, and shall indicate proposed dates for sample collection, analysis and reporting for all of the monitoring and municipal wells required in this RAP. The plan shall include a detailed laboratory quality assurance/quality control plan and a summary of sampling and analytical procedures, including method detection limits for each procedure, to be followed in all analyses required by this RAP. Included in the plan shall be the name(s) of the primary laboratory(ies) which will be performing analyses, the name(s) of any other laboratory(ies) which may provide backup services, and the turnaround time(s) (the time interval from receipt of samples

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to completion of analysis) which the primary laboratory has agreed to provide. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree.

3.3. Subsequent Sampling Plans

By October 31 of each year, beginning in 1986, Reilly shall submit to the Regional Administrator and Director a sampling plan for the coming calendar year that meets the requirements of Section 3.2. In these subsequent plans, 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 this RAP. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree.

3.4. Annual Report

By March 15 of each year, beginning in 1987, Reilly shall submit to the Regional Administrator and Director a report of the results of all Monitoring during the previous calendar year. This report shall contain the following information for each aquifer sampled:

- (A) Results of all water level measurements and chemical analyses.
- (B) For each measuring period in the Prairie du Chien-Jordan, St. Peter, and Drift-Platteville

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aquifers, a water level contour map with elevations labeled at each well.

- (C) For each sampling event, a map showing each well sampled with the concentrations of Other PAH, Carcinogenic PAH, and the sum of benzo(a)pyrene and dibenz(a,h)anthracene labeled by the location of each well, and a map with Phenolics concentrations labeled by the location of each well.
- (D) For the Drift-Platteville, a discussion of the Monitoring and water level results with respect to the effectiveness of the source and gradient control well systems.

DRINKING WATER TREATMENT SYSTEM AT SLP 10/15

4.1. Design and Construction

4.1.1. Design

Reilly has submitted to the Regional Administrator, the Director, and the Commissioner a complete design, including plans and specifications, for the construction of a granular activated carbon (GAC) treatment system at the St. Louis Park municipal drinking water wells SLP 10 and SLP 15, and has submitted applications for necessary permits. The Regional Administrator, the Director, and the Commissioner have reviewed and approved the plan in accordance with Part G of the Consent Decree.

4.1.2. Construction

Reilly shall fully construct the GAC treatment system in accordance with the approved design by December 30, 1985. 4.1.3. Design Criteria

The GAC water treatment system has been designed and shall be constructed by Reilly in accordance with the following criteria, which will satisfy the objectives of the EPA Record of Decision dated June 6, 1984.

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Item Design Value Feed Water Water from wells SLP 15 alone, SLP 10 alone, or SLP 10 and 15, after such waters have been treated in the existing pressure sand filters. Flow Rate 1200 gpm capacity Up to 20,000 ng/l Total PAH Raw Water Concentration Treated Water PAH Shall meet the Drinking Water Criteria defined in Section 2.2. Concentration and shall be operated according to Section 4.3.2. The GAC system shall be enclosed Building within a building with heating, lighting, landscaping, and architectural design compatible with the existing treatment building at SLP 10 and 15. At least three mini-columns shall Mini-columns be installed within the GAC system building and shall be designed in such a manner as to allow testing of alternate carbons and/or prediction of breakthrough at conditions comparable to those in the full-scale system. Space for Additional The building to house the GAC system shall be designed to Carbon Column(s) accommodate the construction of an additional column(s) which may be

4.1.4. Inspection

Reilly shall provide written notification to the Regional Administrator, the Director, and the Commissioner within 3 Days of completing construction of the GAC treatment system pursuant to the approved design. Following receipt of

to Section 4.5.

required to be placed in series with the original columns pursuant such notification, the Regional Administrator, the Director, and the Commissioner shall inspect the system and Reilly shall demonstrate that the system has been constructed and operates in accordance with the approved design. This inspection shall not include demonstration of system performance, which is addressed by Section 4.1.5.

4.1.5. Testing

Within 60 Days of completing construction, Reilly shall perform a two-week test of the GAC treatment system and submit a report to the Regional Administrator, the Director, and the Commissioner on the results of this test. During the testing period, treated water from the GAC system shall be discharged to a storm sewer and the system shall be Monitored as required by Section 4.3. below. The test report shall identify any changes in the as-installed design from the approved design and shall include the following data from the test period: analytical results for all Monitoring samples, system flow rates, pressure readings, observations of the operators, and any other information pertinent for evaluating the performance of the GAC treatment system.

4.1.6. Approval

Following inspection of the treatment system and submission of the testing report pursuant to Sections 4.1.4. and 4.1.5., respectively, the Regional Administrator, the Director, and the Commissioner, in accordance with Part G of

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the Consent Decree, shall notify Reilly in writing as to whether the treatment system is approved or disapproved. For purposes of this Section 4.1.6., the Regional Administrator, the Director, and the Commissioner shall determine whether the treated water meets all Drinking Water Criteria or Advisory Levels through application of the statistical test specified in Section 4.6. When Reilly receives notice that the treatment system is approved, Reilly shall operate and Monitor the system in accordance with Sections 4.2. and 4.3. below.

4.2. Operation and Maintenance

4.2.1. Operating Rate

Reilly shall operate wells SLP 10 and/or SLP 15 and the GAC treatment system at a minimum annual pumping rate of 200 million gallons per year, with a minimum pumping rate of 10 million gallons in any calendar month, once the GAC system has achieved routine operation pursuant to Section 4.3.1.(B). Reilly shall not restrict St. Louis Park's use of these wells up to the maximum flow rate of the GAC treatment system. 4.2.2. Operating Period

Reilly shall operate the GAC treatment system whenever wells SLP 10 and/or SLP 15 are used to supply St. Louis Park's potable water distribution system until such time as the Regional Administrator and Director approve discontinuing use of the system pursuant to Section 4.4. below.

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4.2.3. Maintenance

Reilly shall maintain the GAC system in good working condition as required to achieve reliably treated water that meets the Drinking Water Criteria, as determined by the Monitoring required by Section 4.3. below.

4.2.4. Operation and Maintenance Plan

Within 180 Days of receipt of approval of the design, Reilly shall submit a plan to the Regional Administrator, the Director and the Commissioner for the operation and maintenance of the GAC treatment system. The Regional Administrator, the Director, and the Commissioner shall review the plan in acordance with Part G of the Consent Decree.

4.2.5. Carbon Disposal

Reilly shall transport and dispose of or provide for the regeneration of spent carbon from the GAC treatment system in accordance with Part T of the Consent Decree.

4.3. Monitoring

4.3.1. Treated Water

Treated water from the GAC system shall be Monitored as follows:

(A) During the testing period prior to hookup, Reilly shall Monitor three times per week. Reilly shall also collect a field blank sample corresponding to each treated water sample.

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- During the first month following approval of the (B) system and connection to the St. Louis Park drinking water distribution system, Reilly shall Monitor weekly and submit the results to the Regional Administrator, the Director and the Commissioner in accordance with Section 2.8. Thereafter, Reilly shall Monitor monthly as described in (C) below. In accordance with Part G or H of the Consent Decree, the Regional Administrator, the Director and the Commissioner either (1) shall determine that the system is operating properly and authorize Reilly to continue the routine Monitoring frequency described in (C) below: or (2) if the determination is made that the results do not indicate proper operation of the system, shall require Reilly to resume weekly Monitoring for a period not to exceed two months or to remove the GAC system from the distribution system and conduct further testing of the system, modification of the system, or other action as required by the Regional Administrator, the Director and the Commissioner.
- (C) Routine Monitoring shall be monthly until the carbon has been replaced twice. If any Advisory

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Level or Drinking Water Criterion is exceeded during the first year of operation of the system, Reilly shall immediately notify the Regional Administrator, the Director, and the Commissioner, and shall undertake such additional Monitoring as is required by Section 4.3.2.

(D) Routine Monitoring after two carbon changes shall be quarterly, unless the Regional Administrator, the Director, and the Commissioner determine that the observed service life of the carbon is too short to permit this frequency, in which case the Regional Administrator, the Director and the Commissioner shall notify Reilly of the required Monitoring frequency in accordance with Part G or H of the Consent Decree.

4.3.2. Carbon Replacement Monitoring

(A) If the analytical results from any treated water sample obtained pursuant to Section 4.3.1. exceed the Drinking Water Criterion for Other PAH or exceed the Advisory Level for either Carcinogenic PAH or the sum of tenzo(a)pyrene and ditenz(a,h)anthracene, then Reilly shall collect two additional treated water samples at least 2 Days apart within one week of receiving the results of the exceedance sample. If the

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analytical results from either one or both of the two additional samples also exceed the Drinking Water Criterion for Other PAH or the Advisory Level for either Carcinogenic PAH or the sum of benzo(a)pyrene and dibenz(a,h)anthracene, and neither of the conditions specified in (C)(1) and (2) below are met, then the carbon shall be replaced within 21 Days of receiving the additional sample results.

- (B) If the analytical results from any treated water sample obtained pursuant to Section 4.3.1. exceed the Advisory Level for Other PAH, then Monitoring of treated water shall be conducted immediately according to Section 12.1. If the results of any two samples required by Section 12.1. exceed the Drinking Water Criterion for Other PAH, and neither of the conditions specified in (C)(1) and (2) telow are met, then the carbon shall be replaced within 21 Days of receiving the additional sample results.
- (C) If any analytical result from the additional samples taken as required by (A) or (B) above exceeds the Drinking Water Criterion for Other PAH, or the Advisory Level for either Carcinogenic PAH or the sum of benzo(a)pyrene and dibenz(a,h)anthracene during either

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- (1) within one year after the carbon treatment
 system is placed into service or
- (2) within one year after the first carbon change if carbon was changed in the first year of operation of the carbon treatment system,

then Reilly shall conduct the Monitoring program specified in Section 4.6. Reilly shall report the results of the Section 4.6. Monitoring program to the Regional Administrator, the Director and the Commissioner within 7 Days of receiving the analytical data. If the treated water from the carbon treatment system is determined pursuant to Section 4.6. to exceed the Drinking Water Criterion for Other PAH or the Advisory Levels for Carcinogenic PAH or the sum of benzo(a)pyrene and dibenz(a,h)anthracene, then Reilly shall replace the carbon within 14 Days of making this determination. If the treated water is determined pursuant to Section 4.6. to meet the Drinking Water Criterion for Other PAH and the Advisory Levels for Carcinogenic PAH and the sum of benzo(a)pyrene and dibenz(a,h)anthracene, then normal GAC system operation and Monitoring in accordance with Sections 4.3.1.(B) and

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4.3.1(C). shall be resumed. Time computation under (1) and (2) above shall be measured from the date the sample was collected, not from the date on which analytical results from the sample were generated.

- (D) Following replacement of carbon, treated water shall be Monitored weekly for one month and in accordance with the Monitoring requirements of Section 4.3.1. thereafter.
- (E) If exceedance of the Drinking Water Criterion for Other PAH or an Advisory Level for either Carcinogenic PAH or the sum of benzo(a)pyrene and dibenz(a,h)anthracene is confirmed, the Commissioner may direct that wells SLP 10 and/or SLP 15 be removed from active service until the carbon is replaced.

4.3.3. Feed Water

Feed water to the GAC system (i.e. water treated by the existing pressure sand filters) shall be Monitored at the same time as treated water from the GAC system is Monitored at the following intervals:

- (A) During the testing period prior to hookup, feed water shall be Monitored twice per week.
- (B) During the first month after connection to the distribution system, feed water shall be Monitored biweekly.

- (C) After the first month of operation, Monitoring of feed water shall be performed quarterly until the carbon has been changed twice. If the Regional Administrator, the Director and the Commissioner determine pursuant to Section 4.3.1.(B) that the GAC system is not operating properly, Reilly may, upon receipt of such determination, be required to resume biweekly Monitoring of feed water.
- (D) After two carbon changes in the GAC system, feed water shall be Monitored annually.

4.3.4. Extended Monitoring

Treated water from the GAC system shall be sampled and analyzed annually for the extended list of PAH in Part A.2. of Appendix A, using gas chromatography/mass spectroscopy (GC/MS), or other methods approved by the Regional Administrator and the Director. During this extended analysis, any compounds listed in Part A.2. of Appendix A, or any other compounds which are detected with significant peak heights that are not routinely Monitored, shall be identified and, if possible, quantified, using a mass spectral library which contains extensive spectra of PAH compounds, such as the National Bureau of Standards mass spectral library. Reilly shall analyze a sample of treated or feed water once a year for the acid fraction compounds determined by EPA Test Method 625 or by other methods approved by the Regional Administrator and the Director.

4.3.5. Reporting

By March 15 of each year, beginning in 1987, Reilly shall submit to the Regional Administrator, the Director, and the Commissioner a report of the results of all Monitoring of the GAC treatment system during the previous calendar year. This report shall contain the results of each analysis of feed water to and treated water from the GAC system and of wellhead water from SLP 10 and/or SLP 15, regardless of whether the analyses were required by this RAP. The report shall also describe briefly the operating performance of the GAC system during the previous calendar year.

4.4. <u>Cessation</u>

For purposes of this Section, the cessation criteria are defined as the mean plus one Standard Deviation of at least six consecutive feed water samples collected bimonthly being less than all the Drinking Water Criteria and the mean of such samples being less than the Advisory Levels for Carcinogenic FAH and the sum of benzo(a)pyrene and dibenz(a,h)anthracene. Reilly may submit a request to the Regional Administrator, Director, and the Commissioner documenting that the cessation criteria have been met and requesting that the GAC system operation be ceased. Approval of such a request shall not be unreasonably withheld and any disputes shall be resolved in accordance with Part I of the Consent Decree. Once operation is ceased, the former GAC system feed water (i.e., the effluent from the existing pressure sand filters) shall be Monitored

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quarterly for two years after cessation and annually thereafter, except that this annual feed water monitoring may be omitted where the previous two sample results of wellhead Monitoring at SLP 10 or SLP 15 required by Section 7.3. do not exceed any Drinking Water Criterion. If any results from this post-operation Monitoring exceed any Advisory Level or Drinking Water Criterion, then Monitoring of the former feed water shall be conducted according to Section 12.1. and the GAC system shall be restarted if such Monitoring yields three samples exceeding any Drinking Water Criterion. Nothing in this RAP shall be construed to prevent Reilly or St. Louis Park from operating the GAC treatment system after the cessation criteria have been met.

4.5. Contingent Actions

In the event that the first two carbon replacement intervals are both less than one year, the Regional Administrator and Director may require Reilly to add an additional carbon column(s) in series with the column(s) installed pursuant to Section 4.1. Within 60 Days of receiving such notification Reilly shall submit to the Regional Administrator and Director a design, a construction plan and schedule, an operation plan, and a Monitoring plan for installing and operating additional carbon column(s) in series. Reilly shall construct and operate such additional column(s) in accordance with the design, plans and schedule

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approved by the Regional Administrator and Director in accordance with Part G of the Consent Decree.

4.6. Testing of Compliance

During the test period prior to connecting the carbon treatment system to the municipal distribution system, within the first year of operation and within the first year after the first carbon change (if such change occurs during the first year of operation), the determination of whether treated water from the carbon treatment system meets the Drinking Water Criterion for Other PAH and the Advisory Levels for Carcinogenic PAH and the sum of benzo(a)pyrene and dibenz(a,h)anthracene shall be based on the following testing procedures: within ten Days of receiving analytical results of Monitoring pursuant to Section 4.3.2.(C) indicating that special Monitoring pursuant to this Section 4.6 is required, Reilly shall collect at least four and no more than six samples of treated water on at least four and no more than six successive days and shall collect a field blank sample corresponding to each treated water sample. The samples shall be analyzed for Carcinogenic PAH and Other PAH in accordance with procedures developed and approved pursuant to Section 3.2 with analytical results to be provided in 21 Days or less pursuant to Section 2.8. The analytical values so obtained shall be subjected to the following statistical test to determine whether the treated water exceeds the Drinking Water Criterion for Other PAH or the Advisory Levels for Carcinogenic

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PAH or the sum of benzo(a)pyrene and dibenz(a,h)anthracene:

if t_m,0.95 <
$$\frac{x_{s,\bar{i}} - x_{b,\bar{i}} - c_{i}}{((s_{s,\bar{i}} + s_{b,\bar{i}})/n)^{1/2}}$$

then treated water from the carbon treatment system shall be determined to have exceeded the applicable Drinking Water Criterion or Advisory Levels, where:

n = number of sample events

t_m,0.95 = Student's t-test statistic for m degrees of freedom and a probability of 0.95

m = th	e clos	sest integer	to the	value of:	
(n-1)	1 +		2		_
			i) ² + (:	$s_{b,i}/s_{s,i})^2$	
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 $\overline{X}_{s,i}$ = mean the treated water samples for value i $\overline{X}_{b,i}$ = mean of the blank samples for value i

 $S_{s,i}$ = Standard Deviation of $\overline{X}_{s,i}$

 $S_{b,i} = Standard Deviation of \overline{X}_{b,i}$

i

- C_i = Drinking Water Criterion for Cther PAH, Advisory Level for Carcinogenic PAH, or Advisory Level for the sum of benzo(a)pyrene and dibenz(a,h)anthracene
 - the sum of Other PAH compounds, the sum of Carcinogenic PAH compounds, or the sum of benzo(a)pyrene and dibenz(a,h)anthracene.

MOUNT SIMON-HINCKLEY AQUIFER

5.1. Monitoring

Within 180 Days of the Effective Date, Reilly shall Monitor SLP 11, 12, 13 and 17, and these wells shall be Monitored annually thereafter.

5.2. Thirtieth Year Evaluation.

Reilly, the State and the United States presently share the opinion that migration of Contamination from the Site to SLP 11, 12, 13, or 17 will take substantially longer than 30 years, if it occurs at all. However, for purposes of assuring the continued protection of municipal drinking water wells in this aquifer and for the purposes of Parts BB.7. and BB.8. of the Consent Decree, it is agreed as follows: by the thirtieth anniversary of the Effective Date, the United States, the State, and Reilly shall reevaluate for the Mt. Simon-Hinckley aquifer the Monitoring program; contingent action program, including any contingent actions implemented; and any new information available. Accordingly, Reilly shall within six months of the thirtieth anniversary submit a plan to the Regional Administrator and Director to accomplish the purposes specified above. Such plan may include financial guarantees which assure funding for implementation of remedial actions in this aquifer whenever needel. The Regional Administrator and Director shall review the plan under Part G of the Consent

5.

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Decree. After approval of the plan, Reilly shall implement the plan or, if Reilly desires to terminate the Consent Decree in accordance with Parts BB.7. and BB.8., Reilly shall assure its implementation through financial guarantees.

5.3. Contingent Actions

5.3.1. Existing Wells

If the analytical result of any Monitoring required by Section 5.1. above is greater than any Advisory Level or Drinking Water Criterion for Carcinogenic PAH, the sum of benzo(a)pyrene and dibenz(a,h)anthracene, or Other PAH, Reilly shall comply with the applicable requirements of Section 12. 5.3.2. New Wells

If any municipal drinking water supply well which withdraws water from the Mt. Simon-Binckley aquifer is installed within one mile of W23, Reilly shall, following receipt of notification by the Commissioner of installation of the well, Monitor the well at the time of its installation and annually thereafter. If the analytical result of any Monitoring as required above is greater than any Advisory Level or Drinking Water Criterion for Carcinogenic PAH, the sum of benzo(a)pyrene and dibenz(a,h)anthracene, or Other PAH, Reilly shall comply with the applicable requirements of Section 12.

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IRONTON-GALESVILLE AQUISER

5.

6.1. Source Control at W105

6.1.1. Plan

Within 60 Days of the Effective Date, Reilly shall submit to the Regional Administrator and Director a plan to use W105 as a pumping well with an untreated discharge to the sanitary sever. At the same time, Reilly shall submit to the MWCC an application for a sanitary sever discharge permit, and shall submit to the Commissioner of Natural Resources an application for a water appropriation permit.

6.1.2. Construction

Within 60 Days of receiving the permits specified in Section 6.1.1. above and receiving approval pursuant to Part G of the Consent Decree, whichever is later, Reilly shall complete installation of a pump and piping necessary for connection of W105 to the sanitary sever.

6.1.3. Pumping

Within 5 Days of completing construction as specified in Section 6.1.2. above, Reilly shall commence pumping W105 at a monthly average rate of 25 gallons per minuty.

6.1.4. Monitoring

Reilly shall Monitor W105 quarterly for the first year of pumping and biannually thereafter. Water levels in W105 and W38 (the Milwaukee Road well) shall be measured by Reilly each time W105 is sampled.

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6.1.5. Cessation

The criterion for cessation of pumping W105 is defined as the mean plus one Standard Deviation of at least four consecutive samples collected quarterly being less than 10 micrograms per liter Total PAH. Nothwithstanding this cessation criterion, the well shall be punped for a minimum of two years. Reilly may submit a request to cease pumping W105 to the Regional Administrator and Director with the data required to document compliance with the cessation criterion. Review of the request shall be in accordance with Furk 7 of the Consent Decree and approval shall not be unreasonably withheld. Reilly shall Monitor W105 quarterly for the first year after pumping is stopped and biannually thereafter. If any result of such continued Monitoring shows Total PAH greater than 10 micrograms per liter, Reilly shall collect two additional samples within one month of the first result. If either of the two additional samples exceeds 10 micrograms per liter Total PAH, then Reilly shall restart pumping of W105 as required by Sametion 6.1.3. Nothing in this RAP shall be construed to prevent Reilly or St. Louis Park from pumping W105 after the cessation criterion is met.

6.2. Contingent Actions

6.2.1. Contingent Additional Monitoring or Remedial Action

If any municipal drinking water supply well which withdraws water from the Ironton-Galesville aquifer is

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installed within one mile of W23, Reilly shall, following receipt of notification by the Commissioner of installation of the well, Monitor the well at the time of its installation and annually thereafter. If the analytical result of any Monitoring as required above is greater than any Advisory Level or Drinking Water Criterion for Carcinogenic PAH, the sum of benzo(a)pyrene and dibenz(a,h)anthracene, or Other PAH, Reilly shall comply with the applicable requirements of Section 12. 6.2.2. Reinbursement for Additional Expenses

In the event any person who submits plans to the MDH for installation of a new well in St. Louis Park or Hopkins in the Mt. Simon-Binckley aquifer is required by the MDH to safeguard against the spread of Contamination from the Ironton-Galesville to the Mt. Simon-Binckley aquifer through the use of measures such as additional casings or larger drill holes, Reilly shall upon receipt of notice from the Commissioner pay this person the incremental costs incurred for complying with the requirements of the MDH.

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PRAIRIE DU CHIEN-JORDAN AQUIFER

7.1. Source Control At W23

7.1.1. Plan

Within 60 Days of the Effective Date, Reilly shall submit to the Regional Administrator, the Director and the Dommissioner a plan to reconstruct W23 as a pumping well with an untreated discharge to the sanitary sever. At the same time, Reilly shall submit to the MWCC an application for a sanitary sever discharge permit, and shall submit to the Commissioner of Natural Resources an application for a water appropriation permit.

7.1.2. Construction

Within 60 Days of receiving permits specified in Section 7.1.1. above and receipt of approval pursuant to Part G of the Consent Decree, whichever is later, Reilly shall complete construction of W23 as a Prairie du Chien-Jordan pumping well and of piping necessary for connection of W23 to the sanitary sever.

7.1.3. Pumping

Within 5 Days of completing construction as specified in Section 7.1.2., Reilly shall commence pumping W23 at a monthly average rate of 50 gallons per minute.

7.

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7.1.4. Cessation

The criterion for cessation of pumping W23 is defined as the mean plus one Standard Deviation of at least six consecutive samples collected bimonthly being less than 10 micrograms per liter Total PAH. Notwithstanding this cessation criterion, the well shall be pumped for a minimum of five years. Reilly may submit a request to cease pumping W23 to the Regional Administrator and Director with the data required to document compliance with the cessation criterion. Review of the request shall be in accordance with Part G of the Consent Decree and approval shall not be unreasonably withheld. Reilly shall Monitor W23 quarterly for the first year after pumping is stopped and semiannually thereafter. If any result of such continued Monitoring shows Total PAH greater than 10 micrograms per liter, Reilly shall collect two additional samples within one month of the first result. If either of the two additional samples exceeds 10 micrograms per liter Total PAH, then Reilly shall restart the pumping of W23 as required by Section 7.1.3. Nothing in this RAP shall be construed to prevent Reilly or St. Louis Park from pumping W23 after the cessation criterion is met.

7.2. Gradient Control

7.2.1. Feasibility Study Plan

Within 30 Days of the Effective Date, Reilly shall submit to the Regional Administrator and Director a plan for a

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feasibility study for discharge of 1,000 gallons per minute of water from SLP 4. This study shall examine the feasibility of discharging water from SLP 4 to surface waters, and shall include consultation with governmental entities responsible for the management of the surface water bodies which are considered. The Regional Administrator and Director shall review the plan for this study in accordance with Part G of the Consent Decree.

7.2.2. Feasibility Study Results

Within 90 Days of receiving approval of the feasibility study plan, Reilly shall submit to the Regional Administrator and Director a report summarizing the results of the study referenced in Section 7.2.1. above, and which contains recommendations for disposition of water pumped from SLP 4 for gradient control. The Regional Administrator and Director shall review the study in accordance with Part G of the Consent Decree. At the same time, Reilly shall submit an application for an NPDES permit for a discharge from SLP 4. The Director shall draft and notice the NPDES permit in accordance with Section 2.5.

7.2.3. Treatment

Within 30 Days of the date of receipt of the required NPDES permit, if treatment of the effluent from SLP 4 will be required in order to meet effluent limitations specified in the NPDES permit for PAH or Phenolics, Reilly shall submit to the

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Regional Administrator and Director a plan for treatment of the effluent in order to meet effluent limitations. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree.

7.2.4. Completion

Within 60 Days of the date of receipt of the required NPDES permit, Reilly shall complete connection of SLP 4 to the point of discharge, unless the NPDES permit issued for this discharge requires treatment of the discharge, in which event Reilly shall complete installation of the treatment system and connection of SLP 4 to the point of discharge within 120 Days of the date of receipt of the NPDES permit or receipt of approval of the plan required by Section 7.2.3., whichever is later.

7.2.5. Gradient Control Monitoring Wells

Within 30 Days of submitting the report on the feasibility study required by Section 7.2.2., Reilly shall submit to the Regional Administrator, the Director and the Commissioner a plan for construction or reconstruction of three monitoring wells. The wells, which shall be designated by the project numbers indicated in brackets below, shall be completed in the Prairie du Chien-Jordan aquifer and shall have a minimum diameter of four inches. The wells shall be located near the following locations (these are locations of parks or golf courses): the terminus of Homedale Avenue south of Goodrich

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Street in Hopkins (Interlachen Park) [W401]; Colgate and Drew Avenues in Minneapolis (Waveland Park) [W402]; and France Avenue at West 38th Street in Minneapolis (W403). The plan may substitute existing wells located within 2,500 feet of the locations specified for these new wells, provided that the plan includes the results of an investigation of these alternative wells which shows that they are presently in, or can be upgraded to, a condition capable of producing water level and water quality information representative of only the Prairie du Chien and Jordan formations, and that they will be accessible for Monitoring and water level measurements at the required intervals. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree. Within 10 Days following receipt of approval of the plan by the Regional Administrator, the Director and the Commissioner, Reilly shall submit applications for any necessary permits.

7.2.6. Completion of Well Construction

Within 60 Days of receipt of all permits pursuant to Section 7.2.5., Reilly shall complete construction or reconstruction of the wells approved pursuant to Section 7.2.5. 7.2.7. Operation

Within 5 Days of completing connection of SLP 4 to a permitted surface water discharge, Reilly shall commence operation of the gradient control system, and shall pump SLP 4

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at its capacity (900 gallons per minute or as near as practicable) from October through April and 300 gallons per minute from May through September. The pumping rate may be adjusted upward or downward by as much as 250 gallons per minute upon agreement of St. Louis Park, Reilly, the Director, and the Regional Administrator.

7.2.8. Use of SLP 4 for Drinking Water Supply

Reilly or St. Louis Park may request that the Commissioner declare suitable all or portions of the discharge from SLP 4 for use in St. Louis Park's potable water distribution system at any time (1) after Reilly has submitted to the Regional Administrator, the Director and the Commissioner plans for a treatment system at SLP 4 capable of treating water to below each of the Drinking Water Criteria as defined in Section 2.2., and these plans have been approved pursuant to Part G of the Consent Decree; or (2) after Reilly has provided the Commissioner with documentation that the mean plus one Standard Deviation of at least six consecutive samples collected bimonthly is less than each of the Drinking Water Criteria. The Commissioner shall not unreasonably withhold approval of such a request. Notwithstanding such use of SLP 4, Reilly shall continue to pump the well at the rate required by Section 7.2.7. until the requirements of Section 7.2.9. are met. 7.2.9. Cessation

Reilly may submit a request to the Regional Administrator and Director to cease operating SLP 4 as a

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gradient control well when Monitoring results obtained pursuant to Section 7.3. at SLP 4 and at all wells which are north of an imaginary east-west line through W48, including W48 but excluding W23, are less than each of the Drinking Water Criteria for PAH for two consecutive years. Notwithstanding this cessation criterion, SLP 4 shall be pumped for a minimum of five years. Reilly may submit a request to cease pumping SLP 4 to the Regional Administrator and Director with data required to document compliance with the cessation criteria. Review of the request shall be in accordance with Part G of the Consent Decree and approval of such a request shall not be unreasonably withheld. Nothing in this RAP shall be construed to prevent Reilly or St. Louis Park from operating the gradient control system after the cessation criterion is met.

7.3. Monitoring

Reilly shall Monitor wells in the Prairie du Chien-Jordan aquifer in accordance with a sampling plan submitted to and approved by the Regional Administrator and the Director as specified by Section 3. Except as otherwise approved by the Regional Administrator and Director in accordance with Part G of the Consent Decree, sampling plans for the Prairie du Chien-Jordan aquifer shall provide for Monitoring and water level measurements in the following wells as indicated:

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- (A) Prairie du Chien-Jordan gradient control wells (as set forth in Section 7.2. above and Section 7.4.1. below) shall be Monitored quarterly for the first year of pumping and semiannually thereafter, or as required by the NPDES permit, whichever is more frequent.
- (B) W23 shall be Monitored quarterly for the first year of pumping, and semiannually thereafter.
- (C) The following wells shall be Monitored quarterly for five years from the Effective Date, and annually thereafter:
 - (i) W48
 - (ii) SLP 6
 - (iii) SLP 7 or 9
- (D) The following wells shall be Monitored semiannually for the first five years from the Effective Date, and annually thereafter:
 - (i) American Hardware Mutual or MinikahdaGolf Course
 - (ii) Edina municipal well 2
 - (iii) Edina municipal well 13
 - (iv) Hopkins municipal well 3
 - (v) SLP 10 or 15
 - (vi) SLP 14
 - (vii) SLP 16

(viii)	W402 or	substitute	well	pursuant	to
	Section	7.2.5.			

- (ix) W403 or substitute well pursuant to Section 7.2.5.
- (x) W119
- (E) The following wells shall be Monitored annually:

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- (i) SLP 5
- (ii) Hopkins municipal well 6
- (iii) Edina municipal well 3
- (iv) Edina municipal well 15
- (v) Minnetonka municipal well 6
- (vi) W29
- (vii) W40
- (viii) W70
- (ix) W401 or substitute well pursuant to Section 7.2.5.
- (F) Water levels shall be measured quarterly for five years from the Effective Date and semiannually thereafter at all wells specified in (A) through
 (E) above, except for those wells which prove to be inaccessible for such measurements, and at the following wells:
 - (i) W112
 - (ii) W32
 - (iii) SLP8

- (iv) SLP10
- (v) Edina municipal well 4
- (vi) Edina municipal well 7
- (G) Municipal drinking water supply wells listed in Paragraphs (C), (D), and (E) above shall be Monitored prior to any treatment in place at the well.

7.4. Contingent Actions

7.4.1. Gradient Control System Modification

The Regional Administrator and Director shall review all Monitoring and other data pertinent to the operation of the gradient control well system described in this Section 7 and. at any time after sufficient information is obtained on the distribution of Contaminants and performance of the gradient control system, may notify Reilly that it must submit a plan for gradient control system modification in order to prevent the spread of ground water exceeding any of the Drinking Water Criteria defined in Section 2.2. These modifications may include alteration of specified pumping at gradient control wells, additional gradient control wells or returning to service former gradient control wells. With the plan required by this Section, Reilly shall submit proposed cessation criteria consistent with the objective of attaining each of the Drinking Water Criteria defined in Section 2.2. in the Prairie du Chien-Jordan aquifer for the capture area(s) of any new

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gradient control well(s) which it proposes. In its plan, Reilly may consider the feasibility of utilizing higher pumping rates at nearby existing industrial or commercial wells if , possible. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree. Reilly shall obtain such permits as may be necessary in order to implement any such gradient control system modifications. 7.4.2. W48 Pumping Rate

If changes in the rate of usage of ground water from W48 result in a significant reduction in the pumping rate, Reilly shall use its best effort to ensure that the pumping rate is maintained at levels adequate to maintain effective operation of the gradient control system. This may include obtaining an access agreement pursuant to Part P of the Consent Decree. If Reilly is unable to make such arrangements, the Regional Administrator and Director shall assess the effect of diminution of this pumping stress, and may use their authority under statutes and regulations they administer to maintain the pumping rate or may require gradient control system modifications pursuant to Section 7.4.1.

7.4.3. Treatment

If the concentration of Carcinogenic PAH, Other PAH, phenanthrene or Phenolics measured at SLP 4, W48, or any other gradient control well installed in accordance with Section 7.4.1. above exceed the applicable NPDES permit discharge

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limitations for Carcinogenic PAH, Other PAH, Phenolics or phenanthrene, Reilly shall immediately undertake a sampling program at the affected well. This program shall consist of at least six samples taken one week apart. Upon completion of this program, Reilly shall submit all results to the Regional Administrator and Director. If the mean of these samples exceeds the applicable NPDES permit discharge limitation, Reilly shall within 90 Days of submitting the test program results submit a plan for construction and operation of a treatment system at the affected well. The plan shall be reviewed by the Regional Administrator and Director in accordance with Part G of the Consent Decree. Following receipt of approval of this plan, Reilly shall install the treatment system and shall operate the system until the results of one year of quarterly Monitoring of untreated water at the affected well meet the applicable surface water discharge criteria. Reilly may then request authorization to discontinue treatment from the Regional Administrator and Director. The Regional Administrator and the Director shall review the request pursuant to Part G of the Consent Decree. 7.4.4. Contingent Additional Monitoring or Remedial Action

If the analytical result of Monitoring of any active municipal water supply well as required by Section 7.3. above is greater than any Advisory Level or Drinking Water Criterion for Carcinogenic PAH, the sum of benzo(a)pyrene and

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dibenz(a,h)anthracene, or Other PAB, Reilly shall comply with the applicable requirements of Section 12.

7.5. Hopkins Municipal Well 3

This RAP shall not be construed to prevent the Commissioner from permitting Hopkins municipal well 3 to be returned to service at any time after the GAC treatment system, Prairie du Chien-Jordan source control well, and Prairie du Chien-Jordan gradient control well required by Sections 4, 7.1. and 7.2. of this RAP, respectively, have all been in operation for a period of five years, provided that the water to be added to the distribution system from this well meets each of the Drinking Water Criteria defined in Section 2.2. and is Monitored in accordance with Sections 3, 7.3. and 12.1. of this RAP.

ST. PETER AQUIFER

8.1. Remedial Investigation

8.1.1. Remedial Investigation Plan

Within 30 Days of the Effective Date, Reilly shall submit to the Regional Administrator, the Director and the Commissioner, a plan for sampling wells and for installation of five new monitoring wells to determine the nature and extent of Contamination in the St. Peter aquifer. The plan shall specify well location and design. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree. 8.1.2. Monitoring Well Construction

Within 120 Days of receiving approval pursuant to Part G of the Consent Decree, Reilly shall complete construction of the new monitoring wells.

8.1.3. Monitoring

Within 30 Days of completing the monitoring wells pursuant to Section 8.1.2., Reilly shall collect samples for PAH Monitoring and measure water levels at the five new monitoring wells and at W14, W24, W33, W122, W129, W133, P116, and SLP 3. Well SLP 3 and at least six other St. Peter wells shall be re-sampled for PAH Monitoring within 6 months of the first sampling round, and again within 12 months of the first sampling round.

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8.1.4. Remedial Investigation Report

Within 90 Days of completing the second Monitoring round pursuant to Section 8.1.3. above, Reilly shall submit to the Regional Administrator and Director a report that summarizes the results of the St. Peter remedial investigation. 8.2. Feasibility Study

8.2.1. Feasibility Study Plan

Upon completion of the remedial investigation report required by Section 8.1., the Regional Administrator and the Director may determine pursuant to Part H of the Consent Decree that a feasibility study is required of potential remedial actions for the St. Peter aquifer. Reilly shall submit a plan for a feasibility study to the Regional Administrator and Director within 30 Days of receiving notice pursuant to Part H, that a feasibility study is required. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree.

8.2.2. Feasibility Study Report

Reilly shall submit a report to the Regional Administrator and Director on the results of the St. Peter feasibility study within 90 Days of receiving approval of the feasibility study plan. The report shall identify and evaluate remedial action alternatives for controlling the spread of water in the St. Peter aquifer that exceeds any of the Drinking Water Criteria defined in Section 2.2., including alternative gradient control well systems identified in Section 8.3. and the alternative of continued Monitoring of the St. Peter.

8.3. <u>Remedial Actions</u>

Upon completion of the feasibility study required by Section 8.2. above, the Regional Administrator and Director 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 two gradient control wells. Reilly shall submit to the Regional Administrator and Director within 90 Days of receipt of such notification a plan for a gradient control system, including proposed cessation criteria consistent with the purpose of preventing the further spread of ground water exceeding any of the Drinking Water Criteria defined in Section 2.2. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree. Reilly shall implement the plan as approved by the Regional Administrator and Director.

8.4. Contingent Actions

If the analytical result of Monitoring any active drinking water well in the St. Peter aquifer is greater than any Advisory Level or Drinking Water Criterion for Carcinogenic PAH, the sum of benzo(a)pyrene and dibenz(a,h)anthracene, or Other PAH, Reilly shall comply with the applicable requirements of Section 12.

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DRIFT AND PLATTEVILLE AQUIFERS

9.

9.1. Source Control

9.1.1. Plan

Within 60 Days of the Effective Date, Reilly shall submit to the Regional Administrator and Director a plan for installing a source control well system in the Drift-Platteville aquifer. The plan shall specify:

- (A) the location, design, and operation of two source control wells, one completed in the Drift and one in the Platteville, each located within 500 feet downgradient of monitoring well W13, and each capable of controlling the flow of ground water from beneath an area defined by Walker Street on the north, Temporary Louisiana Avenue on the east, Lake Street and South Frontage Street Extension on the south, and a north-south line extending from the intersection of Walker Street and West 37th Street on the west;
- (B) the location and design of piping to connect the discharge of the two source control wells to the sanitary sewer; and
- (C) the procedures to be used in conducting a pumping test at each well, using at least two observation wells per test.

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At the same time, Reilly shall submit to the MWCC an application for a sanitary sewer discharge permit and shall submit to the Commissioner of Natural Resources an application for a water appropriation permit. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree.

9.1.2. Construction

Within 120 Days of receiving all necessary permits and approval of the plan as specified in Section 9.1.1., whichever occurs last, Reilly shall complete all construction and testing in accordance with the approved plan and shall submit a report to the Regional Administrator and Director which presents logs for the well installations, results of the pump tests, and any field adjustments to the approved design.

9.1.3. Operation and Monitoring

Within 10 Days of completing construction as specified in Section 9.1.2., Reilly shall begin to pump each source control well at a monthly average rate of 25 gallons per minute with discharge to the sanitary sewer. Reilly shall Monitor the discharge from each well guarterly for PAH and Phenolics.

9.1.4. Cessation

Reilly may submit a request to the Regional Administrator and Director to cease operating the Drift-Platteville source control system installed in accordance with Sections 9.1.2. and 9.1.3. when the Drift-Platteville

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source control system is no longer required to control the source of Contamination in the area defined in Section 9.1.1.(A). Notwithstanding the foregoing, Reilly shall operate the Drift-Platteville source control system for at least five years. Review of a request to cease operating the Drift-Platteville source control system shall be in accordance with Part G of the Consent Decree and approval shall not be unreasonably withheld.

9.2. Gradient Control

9.2.1. Plan

Within 60 Days of the Effective Date, Reilly shall submit to the Regional Administrator and Director a plan for installing a gradient control well system in the Drift-Platteville aquifer. The plan shall specify:

- (A) the location, design, and operation of a gradient control well completed in the Drift located within 500 feet of monitoring well W12;
- (B) the location and design of piping to connect the discharges of the gradient control well to the sanitary sever; and
- (C) the procedures to be used in conducting a pumping test at this well, using at least two observation wells per test. At the same time, Reilly shall submit to the MWCC an application for a sanitary sewer discharge permit and shall submit to the

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Commissioner of Natural Resources an application for a water appropriation permit. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree.

9.2.2. Construction

Within 120 Days of receiving all necessary permits and approval of the plan as specified in Section 9.2.1., whichever occurs last, Reilly shall complete all construction and testing in accordance with the approved plan and shall submit a report to the Regional Administrator and Director which presents the log for the well installation, results of the pump tests, and any field adjustments to the approved design.

9.2.3. Operation and Monitoring

Within 10 Days of completing construction as specified in Section 9.2.2., Reilly shall begin to pump the gradient control well at a monthly average rate of 50 gallons per minute with discharge to the sanitary sewer. Reilly shall Monitor the discharge from the well quarterly for PAH and Phenolics. 9.2.4. Cessation

Reilly may submit a request to the Regional Administrator and Director to cease operating the Drift-Platteville gradient control system installed in accordance with Sections 9.2.2. and 9.2.3. when the Drift-Platteville gradient control system is no longer required to limit the spread of Contamination into the area delineated

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by the buried bedrock valley as mapped by Hult and Schoenberg in USGS Water Supply Paper 2211, Plate 2. Review of the request shall be in accordance with Part G of the Consent Decree and approval shall not be unreasonably withheld. Notwithstanding the foregoing, Reilly shall operate the Drift-Platteville gradient control system for at least five years.

9.3. Northern Area Remedial Investigation

9.3.1. Remedial Investigation Plan

Within 60 Days of the Effective Date, Reilly shall submit to the Regional Administrator, the Director and the Commissioner a plan for installing additional monitoring wells in the Drift-Platteville aquifer to further define the nature and extent of Contamination. The plan shall specify six wells completed in the Drift or Platteville aquifers within an area 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 Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree.

9.3.2. Monitoring Well Construction.

Within 60 Days of receiving approval pursuant to Part G of the Consent Decree, Reilly shall complete construction of the new monitoring wells.

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9.3.3. Monitoring

Within 30 Days of completing the monitoring wells pursuant to Section 9.3.2., Reilly shall collect samples for PAH and Phenolics Monitoring and measure water levels at the new monitoring wells and at wells W136 and W131. These wells shall be re-sampled for PAH and Phenolics Monitoring within 6 months of the first sampling round. The Regional Administrator, the Director and the Commissioner may request that one or more of the samples collected during the first and/or second sampling rounds be subjected to an expanded analysis instead of PAH and Phenolics. The expanded analysis shall include the following priority pollutant categories: volatiles, acids, base/neutrals and metals (40 CFR Part 122, Appendix D); plus ammonia, chloride, sodium and sulfate. For every such sample that is subjected to an expanded analysis instead of PAH and Phenolics, one sample for PAH and Phenolics Monitoring during the first year after the Effective Date, pursuant to Section 9.6., shall be eliminated. 9.3.4. Remedial Investigation Report

Within 90 Days of completing the second Monitoring round pursuant to Section 9.3.3. above, Reilly shall submit to the Regional Administrator and Director a report that summarizes the results of the Drift-Platteville remedial investigation. The actions taken to conduct and report on the expanded analyses under Sections 9.3.3. or 9.3.4. do not

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themselves constitute adequate response measures within the meaning of Parts U.5.a., U.5.b., U.6.a. or U.6.b. of the Consent Decree.

9.4. Northern Area Feasibility Study

9.4.1. Feasibility Study Plan

Within 30 Days of completion of the remedial investigation required by Section 9.3., Reilly shall submit a plan for a feasibility study to the Regional Administrator and Director. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree. 9.4.2. Feasibility Study Report

Reilly shall submit a report on the results of the Drift-Platteville feasibility study within 90 Days of receiving approval of the feasibility study plan. The report shall identify and evaluate remedial action alternatives for limiting the further spread of Contamination located within the area defined in Section 9.3.1. above, including alternative gradient control well systems identified in Section 9.5. and the alternative of continued Monitoring of the Drift-Platteville.

9.5. Northern Area Remedial Actions

9.5.1. Implementation

Upon completion of the feasibility study required by Section 9.4. above, the Regional Administrator and Director may, for the purpose of limiting the further spread of Contamination located within the study area defined in Section

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9.3.1. above, require Reilly to implement a remedy of installing and operating one or more gradient control wells. Reilly shall submit to the Regional Administrator and the Director within 90 Days of receipt of such notification a plan, including Monitoring, for such remedy. With the plan required by this Section, Reilly shall submit proposed cessation criteria consistent with the purpose of limiting the spread of Contamination located within the study area described in Section 9.3.1. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree. Reilly shall implement the plan as approved by the Regional Administrator and Director.

9.5.2. Cessation

Reilly may submit a request to the Regional Administrator and Director to cease operating the Northern Drift-Platteville area remedy approved in accordance with Section 9.5.1. when operation of this remedy is no longer required to limit the spread of Contamination located within the study area described in Section 9.3.1. Review of the request shall be in accordance with Part G of the Consent Decree and approval shall not be unreasonably withheld.

9.6. Monitoring

The annual sampling plan required by Sections 3.2., 3.3 and 3.4. shall be designed to assess changes in the extent of Contamination and to evaluate the effectiveness of the

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source and gradient control well systems and any other remedy implemented in the Drift-Platteville aquifer. For the first year, Drift-Platteville Monitoring shall consist of semiannual Monitoring of 30 wells for PAH and Phenolics. The number of samples for PAH and Phenolics Monitoring in the first year after the Effective Date shall be reduced by one sample designated by the Regional Administrator and Director for every sample subjected to an expanded analysis pursuant to Section 9.3.3. For the second and third years after the Effective Date, Drift-Platteville Monitoring shall consist of Monitoring 30 wells annually for PAH and Phenolics. Thereafter, 20 wells shall be Monitored biannually for PAH and Phenolics. Two of the above sampling events shall be conducted concurrently with the Northern Area remedial investigation required by Section 9.3. Reilly shall measure water levels in the sampled wells whenever Monitoring samples are collected.

9.7. Contingent Actions

9.7.1. Source Control Contingencies.

The Regional Administrator and Director shall review all Monitoring or other data pertinent to the operation of the source control well system and the movement of PAH and Phenolic Contaminants in the Drift-Platteville, and, at any time after at least three rounds of Monitoring pursuant to Section 9.6., may require Reilly to install an additional source control well(s) or to modify the operation of the source control well

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system installed pursuant to Section 9.1. above, in accordance with Part H of the Consent Decree, in order to control the source of Contamination in the area defined in Section 9.1.1.(A). Within 90 Days of receipt of notification of such a determination by the Regional Administrator and Director, Reilly shall submit to the Regional Administrator and the Director a plan and schedule for implementing the action(s). The Regional Administrator and Director shall review this plan in accordance with Part G of the Consent Decree. Following receipt of approval of this plan, Reilly shall implement the requested action(s) in accordance with the approved plan. Nothing in this RAP shall be construed to prevent Reilly from requesting the Regional Administrator and Director to allow modifications to the operation of the source control well system installed and operated pursuant to Section 9.1. above. 9.7.2. Gradient Control Contingencies

The Regional Administrator and Director shall review all Monitoring or other data pertinent to the operation of the gradient control well system and the movement of PAH and Phenolic Contaminants in the Drift-Platteville, and, at any time after at least three rounds of Monitoring pursuant to Section 9.6., may require Reilly to install an additional gradient control well(s) in the Drift-Platteville or to modify the operation of the gradient control well system installed and operated pursuant to Section 9.2. above, in accordance with

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Part H of the Consent Decree, in order to prevent the spread of Contamination into the area delineated by the buried bedrock valley as mapped by Hult and Schoenberg in USGS Water Supply Paper 2211, Plate 2. Within 90 Days of receipt of notification of such a determination by the Regional Administrator and Director, Reilly shall submit to the Regional Administrator and Director a plan and schedule for implementing the action(s). The Regional Administrator and Director shall review this plan in accordance with Part G of the Consent Decree. Following receipt of approval of this plan, Reilly shall implement the requested action(s) in accordance with the approved plan. Nothing in this RAP shall prevent Reilly from requesting the Regional Administrator and Director to allow modifications to the operation of the gradient control well system installed and operated pursuant to Section 9.2. above.

9.7.3. Northern Area Remedy Contingencies

The Regional Administrator and Director shall review all Monitoring or other data pertinent to the remedy implemented pursuant to Section 9.5. above and the movement of PAH and Phenolic Contaminants in the Drift-Platteville, and, at any time after any remedy implemented pursuant to Section 9.5. has begun, and after three rounds of Monitoring have been completed pursuant to the plan approved under Section 9.5.l., may require Reilly to install an additional gradient control well(s) or otherwise modify the remedy installed and operated

pursuant to Section 9.5. above in accordance with Part H of the Consent Decree, in order to limit the further spread of any Contamination located within the area defined in Section 9.3.1. Within 90 Days of receipt of notification of such a determination by the Regional Administrator and Director, Reilly shall submit to the Regional Administrator and Director a plan and schedule for implementing the action(s). The Regional Administrator and Director shall review this plan in accordance with Part G of the Consent Decree. Following receipt of approval of this plan, Reilly shall implement the requested action(s) in accordance with the approved plan. Nothing in this RAP shall prevent Reilly from requesting the Regional Administrator and Director to allow modifications to the operation of any gradient control well system installed and operated pursuant to Section 9.5. above.

LEAKING MULTI-AQUIFER WELLS

10.1. <u>Multi-Aquifer Wells Open to the Mt. Simon-Hinckley,</u> <u>Ironton-Galesville, or Prairie du Chien-Jordan Aquifers</u> 10.1.1. Investigation Plan

Within one year of the Effective Date, Reilly shall submit to the Regional Administrator, the Director and the Commissioner a plan for investigating suspected multi-aquifer wells which may be leaking water exceeding any of the Drinking Water Criteria or 10 micrograms per liter Phenolics into the Mt. Simon-Hinckley aquifer, the Ironton-Galesville aquifer, or areas of the Prairie du Chien-Jordan aquifer located outside of the capture area of the Prairie du Chien-Jordan aquifer gradient control system operated pursuant to Section 7.2., and, if applicable, Section 7.4.1. For purposes of this Section, the southern boundary of the capture area of the Prairie du Chien-Jordan aquifer gradient control well system operated pursuant to Section 7.2. is defined as Excelsior Boulevard west of Highway 169/100 and West 42nd Street east of Highway 169/100; the eastern boundary as France Avenue; the northern boundary as a line extending from well SLP 7 to the intersection of France Avenue and Minnetonka Blvd. and west from SLP 7 to Hennepin County Road 18; and the western boundary as Hennepin County Road 18. The plan shall describe the

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investigation techniques to be used, which shall include at a minimum for each well: static water level measurements, water quality Monitoring, spinner logging, caliper logging, and E- or gamma logging. Additional techniques, such as down-hole TV logging, may also be used. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree.

10.1.2. Investigation and Report

Within one year of receipt of approval of the investigation plan pursuant to Section 10.1.1., Reilly shall complete a multi-aquifer well investigation in accordance with the approved plan and shall report the findings to the Regional Administrator, the Director and the Commissioner, and recommend which leaking multi-aquifer wells, if any, should be abandoned or reconstructed.

10.1.3. Report Evaluation

For any of the wells investigated pursuant to Section 10.1.1. which displays interaquifer flow of water which exceeds any of the Drinking Water Criteria or 10 micrograms per liter Phenolics, the Regional Administrator, the Director and the Commissioner shall consider: the rate of any multi-aquifer flow; the quality of any water being leaked; the likely fate and impacts of any leaking Contaminants, considering ground water flow and use patterns in the aquifer(s) of concern and the impact of any gradient control well(s); and the cost of

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abandoning or reconstructing the leaking well(s). Based on this evaluation, the Regional Administrator, the Director and the Commissioner may require Reilly to abandon or reconstruct the well(s) in accordance with Part H of the Consent Decree. If Reilly abandons an active well, Reilly shall provide an alternative water supply which provides water of equivalent quality and quantity at a cost to the owner of the affected well no greater than that of pumping ground water from the affected well.

10.1.4. Well Abandonment Plan

If the Regional Administrator, the Director and the Commissioner determine pursuant to Section 10.1.3. that Reilly shall abandon or reconstruct any wells, then Reilly shall submit to the Regional Administrator, Director and the Commissioner within 90 Days of receipt of such notification, a plan for abandoning or reconstructing the well(s) specified by such notification and, if necessary, providing the well owner(s) with an alternative water supply. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree. 10.1.5. Well Abandonment

Within 90 Days of receipt of approval of the plan specified in Section 10.1.4., Reilly shall abandon or reconstruct the well(s) required in accordance with the approved plan.

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10.2. <u>Multi-Aquifer Wells Open to the St. Peter Aquifer</u> 10.2.1. Investigation Plan

Within 180 Days of receipt of the decision by the Regional Administrator, the Director and the Commissioner with regard to remedial action in the St. Peter aquifer pursuant to Section 8.3., Reilly shall submit to the Regional Administrator, the Director and the Commissioner a plan for investigating suspected multi-aquifer wells which are open to the St. Peter aquifer and which may be leaking water exceeding any of the Drinking Water Criteria or 10 micrograms per liter Phenolics into areas of the St. Peter aquifer located outside of the capture area of any St. Peter aquifer gradient control system operated pursuant to Section 8.3. The plan shall describe the investigation techniques to be used. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree. 10.2.2. Investigation and Report

Within one year of receipt of approval of the investigation plan pursuant to Section 10.2.1., Reilly shall complete a multi-aquifer well investigation in accordance with the approved plan and shall report the findings to the Regional Administrator, the Director and the Commissioner and recommend which leaking multi-aquifer wells, if any, should be abandoned or reconstructed.

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10.2.3. Report Evaluation

For any of the wells investigated pursuant to Section 10.2.1. which displays interaquifer flow of water which exceeds any of the Drinking Water Criteria or 10 micrograms per liter Phenolics, the Regional Administrator, the Director and the Commissioner shall consider: the rate of any multi-aquifer flow; the quality of any water being leaked; the likely fate and impacts of any leaking Contaminants, considering ground water flow and use patterns in the aquifer(s) of concern and the impact of any gradient control well(s); and the cost of abandoning or reconstructing the leaking well(s). Based on this evaluation, the Regional Administrator, the Director and the Commissioner may require Reilly to abandon or reconstruct the well(s) in accordance with Part B of the Consent Decree. If Reilly abandons an active well, Reilly shall provide an alternative water supply which provides water of equivalent quality and quantity at a cost to the owner of the affected well no greater than that of pumping ground water from the affected well.

10.2.4. Well Abandonment Plan

If the Regional Administrator, the Director and the Commissioner determine pursuant to Section 10.2.3. that Reilly shall abandon or reconstruct any wells, then Reilly shall submit to the Regional Administrator, the Director and the Commissioner, within 90 Days of receipt of such notification, a

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plan for abandoning or reconstructing the well(s) specified by such notification and, if necessary, providing the well owner(s) with an alternative water supply. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree. 10.2.5. Well Abandonment

Within 90 Days of receipt of approval of the plan specified in Section 10.1.4., Reilly shall abandon or reconstruct the well(s) required in accordance with the approved plan.

10.3. Contingent Actions

10.3.1. Investigation Plan

If the capture area of any gradient control well system installed in the Prairie du Chien-Jordan or the St. Peter aquifers decreases as a result of ceasing operation or decreasing pumping rates in accordance with this RAP, the Regional Administrator, the Director and the Commissioner may require Reilly to submit a plan to investigate any multi-aquifer wells which may be leaking water exceeding any of the Drinking Water Criteria or 10 micrograms per liter Phenolics into areas of the aquifer that were formerly controlled by the gradient control well system. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree.

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10.3.2. Investigation and Report

Within one year of receipt of approval of the investigation plan pursuant to Section 10.3.1., Reilly shallcomplete a multi-aquifer well investigation in accordance with the approved plan and shall report the findings to the Regional Administrator, the Director and the Commissioner and recommend which leaking multi-aquifer wells, if any, should be abandoned or reconstructed.

10.3.3. Report Evaluation

For any of the wells investigated pursuant to Section 10.3.1. which displays interaquifer flow of water which exceeds any of the Drinking Water Criteria or 10 micrograms per liter Phenolics, the Regional Administrator, the Director and the Commissioner shall consider: the rate of any multi-aquifer flow; the quality of any water being leaked; the likely fate and impacts of any leaking Contaminants, considering ground water flow and use patterns in the aquifer(s) of concern and the impact of any gradient control well(s); and the cost of abandoning or reconstructing the leaking well(s). Based on this evaluation, the Regional Administrator, the Director and the Commissioner may require Reilly to abandon or reconstruct the well(s) in accordance with Part H of the Consent Decree. If Reilly abandons an active well, Reilly shall provide an alternative water supply which provides water of equivalent quality and quantity at a cost to the owner of the affected

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well no greater than that of pumping ground water from the affected well.

10.3.4. Well Abandonment Plan

If the Regional Administrator, the Director and the Commissioner determine pursuant to Section 10.3.3. that Reilly shall abandon or reconstruct any wells, then Reilly shall submit to the Regional Administrator, the Director and the Commissioner, within 90 Days of receipt of such notification, a plan for abandoning or reconstructing the well(s) specified by such notification and, if necessary, providing the well owner(s) with an alternative water supply. The Regional Administrator, the Director and the Commissioner shall review the plan in accordance with Part G of the Consent Decree. 10.3.5. Well Abandonment

Within 90 Days of receipt of approval of the plan specified in Section 10.3.4., Reilly shall abandon or reconstruct the well(s) required in accordance with the approved plan.

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NEAR-SURFACE CONTAMINATION

11.1. Soil Investigation

11.1.1. Plan

Within 90 Days of the Effective Date, Reilly shall submit to the Regional Administrator and Director a plan for installation of shallow borings and analysis of resulting soil cores for the purpose of determining the extent of subsurface Contamination south of the Site. The plan shall provide for borings in an area bounded by Lake Street on the north; Monitor Street and an imaginary straight-line extension of Monitor Street to Methodist Hospital on the east; Minnehaha Creek on the south; and Taft Avenue and an imaginary straight-line extension of Taft Avenue to Minnehaha Creek on the west. The plan shall provide for at least 15 but not more than 25 borings, each boring to have a depth of at least 35 feet but not deeper than the top of the Platteville formation. The plan shall provide for at least 15 but no more than 45 soil cores to be analyzed for benzene extractables and/or Phenolics. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree.

11.1.2. Completion

Within 90 Days of receipt of approval of the plan, Reilly shall complete installation and sampling of the borings in accordance with Section 11.1.1. above.

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11.1.3. Report

Within 60 Days of completing installation of borings as required by Section 11.1.2. above, Reilly shall submit to the Regional Administrator and Director a report on the results of the above borings, including, but not limited to a map of the area investigated, the location of each boring, boring logs, analytical results, and visual or olfactory observations of Contamination.

11.2. Notices in Deed

Within 180 Days of completing the installation of borings as required by Section 11.1. above, the Parties owning property in the area described in Section 11.1. on which a release of hazardous substances resulting from operations at the Site has occurred or is occurring, shall file an affidavit with the Recorder of Deeds of Hennepin County which complies with Minn. Stat. § 1158.16, Subd.2 (1984). Any Party filing such an affidavit shall submit a copy of such recorded affidavit to the Regional Administrator and Director within 14 Days of such Recording. Within 180 Days of completing the installation of borings as required by Section 11.1. above, St. Louis Park shall also by this date submit to the Regional Administrator and Director the location and owners of other properties within the areas described in Section 11.1. above, on or under which a release has occurred or is continuing to occur.

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11.3. Wetlands Filling

11.3.1. Filling Required

By March 1, 1987, Reilly shall have completed covering, with one foot of fill, existing wetlands sediments and vegetation in the wetland areas identified by number and location on Appendix B (attached), in order to protect migratory waterfowl. Reilly shall use clean fill compatible with possible later construction of the Louisiana Avenue/State Trunk Highway 7 intersection in this area. Reilly shall cut down standing wetland vegetation (not including trees) before filling. The wetland areas shall be filled in the following sequence by the dates specified:

 the area south of State Trunk Highway 7 bounded by Louisiana Avenue, Lake Street, and the recent fill area to the west (identified as wetland \$1 in App. B) on or before May 31, 1986;

2. the area north of State Trunk Highway 7 bounded by Louisiana Avenue and the existing fill at Mobile Marine Discount (identified on App. B as wetland \$2), on or before May 31, 1986;

3. the small area immediately south of Walker Street and Mill City Plywood (identified as wetland #3 in App. B) on or before August 31, 1986;

4. the drainage swale north of State Trunk Highway 7 (identified in App. B as wetland \$4), on or before March 1, 1987;

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5. the small areas immediately north and south of the South Frontage Road extension (identified in App. B as wetlands #'s 5a and 5t) and the unnumbered drainage swale south of State Trunk Highway 7 (identified in App. B as wetland #5c) all on or tefore March 1, 1987.

11.3.2. Property Owners

Reilly shall use its best efforts to obtain access to the property involved for the purpose of and prior to filling a particular area. Reilly shall not be required to pay any fee for access as part of its best efforts to obtain access prior to invoking the assistance of the U.S. Fish and Wildlife Service or the MPCA. If Reilly is unable to obtain access, using its best efforts, the U.S. Fish and Wildlife Service shall assist Reilly, its contractors, employees or assigns in requesting access to the property involved. If the U.S. Fish and Wildlife Service is unable to obtain access, the MPCA shall use its statutory and other regulatory authority to assist in obtaining access to the property. If required, deadlines for filling shall ce extended for areas where access is in dispute with the property owner(s) by a period equal to the time from Reilly's receipt of written refusal to grant access by the property owner(s) to Reilly's receipt of written notice of access from the property owner or the MPCA.

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11.3.3. Approval

Reilly shall use its best efforts to provide written notice to the U.S. Fish and Wildlife Service (the Regional Director of FWS, Region 3, Fort Snelling, Twin Cities, MN 55111, or his designee) at least five working days before beginning to fill each enumerated area. If Reilly is unable to provide written notice five working days before filling, then Reilly shall provide oral or written notice as much in advance of filling as possible. One or more representatives of the FWS Regional Director may be present to observe filling operations without prior notice to Reilly. Upon completion of the filling of each of the areas enumerated above, Reilly shall provide written notification to the FWS Regional Director. Within fourteen Days of receipt of such written notification, the FWS Regional Director or his designee will inspect the area filled, and provide Reilly with written notification of his determination to approve or disapprove the filling as performed, in accordance with the requirements of this Section. However, if Reilly fails to give the FWS Regional Director sufficient advance written or oral notice to allow FWS the opportunity to observe filling operations, the FWS Regional Director shall have an additional reasonable time to provide Reilly with written notification of the FWS Regional Director's determination. Any dispute over additional requirements of the FWS Regional Director shall be resolved in accordance with the

procedures set out in Part I of the Consent Decree. Reilly shall inspect the filled wetland areas monthly from May through September of each year and shall cut all wetland vegetation which has grown to a height of six inches or longer, until final construction under Section 11.4.1. or covering under Section 11.4.3. The Regional Administrator, the Director, and St. Louis Park will be copied on all correspondence between Reilly and the FWS Regional Director pertaining to wetlands filling. However, the FWS Regional Director shall have the exclusive authority to act upon any request for an excuse or extension under Part N for the requirements of Section 11.3. 11.4. Louisiana Avenue/State Trunk Highway 7 Intersection 11.4.1. Construction

This RAP shall not be construed to impede or delay the construction of an at-grade intersection at Louisiana Avenue and State Trunk Highway 7 in accordance with glans and specifications for this project on file with the MPCA as of January 1, 1985. If the plans and specifications for this project are changed so as to substantially alter the impact of the construction on soil or ground water pollution (including hazardous substances, pollutants or contaminants), St. Louis Park shall obtain written approval of these changes by the Regional Administrator and Director prior to implementing such changes.

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11.4.2. Dewatering

If construction plans for the project specify the dewatering of any soils, St. Louis Park shall provide means for collecting any polluted water resulting from dewatering in this area and for disposal to the sanitary sewer, unless agreed otherwise by the Regional Administrator and Director. 11.4.3. Cancellation or Delay

If the Director notifies Reilly that the Minnesota Department of Transportation has not or will not have committed funds by October 31, 1989, for construction of an at-grade intersection at Louisiana Avenue and State Trunk Highway 7; or, if St. Louis Park prior to this date notifies Reilly that it will not seek funding for construction of this intersection, Reilly shall submit to the Regional Administrator and Director within six months of receipt of such notification a plan for additional fill, grade, and cover of all remaining wetland areas between Walker Street and Lake Street in order to promote drainage and minimize infiltration of precipitation. The plan shall provide for:

- (A) filling of the remaining wetland areas with additional clean fill, if necessary;
- (B) covering undeveloped areas within the area bounded by Walker Street, Louisiana Avenue, Lake Street and South Frontage Road Extension, and an imaginary north-south line through the

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intersection of Walker Street and West 37th Street with a low-permeability cover and sufficient topsoil to support a vegetative cover;

- (C) sloping the area to promote drainage to a storm water collection system; and
- (D) establishment and maintenance of a perennial grass cover.

The plan shall show the proposed placement of any additional fill and shall detail arrangements with property owners. The Regional Administrator and Director shall review the plan in accordance with Part G of the Consent Decree. Within 6 months of receipt of approval, Reilly shall implement the plan as approved by the Regional Administrator and Director. 11.5. <u>Development of the Site</u>

11.5.1 Site Development Plan

(A) Within 180 Days of the Effective Date, St. Louis Park and the HRA each shall submit to the Regional Administrator and the Director a plan (hereinafter "Site Development Plan"), providing a description of the actions they will take at the respective areas of the Site owned by them located west of Louisiana Avenue. As of the Effective Date, the HRA owns the following described property located within the Site and west of Louisiana Avenue: Lot 1, Block 2; Lot 1,

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Block 5; Lot 1, Block 8; all in Oak Park Village according to the plat thereof on file in the office of the County Recorder of Hennepin County, Minnesota. As of the Effective Date, St. Louis Park owns the following property west of Louisiana Avenue: All property within the Site which is dedicated as park land on the plat of Oak Park Village according to the plat thereof on file in the office of Hennepin County, Minnesota. St. Louis Park and the HRA shall prepare their respective plans so as to avoid inconsistencies, such as inconsistencies with respect to grading and runoff.

- (B) Each Site Development Plan shall include a description of the actions to be implemented, including:
 - (1) actions to minimize infiltration of precipitation into soils and ground water;
 - (2) actions to direct runoff to a storm water collection system;
 - (3) actions to minimize the need to excavate hazardous substances or soils containing hazardous substances;
 - (4) actions to minimize the possibility of exposure of hazardous substances which may be located near the surface;

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- (5) actions to prevent any soils or other materials which may be excavated from creating a nuisance (including odor problems) to area residents;
- (6) in the HRA plan, actions to landscape the existing stockpile of soils and other material located in Block 8 at the southwest corner of the Site near Walker Street, so as to minimize infiltration of precipitation into and erosion of the stockpile; and,
- (7) actions to place an adequate soil and vegetative cover as needed throughout the Site to prevent soil erosion, minimize infiltration of precipitation and avoid nuisances (including odor problems).
- (C) Each Site Development Plan shall provide a reasonable schedule for implementation of each action described in that Plan.
- (D) The Regional Administrator and the Director shall review each Site Development Plan in accordance with Part G of the Consent Decree, and shall not unreasonably withhold approval.
- (E) St. Louis Park and the HRA shall each comply with their own Site Development Plan as approved by the Regional Administrator and the Director.

11.5.2 Site Maintenance

Subsequent to implementation of the Site Development Plan in accordance with Section 11.5.1., St. Louis Park and the HRA shall maintain their respective portions of the Site such that the objectives stated in 11.5.1.(B) are continually met. In the event that the measures taken pursuant to the Site Development Plan fail to achieve these objectives, St. Louis Park and the HRA shall take such additional measures as the Regional Administrator and the Director may require to ensure that the objectives are met.

11.5.3 Construction

- (A) Prior to any construction on their respective areas of the Site located west of Louisiana Avenue, St. Louis Park or the HRA, as appropriate, shall submit a plan to the Regional Administrator and the Director which details the proposed construction, and which includes, but is not limited to, the following:
 - (1) plans for the construction of the proposed improvements;
 - (2) safety provisions to protect construction workers from exposure to hazardous substances:
 - (3) plans, commensurate with the intended construction, for investigation and

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excavation of soils, including a description of the methods to be used (both before and during construction) for evaluating soil and other materials which may be excavated to determine if they are hazardous under applicable State and Federal hazardous waste rules:

- (4) plans for disposal of non-hazardous soils and other non-hazardous materials which may be excavated during construction, including specific locations at which materials will be disposed; except that St. Louis Park or the HRA may request an exemption from this requirement for soils which were not polluted by activities at the Site;
- (5) plans to assure that, if hazardous substances are encountered at any time during construction, they will be handled and disposed of in compliance with all applicable State and Federal laws and regulations and that written assurance from a facility(ies) authorized to accept such waste will be submitted to the Regional Administrator and the Director. Under appropriate circumstances, plans may be

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submitted to the Regional Administrator and the Director for replacing small amounts of contaminated soils on the site. Such plans may propose that for minor disturbances of the soil, such as utility line construction, repair, or replacement, the material removed be replaced in approximately its original location prior to the disturbance and be covered by clean soil to a depth of at least twelve (12) inches. A refusal by the Regional Administrator or the Director to permit such replacement of contaminated soil shall be subject to review under Part G of the Consent Decree; and

- (6) plans for prevention of nuisance conditions during construction, including plans for compliance with Minnesota Rules Parts 7005.0900-7005.0960 (1983) or their then-applicable equivalents.
- (B) The Regional Administrator and the Director shall review each construction plan in accordance with Part G of this Consent Decree, and shall not unreasonably withhold approval.
- (C) St. Louis Park and the HRA shall not convey any interest in property for their respective areas

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unless the instrument of conveyance includes a covenant running with the land that assures that each subsequent purchaser or successor in interest shall comply with the requirements of this Section 11.5.3.

- (D) St. Louis Park, the HRA, and any subsequent purchasers or successors in interest, as appropriate, shall each comply with the construction plan as approved by the Regional Administrator and the Director.
- (E) Development may proceed on property on the Site, including Blocks 2 and 5, if it is done in accordance with the provisions of Section 11.5; however, this Section 11.5.3. does not constitute a waiver of any permitting or other requirements which may apply to any proposed construction at the Site.

11.5.4 Stockpiling or Disposal of Soil

After the Site Development Plan required by Section 11.5.1. is implemented, no soil excavated for any purpose from the Site shall be stockpiled or otherwise placed, either temporarily or permanently, anywhere on the Site, except for soil which is not visually polluted and does not have a noticeable odor of creosote or coal tar. If soil or any other material excavated from the Site for any reason after the

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Effective Date is deemed hazardous by the EPA or MPCA pursuant to Federal or State hazardous waste rules, the soil or hazardous materials shall be moved to a permitted hazardous waste facility approved pursuant to Part T of the Consent Decree, and St. Louis Park and the HRA, or successor owner of property on the Site, as appropriate, shall comply with all notification, disclosure, and transportation requirements of Federal and State hazardous waste rules and regulations.

11.6 MPCA - St. Louis Park Stipulation Agreement

The provisions of this Section 11 supersede the Stipulation Agreement between St. Louis Park and the MPCA dated April 19, 1977 and said Stipulation Agreement shall be null and void upon the Effective Date of this Consent Decree.

11.7 Responsibilities of Other Site Owners

11.7.1 Access

Oak Park Village Associates and Philip's Investment Co. shall provide access to the United States, the State, Peilly, St. Louis Park and their contractors, subcontractors, agents, and employees, as provided in Part P of the Consent Decree.

11.7.2 Notices in Deeds

Within ninety (90) Days of the Effective Date, Oak Park Village Associates and Philip's Investment Co. shall each file an Affidavit with the Recorder of Deeds of Hennepin County which complies with the provisions of Minn. Stat. Section

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115B.16, Subd. 2 (1984), for their respective properties located on the Site. Oak Park Village Associates and Philip's Investment Co. shall each submit a copy of such recorded affidavit to the Director and Regional Administrator within fourteen (14) Days of such recording.

11.7.3 Future Site Development or Disturbance

Prior to undertaking any construction or demolition activity on their respective areas of the Site, the appropriate landowner (Oak Park Village Associates or Philip's Investment Co.) shall submit a plan to the Regional Administrator and the Director which details the proposed construction or demolition activity and which contains all applicable provisions as set forth in Sections 11.5.3.(A)(1) through (6) of this RAP. The Regional Administrator and the Director shall review any such construction or demolition plan in accordance with Part G of the Consent Decree.

.11.7.4 Subsequent Purchasers or Successors in Interest

Oak Park Village Associates and Philip's Investment Co. shall not convey any interest in their respective properties located on the Site unless the instrument of conveyance includes a covenant running with the land that assures that each subsequent purchaser or successor in interest shall comply with the requirements of this Section 11.7.

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11.7.5 Other Permitting Requirements

This Section 11.7. does not constitute a waiver of any permitting or other requirements which may apply to any proposed construction or demolition activity at the Site. 11.7.6 Compliance With Approved Plan

Oak Park Village Associates and Philip's Investment Co., and their subsequent purchasers or successors in interest, as appropriate, shall comply with any plan approved by the Regional Administrator and the Director under this Section 11.7.

CONTINGENT ACTIONS FOR MUNICIPAL DRINKING WATER SUPPLY WELLS

12.1. Contingent Monitoring

12.1.1. Exceedance of Advisory Levels

If the analytical result of any sample taken from an active municipal drinking water well under the Monitoring requirements of Sections 3., 4.3., 5.1., 6.2.1., 7.3., or 8.4. above exceeds an Advisory Level, Reilly shall take another sample within seven Days of receiving the analytical results and analyze this sample. If the results of the second sample are below all of the Advisory Levels, a third sample shall be taken by Reilly within seven Days of receiving the results of the second sample. If the third sample is below all of the Advisory Levels, Monitoring of the affected well shall revert to its normal schedule. If the analytical result of the second or third sample exceeds an Advisory Level but is less than all Drinking Water Criteria, the Regional Administrator, the Director, and the Commissioner shall be notified by Reilly immediately and subsequent samples shall be taken by Reilly monthly until such time as either:

> (A) three consecutive samples yield results less than all of the Advisory Levels, in which case the sampling interval shall revert to the level specified for the affected well in Sections 3., 4.3., 5.1., 6.2.1., 7.3., or 8.4. above; or

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- (B) a sample yields results greater than a Drinking Water Criterion, in which case the requirements of Section 12.1.2., below, apply.
- 12.1.2. Exceedance of Drinking Water Criteria
 - (A) If the analytical result of any sample taken from an active municipal drinking water well pursuant to Section 12.1.1 exceeds the Drinking Water Criterion for Carcinogenic PAH, the sum of benzo(a)pyrene and dibenz(a,h)anthracene, or Other PAH, the Regional Administrator, the Director and the Commissioner shall be immediately notified by Reilly, and another sample shall be taken by Reilly within three Days of receiving the results of the first sample and analyzed. If the analytical result of the second sample is less than all of the Drinking Water Criteria but greater than any Advisory Level, a third sample shall be taken by Reilly within seven Days of receiving the results of the second sample and analyzed. If the results of this third sample are less than all of the Drinking Water Criteria, but greater than any Advisory Level, Reilly shall comply with the monthly sampling frequency specified in Section 12.1.1. above.

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(B) If the analytical result of the second or third sample taken pursuant to Section 12.1.2.(A) above is greater than the Drinking Water Criterion for Carcinogenic PAH, the sum of benzo(a)pyrene and dibenz(a,h)anthracene, or Other PAH, Reilly shall Monitor the well weekly until such time as either: (1) three consecutive samples yield results below all of the Drinking Water Criteria, in which case Monitoring of the well shall revert to the normal schedule (including Advisory Level Monitoring as specified by Section 12.1.1. above if applicable); or, (2) three consecutive samples yield results above any Drinking Water Criterion, in which case Reilly shall immediately notify the Regional Administrator, the Director and the Commissioner. The Commissioner may then require the affected well to be taken out of service, in which case Reilly shall undertake the contingent actions specified in Section 12.2. below.

12.1.3. Analytical Turn-around Time

All Monitoring conducted pursuant to Section 12.1. shall be on a 21-Day turn-around time basis in accordance with Section 2.8.

12.2. Contingent Drinking Water Treatment

12.2.1. Applicability

This Section 12.2. shall apply in the event that Monitoring of active St. Louis Park, Edina, Hopkins or Minnetonka municipal water supply wells in the Mt. Simon-Hinckley, Ironton-Galesville, Prairie du Chien-Jordan, or St. Peter aquifers, pursuant to Section 12.1. above, indicates that untreated water from any such well exceeds any Drinking Water Criterion at the point at which the water is introduced to the water distribution system but before dilution with water from any other source. This Section 12.2. does not apply to SLP 10 and 15, which have specific requirements contained in Section 4 above.

12.2.2. Options for Dealing With Contaminated Municipal Drinking Water Supply Wells

In the event the conditions specified in Section 12.1.2.(B)(2) above are met, the Commissioner may require the affected well to be removed from service, in which case Reilly shall submit to the Regional Administrator, the Director and the Commissioner a plan for responding to the well closure. The plan may recommend that the well be left out of service if the affected city concurs, in which case the potential effects of altered migration of Contaminants in the affected aquifer due to elimination of pumping the well shall be assessed, and a proposed remedy for these effects shall be included. In

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addition, Reilly shall propose a remedy for restoring the lost water supply through treatment, which may include existing treatment, or providing alternative supplies. If Reilly proposes treatment, a conceptual design for a treatment system and Monitoring plan shall be included in the plan. In the event that the results of Monitoring well SLP 6 exceed any Drinking Water Criterion pursuant to Section 12.1.2.(B), Reilly shall submit a plan for this well that assures that the pumping stress at this well is maintained and that St. Louis Park maintains an adequate drinking water supply.

12.2.3. Construction and Agency Approval

The Regional Administrator, the Director and the Commissioner shall review the proposed remedial action, taking into account the water supply needs of the affected city as well as the effectiveness of the proposed remedy in removing Contaminants from drinking water, if applicable, and the effect of the proposed remedy on the movement of Contaminants in the aquifer. Reilly shall construct the remedy as approved by the Regional Administrator, the Director and the Commissioner in accordance with Fart G of the Consent Decree and upon consultation of the affected city not a Party hereto. 12.2.4. Hopkins.

In the event that the proposed remedial action referenced in Section 12.2.3. relates to an active Hopkins municipal water supply well, Hopkins shall be provided with a

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copy of the proposed remedial action at the same time as the Regional Administrator, the Director, and the Commissioner and shall have thirty (30) days to submit comments and objections relative to that proposed remedial action, which comments and objections the Regional Administrator, the Director and the Commissioner shall consider when reviewing and approving the proposed remedial action. In the event the Regional Administrator, the Director, and/or the Commissioner do not adopt the comments or objections made by Hopkins, they shall, prior to approval of the proposed remedial action, set forth in writing to Hopkins the specific basis of the rejection of each comment or objection. Nothing in this Section or Section 12.2.3. shall be construed as a waiver by Hopkins of any right, power or authority that it might otherwise have.

12.2.5. Monitoring

Reilly shall Monitor any treatment system constructed pursuant to this Section 12.2. in accordance with the Monitoring plan as approved by the Regional Administrator and Director under Section 12.2. in accordance with Part G of the Consent Decree.

12.2.6. Cessation

Reilly shall operate and maintain any treatment system constructed pursuant to this Section 12.2. until the cessation criteria defined in Section 4.4. are met.

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APPENDIX A

PAH COMPOUNDS TO BE MONITORED

A.1. List of Compounds To Be Monitored on a Routine Basis

A.1.1. Carcinogenic PAH

Whenever this RAP specifies Monitoring for Carcinogenic PAH, the analysis shall include the following PAH compounds and those Additional Carcinogenic PAH compounds added pursuant to Part D.1. of the Consent Decree:

benz(a)anthracene	(56-55-3)*
benzo(b)fluoranthene	(205-99-2)
benzo(j)fluoranthene	(205-82-3)
benzo(ghi)perylene	(191-24-2)
benzo(a)pyrene	(50-32-8)
chrysene	(218-01-9)
ditenz(a,h)anthracene	(53-70-3)
indeno(1,2,3-cd)pyrene	(193-39-5)
quinoline	(91-22-5)

A.1.2. Other PAH

Whenever this RAP specifies Monitoring for Other PAH, the analysis shall include the following PAH compounds:

* Chemical Abstracts Service registry number.

acenaphthene	(83-32-9)
acenaphthylene	(208-96-8)
acridine	(260-94-6)
anthracene	(120-12-7)
benzo(k)fluoranthene	(207-08-9)
2,3-benzofuran	(271-89-6)
benzo(e)pyrene	(192-97-2)
benzo(b)thiophene	(95-15-8)
biphenyl	(92-15-8)
carbazole	(86-74-8)
dibenzofuran	(132-64-9)
dibenzothiophene	(132-65-0)
2,3-dihydroindene	(496-11-7)
fluoranthene	(206-44-0)
fluorene	(86-73-7)
indene	(95-13-6)
indole	(120-72-9)
1-methylnaphthalene	(90-12-0)
2-methylnaphthalene	(91-57-6)
naphthalene	(91-20-3)
perylene	(198-55-0)
phenanthrene	(85-01-08)
pyrene	(129-00-0)
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A.2. Extended List of Carcinogenic PAH

The following PAH are suspected human carcinogens, but have not

been detected routinely to date in samples of drinking water supply aquifers in the St. Louis Park area. The following PAH, therefore, shall be included in the calculation of Carcinogenic FAH if they are detected in any special analysis required by this RAP, but shall not be analyzed under routine Monitoring for PAH required by this RAP:

benzo(c)phenanthrene	(195-19-7)
dibenz(a,c)anthracene	(215-58-7)
dibenzo(a,e)pyrene	(192-65-4)
dibenzo(a,h)pyrene	(189-64-0)
dibenzo(a,i)pyrene	(189-55-9)
7,12-dimethylbenz	
(a)anthracene	(57-97-6)
3-methylcholanthrene	(56-49-5)

A.3. Non-Detected Values

Whenever the PAH compounds listed in this Appendix are analyzed for the purposes of determining compliance with any of the Drinking Water Criteria, Advisory Levels, or cessation criteria defined by this RAP, non-detected values shall not be counted in any way when calculating the sum of Carcinogenic PAH, Other PAH or Total PAH concentrations.

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A.4. Surrogate Spike Recovery

Monitoring data obtained pursuant to Section 3 shall not be adjusted for surrogate spike recoveries when determining compliance with any of the Drinking Water Criteria, Advisory Levels or cessation criteria defined by this RAP. The laboratory quality assurance/quality control plan required pursuant to Section 3 shall indicate the expected surrogate spike recoveries for the analytical methods required by this RAP.

A.5. Sampling and Analysis Blanks

Field blanks and method blanks shall be collected and analyzed at frequencies to be specified in each year's sampling plan pursuant to Section 3. Analytical results from field and method blanks shall be given due consideration when determining compliance with any of the Drinking Water Criteria, Advisory Levels or cessation criteria defined by this RAP.





