

In the Matter of the Application of Kansas)
Gas Service, a Division of ONE Gas, Inc. for)
Adjustment of its Natural Gas Rates in the) Docket No. 18-KGSG-560 - RTS
State of Kansas.)

DIRECT TESTIMONY
OF
JAMES E. HAUGHT
ON BEHALF OF KANSAS GAS SERVICE
A DIVISION OF ONE GAS, INC.

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1 **I. Position and Qualifications**

2 **Q. Please state your name and business address.**

3 A. My name is James E. Haught. My business address is 15 East Fifth Street, Tulsa, Oklahoma.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by ONE Gas, Inc., (“ONE Gas”) as Director-Environmental. ONE Gas is the
6 parent company of Kansas Gas Service (“KGS” or the “Company”).

7 **Q. Please describe your educational background and professional experience.**

8 A. I have an Associates in Arts degree in Economics/Accounting from Northeastern Oklahoma
9 A&M. I earned a Bachelor of Science degree in Agriculture from Oklahoma State University.
10 I received a Doctor of Veterinary Medicine from Oklahoma State University College of
11 Veterinary Medicine. I earned a Master of Public Health-Environmental Management from
12 the University of Oklahoma Department of Occupational and Environmental Health.

13 With respect to my professional experience, I practiced veterinary medicine from 1980
14 through 1992. Since 1992, I have worked for ONE Gas and its predecessor ONEOK, Inc.,
15 (“ONEOK”) in various positions in the Environmental Department.

16 **Q. What are your job responsibilities?**

17 A. I direct environmental activities for ONE Gas, including efforts related to KGS's obligation to
18 perform environmental investigation, testing, monitoring, remediation and other work on

1 specific facilities used in the past to manufacture gas to serve Kansas customers and the real
2 property where those facilities were located, as well as nearby properties, which are being
3 managed by the Company ("Environmental Work"). The Environmental Work being
4 performed in Kansas is done pursuant to a Consent Order with the State of Kansas
5 Department of Health and Environment ("KDHE"), which was issued in KDHE Case No. 94-E-
6 0172, signed by ONE Gas' predecessor, Western Resources, Inc., ("WRI") on October 7, 1994,
7 and several amendments thereto (referred to in my testimony collectively as "Consent
8 Order"). The work is also being performed in compliance with the provisions contained in the
9 Stipulation and Agreement approved by the Kansas Corporation Commission ("KCC" or
10 "Commission") in Docket No. 97-WSRG-486-MER ("486 Docket") by order dated October 15,
11 1997 with respect to the ONEOK acquisition of WRI's gas properties in Kansas. In that
12 Stipulation and Agreement, ONEOK agreed to maintain the level of environmental
13 performance practiced by WRI under the Consent Order.

14 **Q. Have you previously testified before the KCC?**

15 A. Yes. I provided testimony in Docket No. 17-KGSG-455-ACT.

16 **Q. Was this testimony prepared by you or under your direction?**

17 A. Yes, it was.

18 **Q. Have you prepared any exhibits in connection with your testimony?**

19 A. Yes, I prepared and sponsor the exhibits listed in the table of contents.

20 **Q. Were these exhibits prepared by you or under your direction?**

21 A. Yes, they were.

22

1 **II. Executive Summary**

2 **Q. What is the purpose of your testimony?**

3 A. My testimony supports the reasonableness of costs included in Adjustment IS 24 which is
4 discussed in the testimony of Ms. Lorna Eaton. The costs included in Adjustment IS 24 are
5 related to the Environmental Work undertaken by the Company and subject to an Accounting
6 Authority Order (“AAO”) approved by the Commission in Docket No. 17-KGSG-455-ACT.
7 Specifically, my testimony addresses the following areas:

- 8 (1) A history of the manufactured gas industry in Kansas;
9 (2) Background information regarding manufactured gas
10 plant (“MGP”) sites managed by KGS;
11 (3) A summary of the Environmental Work Performed in
12 2017 at MGP sites managed by KGS; and
13 (4) An explanation of the work performed in 2017 and the
14 reasonableness of the expense incurred.

15 **III. Background**

16 **Q. Can you provide a brief history of the manufactured gas industry in Kansas?**

17 A. Yes, I can. In 2008, KDHE prepared a paper regarding the manufactured gas industry in
18 Kansas. A copy of that paper is attached to my testimony and incorporated herein as Exhibit
19 JEH-1. As indicated in that paper, between 1869 and 1930, many Kansans depended on
20 manufactured gas to light and heat their homes and to cook their food. Manufactured gas
21 was produced in factories called gas works.¹ Gas light was considered superior to candles or
22 kerosene lanterns and having manufactured gas for lighting and heating meant a Kansas town
23 was “up-to-date.”² A map showing the location of the Kansas towns where the manufactured
24 gas plants were located and the years in which they were operated, can be found on page 2
25 of the KDHE paper.³ Between the 1900 to 1908-time frame, both natural gas and the
26 development of electric power became abundant and more common place which meant the

¹ Exhibit JEH-1, pages 1-2.

² Exhibit JEH-1, page 1.

³ Exhibit JEH-1, page 2.

1 end of the use of manufactured gas plants in Kansas. By 1908, eleven manufactured gas
2 plants had been abandoned,⁴ with the last plant closing in 1930.⁵ It has been determined
3 that KGS is responsible for managing the investigation and remediation of 12 of the former
4 MGP sites. The 12 sites currently managed by Kansas Gas Service are identified on the map
5 included as page 2 of the earlier referenced KDHE paper.

6 Another good summary of the history of the manufactured gas industry in Kansas can be
7 found in the KDHE Consent Order at Article III, Statement of Facts.⁶ A copy of the Consent
8 Order is attached to my testimony as Exhibit JEH-2 and is incorporated herein by reference.

9 **Q. How did these manufactured gas plants work?**

10 A. As noted previously, gas was manufactured in a factory called a gas works. The factory usually
11 consisted of one or two buildings, some sheds for storing coal and a distinctive cylindrical
12 structure called a gas holder or gasometer.⁷ (See, pages 3-8 of the KDHE paper as attached
13 to my testimony as Exhibit JEH-1, for a summary of how manufactured gas plants operated.)
14 A photo of one of the gas holders excavated at the Kansas City MGP site is shown on page 3
15 of the KDHE paper. As explained by in the KDHE paper, the gas holder was built and used in
16 the manufactured gas process as follows:

17 The gas holder was often built over a large underground tank.
18 Quite often, a knob of rock or concrete, called the "dumpling"
19 would be left behind to save on excavation costs and to provide a
20 foundation for the framework. The tank would be lined with brick
21 or concrete and made watertight by adding a layer of hydraulic
22 cement. The gas holder itself was a wooden shell, sometimes in
23 two or three telescopic sections, that floated in water that filled
24 the tank. As the holder filled with gas, it rose in the tank. A
25 framework of steel girders surrounded the holder to prevent it
26 from toppling over, and the weight of the holder and
27 counterweights pressurized the gas as it flowed outward through

⁴ Exhibit JEH-1, page 2.

⁵ Exhibit JEH-1, page 10.

⁶ Exhibit JEH-2, pages 3-5.

⁷ Exhibit JEH-1, page 3.

1 the distribution piping. An engineer could estimate the amount of
2 gas on hand by the height of the gas holder.⁸

3 The KDHE report explains the two methods used to manufacture gas at these gas works. The
4 earlier method was referred to as the coal carbonization method. A diagram showing how
5 gas was manufactured from coal is shown on page 5 of Exhibit JEH-1.⁹ The second method
6 was referred to as the carbureted water gas method or CWG method. A diagram showing
7 how gas was manufactured under the CWG method is shown on page 7 of Exhibit JEH-1.¹⁰
8 Per the KDHE (as presented in the Consent Order covering the MGP sites being managed by
9 KGS), the manufactured gas plants that operated in Kansas used practices that were
10 considered state-of-the-art at the time.¹¹

11 As set forth in the KDHE paper (Exhibit JEH-1) and as summarized in the Statement of
12 Facts in the Consent Order (Exhibit JEH-2), the process of manufacturing gas at these gas
13 works left behind substances such as coal ash, clinkers, coal and oil tars, lampblack, ammonia,
14 cyanide compounds and emulsions of oil or tar in water.¹² Also as indicated in the KDHE paper
15 and the Consent Order, some of the materials leftover after the process had commercial value
16 and could be resold or used, but the residual materials that could not be resold were often
17 stored or disposed of on site.¹³ These materials might include water contaminated with
18 ammonia and tar and coal tar. Additionally, it was common for spent lime and iron shavings
19 used in the purification process (along with the wood chips or ground corn cobs used to
20 increase the surface areas of the purifier material) to be spread or buried on-site.¹⁴

⁸ Exhibit JEH-1, page 4.

⁹ Exhibit JEH-1, page 5.

¹⁰ Exhibit JEH-1, page 7.

¹¹ Exhibit JEH-2, page 5.

¹² Exhibit JEH-1, page 10; Exhibit JEH-2, page 4.

¹³ *Id.*

¹⁴ Exhibit JEH-1, page 11; Exhibit JEH-2, pages 4-5.

1 **Q. Can you provide general background information regarding the MGP sites managed by KGS?**

2 A. Yes. As noted earlier, KGS manages twelve (12) MGP sites. The MGP sites are in the following

3 Kansas towns: Abilene, Atchison, Concordia, Emporia, Hutchinson, Junction City, Kansas City,

4 Leavenworth, Manhattan, Parsons, Salina and Topeka. KDHE has contacted the Company

5 regarding potential management of a MGP site in Ottawa, but unlike the other sites, KGS has

6 determined that this site was not owned by one of the Company's predecessors. KGS has

7 informed KDHE that, unless additional information becomes available that clearly indicates

8 that KGS is in fact a successor, it does not intend to manage the MGP site in Ottawa.

9 Consistent with the history provided by KDHE (as set forth in its 2008 paper attached hereto

10 as "Exhibit JEH-1" and in the Consent Order (Exhibit JEH-2)), most of these MGPs began their

11 operations in the late 1880s, with most ending their operations by 1908 and the last by 1930.

12 Today, KGS owns the real property at six of the twelve sites where the MGPs were once

13 located and the remaining real property at the other six sites are owned by third parties.

14 **Q. Can you identify Exhibit JEH-3 and explain the information contained in that exhibit relating**
15 **to the 12 MGP sites managed by KGS?**

16 A. Yes. Exhibit JEH-3 is a spreadsheet prepared by ONE Gas and contains background

17 information relating to the 12 MGP sites managed by the Company. Page one of the

18 spreadsheet identifies whether KGS owns the site and whether there is an active Company

19 service center at the site. Page two of the spreadsheet includes a brief narrative of the status

20 of the Environmental Work performed at each site. This spreadsheet also contains a

21 categorical summary of the Environmental Work that has been performed to date and the

22 status at each site relating to soil, groundwater and vapor intrusion. Finally, it includes

23 information with respect to the regulatory status for each site.

1 **Q. Can you provide the Commission with background information concerning the Consent**
2 **Order covering the MGP sites managed by KGS?**

3 A. Yes, I can. Attached to my testimony as “Exhibit JEH-2” is a copy of the Consent Order that
4 was agreed to by KDHE and WRI (a predecessor to KGS) on October 7, 1994. The Consent
5 Order, at the time it was entered into, pertained to only two MGP sites. These sites are in
6 Hutchinson and Leavenworth.¹⁵ The Consent Order covered the performance of WRI
7 regarding certain environmental investigation and remedial activities at the MGP sites. WRI
8 agreed to comply with and be bound by the terms of the Consent Order.¹⁶ The purpose of
9 the Consent Order was to develop effective response activity designed to determine the
10 source, nature, extent and impact of MGP contamination by requiring WRI to perform certain
11 activities spelled out in the Consent Order.¹⁷ The Consent Order allowed KDHE and WRI to
12 add or delete other MGP sites to be covered by the Consent Order.¹⁸ Subsequently,
13 amendments were made to the Consent Order to include the coverage of additional MGP
14 sites. Exhibit JEH-4 provides a timeline showing when various amendments were made to the
15 Consent Order. Exhibit JEH-5 contains the amendments to the Consent Order.

16 **Q. How did KGS become responsible for carrying out the requirements set forth in the Consent**
17 **Order?**

18 A. Based on my review and understanding of the documents contained in Exhibit JEH-6
19 (Stipulation and Agreement, the Order Approving the Stipulation and Agreement and Staff
20 Witness Dietz’s Testimony in support of the environmental provision contained in the
21 Stipulation and Agreement in the 486 Docket), the Commission specifically required KGS to

¹⁵ Exhibit JEH-2, Exhibit A.

¹⁶ Exhibit JEH-2, page 2.

¹⁷ Exhibit JEH-2, pages 2-3.

¹⁸ Exhibit JEH-2, page 3.

1 assume the environmental performance as practiced by WRI at the time WRI sold its Kansas
2 natural gas business to ONEOK in 1997, including WRI's performance under the Consent
3 Order.¹⁹ Since these MGP sites were historically used to provide natural gas service to
4 customers, it is reasonable that they would be sold as part of the natural gas business and
5 assumed by KGS. Based upon the testimony filed by Staff witness Dietz in the 486 Docket, in
6 1997, the Consent Order covered five MGP sites. Additionally, in his testimony, Mr. Dietz
7 indicated that there were likely other sites to be covered by the Consent Order in the future.
8 Mr. Dietz also testified that with respect to the work that would need to be performed, "these
9 are extensive and ongoing projects which will require expertise and resources for many
10 years."²⁰ His recommendation, which was accepted by the Commission, was to require KGS
11 to work with KDHE in order to maintain the environmental performance practiced by WRI
12 under the Consent Order.²¹ Mr. Dietz's recommendation, as adopted by the Commission, is
13 additional support that KGS is now responsible for carrying out the requirements contained
14 in the Consent Order.

15 As I indicated previously in my testimony, the number of MGP sites covered by the
16 Consent Order has increased since the Company was ordered by the KCC to comply with the
17 Consent Order. KGS and KDHE continue to work under the Consent Order in a cooperative
18 manner to schedule and prioritize the Environmental Work performed at the MGP sites being
19 managed by the Company. The scope of the Environmental Work performed (and expected
20 to be performed in the future) by KGS continues to be refined as the investigative work (that
21 has been conducted at the sites since 1997) is still ongoing.

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¹⁹ Exhibit JEH-6, Order Approving Stipulation and Agreement, page 15, paragraph 35.

²⁰ Exhibit JEH-6, Paul Dietz Prefiled Testimony, Section Two, page 7.

²¹ *Id.*

1 IV. Summary of Environmental Work Performed by KGS from January 1, 2017 through March
2 31, 2018
3

4 Q. Please provide a summary of the environmental work performed by KGS from January 1,
5 2017 through March 31, 2018.

6 A. KGS performed the following work by location:

7 1. Abilene

8 • January 2017

9 ○ On behalf of ONE Gas, Burns & McDonnell (“B&McD”) submitted a
10 Comprehensive Investigation work plan to the Kansas Department of
11 Health & Environment (“KDHE”).

12 ○ KDHE approved the work plan and requested response within 30 days to
13 the project manager’s comments and questions.

14 • February 2017

15 ○ B&McD submitted the written responses to KDHE’s
16 comments/questions.

17 • March-April 2017

18 ○ Field work conducted to identify the extent of remaining impacts to soil
19 and groundwater on site, define the extent of non-aqueous phase liquid
20 present beneath the site and to further assess the dissolved-phase plume
21 downgradient of the site.

22 * Field activities consisted primarily of a laser-based,
23 spectrographic investigation (TarGOST®) to determine the extent
24 of non-aqueous phase liquid present in the subsurface, collection
25 of soil and groundwater samples from borings/probes installed

1 at 25 locations and the installation of 18 additional groundwater
2 monitoring wells.

- 3 • August 2017
 - 4 ○ Sampled all new and previously installed wells.
- 5 • December 2017
 - 6 ○ Submitted the Comprehensive Investigation Study Report to KDHE.
 - 7 Conducted a Receptor Study to obtain information necessary to develop
 - 8 a Corrective Action Study.
- 9 • January through March 31, 2018
 - 10 ○ Information presented in the December 2017 Comprehensive
 - 11 Investigation Study Report was combined with findings from the
 - 12 Receptor Study to draft a Corrective Action Study to identify and evaluate
 - 13 remediation alternatives and a recommend a proposed course of action
 - 14 for KDHE consideration. The Corrective Action Study is tentatively
 - 15 scheduled for submittal to KDHE in 2018.

16
17 2. Atchison (site consists of north and south parcels)

- 18 • January 2017
 - 19 ○ B&McD submitted an Interim Removal Action work plan to KDHE.
 - 20 ○ KDHE approved the Interim Removal Action work plan proposing to
 - 21 remove source material from inside an underground tar well and
 - 22 adjacent impacted soils from the tar well that is located on the south
 - 23 parcel.

- 1 o B&McD began developing a Corrective Action Study in January that
2 identifies and recommends an appropriate remedial option for
3 manufactured gas plant residuals within two underground gas holder
4 tanks located on the north parcel. Both gas holder tanks contain
5 construction rubble and soil and are currently covered with asphalt
6 and/or above ground building infrastructure. The Corrective Action
7 Study is tentatively scheduled for submittal to KDHE in 2018.
- 8 • June 2017
- 9 o Groundwater sampling completed as part of the annual groundwater
10 sampling event.
- 11 • November 2017
- 12 o B&McD explored different remedial options for the interim removal
13 action plan to address source material and impacted soils in and around
14 the tar well. Options included review of a new technology (Endpoint
15 Consulting’s Vapor Energy Generator) to treat excavated material on-
16 site to make it suitable for unrestricted reuse as backfill in the
17 excavations. Two drums of representative material were collected and
18 submitted to Endpoint Consulting for a “bench test” to see if the new
19 technology might be a viable option. This option is no longer being
20 actively pursued do to issues with costs and vendor availability.
- 21 • January 1 through March 31, 2018
- 22 o Alternate disposal options were investigated and cost estimates
23 developed to replace the Endpoint Consulting Vapor Energy Generator
24 option.

- 1 3. Concordia
- 2 • June 2017
- 3 ○ Groundwater sampling completed as part of the annual groundwater
- 4 sampling event.

- 5 4. Emporia
- 6 • No activity at this site during 2017.

- 7 5. Hutchinson
- 8 • February 2017
- 9 ○ On behalf of ONE Gas, B&McD submitted a letter to KDHE rebutting
- 10 certain assertions identified in a Voluntary Cleanup Investigation report
- 11 completed by Burlington Northern Santa Fe (“BNSF”). BNSF owns the
- 12 property bordering upgradient of the manufactured gas plant site and
- 13 claims environmental impacts identified during the Voluntary Cleanup
- 14 Investigation originated from manufactured gas plant operations. ONE
- 15 Gas believes these assertions to be invalid and not fully supported by
- 16 the data presented, leading to the rebuttal letter.

- 17 • June 2017
- 18 ○ Groundwater sampling completed as part of the annual groundwater
- 19 sampling event.

- 20 6. Junction City
- 21 • No activity at this site during 2017.

- 22 7. Kansas City
- 23 • June 2017

1 o Groundwater sampling completed as part of the annual groundwater
2 sampling event.

3 8. Leavenworth

4 (The site is owned by Kansas Gas Service and is under a 99-year lease to the City of
5 Leavenworth).

6 • January 2017

7 o KDHE issued a letter documenting the findings from a routine
8 inspection in December 2016 to confirm compliance with the
9 Environmental Use Control in place for the site.

10 * The inspection revealed no violations. However, the letter noted
11 that repairs needed to be made to areas of bank erosion along
12 Three-Mile Creek where it passes through the site.

13 * The City of Leavenworth has contracted and is managing a
14 project to correct and stabilize the creek bank erosion. As the
15 property owner, Kansas Gas Service is contributing to the cost of
16 the project.

17 9. Manhattan

18 • February 2017

19 o B&McD issued a Supplemental Site Investigation Work Plan to KDHE
20 proposing field activities to evaluate the extent of manufactured gas
21 plant impacts at the site and to further assess the dissolved-phase
22 plume downgradient of the manufactured gas plant.

23

24

- 1 • March 2017
- 2 ○ KDHE completed review of the work plan and made comments
- 3 requiring written responses and revisions to the work plan within 30
- 4 days of the date of the letter.
- 5 • April 2017
- 6 ○ ONE Gas requested, and KDHE approved, a 15-day extension to provide
- 7 responses and an updated workplan due to commitments to field work
- 8 being conducted at the Abilene site.
- 9 ○ B&McD submitted a letter with responses addressing KDHE’s
- 10 comments and a revised work plan to KDHE within the 15-day
- 11 extension.
- 12 ○ KDHE approved the revised work plan with no further comments.
- 13 • June, July & October 2017
- 14 ○ Field work conducted to execute the work plan KDHE approved.
- 15 ○ Sample results indicate that additional investigation will be required in
- 16 2018 before a Corrective Action Study can be completed.
- 17 • March 2018
- 18 ○ Began the additional investigation scheduled to concluded by mid-May.
- 19 10. Parsons
- 20 • No activity at this site during 2017.
- 21 11. Salina
- 22 • June 2017
- 23 ○ Groundwater sampling completed as part of the annual groundwater
- 24 sampling event.

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12. Topeka

- June 2017
 - Groundwater sampling completed as part of the annual groundwater sampling event.

V. Reasonableness of Expense Included in Adjustment IS 24

Q. Do the expenses included in Adjustment IS 24 comply with the Settlement Agreement approved by the Commission in Docket No. 17-KGSG-455-ACT?

A. Yes. The expenses included in Adjustment IS 24 are actual and prudent external costs incurred after January 1, 2017, and which were necessary for the investigation and remediation work at MGP sites approved by KDHE. No internal labor costs have been included in these expenses.

Q. Were all expenses included in Adjustment IS 24 prudently incurred?

A. Yes, they were. All expenses have been incurred to address KDHE-approved work plans. Work plans are developed following recognized KDHE and EPA guidance that focuses on protecting human health and the environment but also allows for technical feasibility and some level of cost consideration.

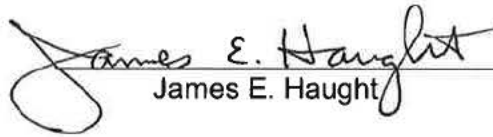
Q. Does this conclude your testimony?

A. Yes, it does.

VERIFICATION

STATE OF OKLAHOMA)
) ss.
COUNTY OF TULSA)

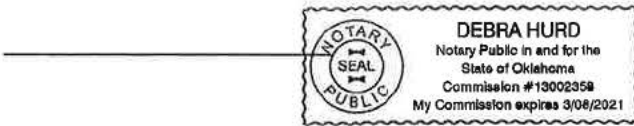
James E. Haught, being duly sworn upon his oath, deposes and states that he is Director – Environmental for ONE Gas, Inc.; that he has read and is familiar with the foregoing Direct Testimony filed herewith; and that the statements made therein are true to the best of his knowledge, information, and belief.


James E. Haught

Subscribed and sworn to before me this 21st day of June 2018.


NOTARY PUBLIC

My appointment Expires:





**Kansas Department of Health and Environment
Bureau of Environmental Remediation/Remedial Section**

Developed By: Aspen Junge and John Cook June 30, 2008

The Manufactured Gas Industry in Kansas

For 60 years, many Kansans depended on manufactured gas to light and heat their homes, and to cook their food. Manufactured gas, produced in factories called gas works, was considered one of the most civilizing improvements a frontier city could make.

Imagine your city as it may have been in the 1860s. Horse-drawn buggies and wagons travel down unpaved streets, which were a sea of mud after it rained. At night it was very dark, because there were no streetlights. What little light there was came from lanterns, fueled by kerosene or candles, placed in windows or in front of whatever businesses were open late. Most people stayed home at night, choosing to go out only when a full moon lit the sky. The dark streets could be dangerous—if you didn't get robbed or lose your way, you could fall into a pothole or get run down by a carriage.

But then gas comes to town and the streets are lined with stately lamp-posts that turn night into day. Homes were lit with a cheery flame that was almost as bright as sunlight, and businesses could stay open later in the evening. Community life flourished as people spent their evenings attending theatre and lectures or socializing.

Gas light was considered far superior to candles or kerosene lanterns. The Kansas Daily Tribune wrote on July 1, 1869:

“There is nothing that will contribute so much to beautify our city, and make life

pleasant and agreeable, as gas light. It is a steady, handy and constant light, and not near so wearing to the eyes as candle or oil light. Then one need not worry himself about oil cans, lamps or lamp chimneys. He may go home with his mind at rest, sure that when the shades of night are closing in around him, his faithful spouse (if he has one, or, in lieu thereof, a mother or sister, or some other man's sister) will have the gas lit, his slippers and gown ready, and a generous welcome in store for the weary toiler (of the Kaw), instead of a lecture on female suffering, caused by his forgetting to bring home the can of oil and the chimneys. In the long run, it is as cheap or cheaper than oil, and not near so destructive in its results. Insurance is always reduced on a building where gas is in use. It is always clean; while with oil you are always spilling, breaking lamps, getting it into your dough and spoiling the hot biscuits, &c., &c.”

Not only was gas light considered a superior form of lighting, it was one way of demonstrating that a city was up-to-date. Kansans of the 19th century, much like Kansans of the 21st century, were interested in technological gadgets and conveniences. They were also very interested in extolling the benefits of Kansas to those who might like to move here. A city that could advertise that it had gas lighting, a municipal water supply, paved streets, modern schools, plenty of churches, and a vibrant

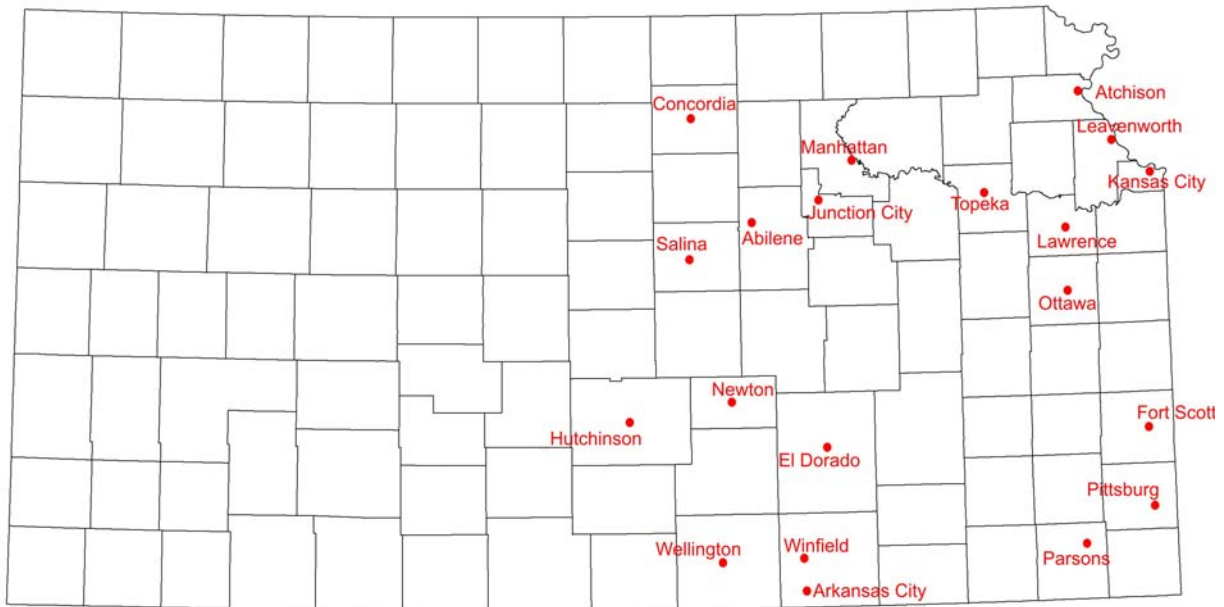
community could attract settlers who were seeking a new life but weren't quite ready to rough it out on the prairie.

Locations of Manufactured Gas Plants

Gas was manufactured in Kansas from 1869 until 1930.

The first big push for building manufactured gas plants was in the late 1860s, after the Civil War, when Kansas was experiencing a huge growth in population. So many people were settling in Kansas that cities were competing with one another to see which would grow in population and influence the fastest, and wanted to be able to advertise modern conveniences. There was a certain rivalry between cities—Topeka and Leavenworth were both constructing gas works, so of course Lawrence had to do the same.

The first boom in manufactured gas plant construction lasted from 1868 to 1871, when four communities, Leavenworth, Topeka, Lawrence, and Fort Scott, invested in gas. From 1880 to 1890, 13 more plants were built, primarily in the eastern and southeastern parts of the state. In the 1890s natural gas was being discovered and developed, and proved to be an excellent fuel for industry and heating although it did not produce as much light when burned as manufactured gas. Twelve manufactured gas plants had closed by 1908. However, when the shallow, easily tapped gas fields began to fail in the early 1910s, prices for natural gas rose to the point where manufactured gas could again compete. Four more gas works were constructed in 1912 and 1913, and remained in operation at least until 1928.



Leavenworth	1868-1906	Hutchinson	1885-1906	Pittsburg	1887-1905
Topeka	1869-1908	Kansas City	1886-1905	Arkansas City	1890-1904
Fort Scott	1871-1905	Wellington	1886-1906	Salina	1881-1928
Atchison	1880-1905	El Dorado	1886-1907	Manhattan	1912-1928
Emporia	1880-1927	Lawrence	1869-1905	Abilene	1913-1928
Parsons	1884-1900	Newton	1886-1917	Junction City	1913-1928
Winfield	1884-1916	Ottawa	1886-1917	Concordia	1913-1930

The Gas Works

Gas was manufactured in a factory called a gas works. The factory usually consisted of one or two buildings, some sheds for storing coal, and a distinctive cylindrical structure called a gas holder or gasometer. Leavenworth's Times and Conservative newspaper described the construction of a new gas holder on April 23, 1869:

“The Gas Company are adding a gas holder to their works, their present one being inadequate to supply the increasing demand for gas. The excavation for the new holder has been made and workmen were busy laying the inlet and outlet pipes. The dimensions of this addition are as follows: brick tank 66 ½ feet in diameter by 20 feet in depth; gas holder 40 feet high by 61 ½ feet in diameter. The gas holder is of the

kind known as telescope holder being in two sections linked together by a hydraulic cup. There are six iron columns placed at equal distances around the holder, each column being 40 feet in height and 15 inches in diameter. The columns are connected at the top by iron truss girders 33 feet long by 30 inches high. The counter balance weights will be in the columns and out of sight. The capacity of the holder will be 250,000 feet per day. The cost of the improvement aggregates \$50,000 and it is expected connexion will be made with the works and street about the first of September. When completed the new holder will be quite an ornament to that part of the city—in all the gorgeousness of red paint contrasting sharply with the black of the columns and girder.”



An excavated gas holder tank in Kansas City. In this picture is the “dumpling,” made of bedrock or concrete, usually left in the holder tank in order to support the gas holder framework and piping.

The gas holder was often built over a large underground tank. Quite often, a knob of rock or concrete, called the “dumpling,” would be left behind to save on excavation costs and to provide a foundation for the framework. The tank would be lined with brick or concrete and made watertight by adding a layer of hydraulic cement. The gas holder itself was a wooden shell, sometimes in two or three telescopic sections, that floated in water that filled the tank. As the holder filled with gas, it rose in the tank. A framework of steel girders surrounded the holder to prevent it from toppling over, and the weight of the holder and counterweights pressurized the gas as it flowed outward through the distribution piping. An engineer could estimate the amount of gas on hand by the height of the gas holder.

Manufacturing Gas

Coal Carbonization Method

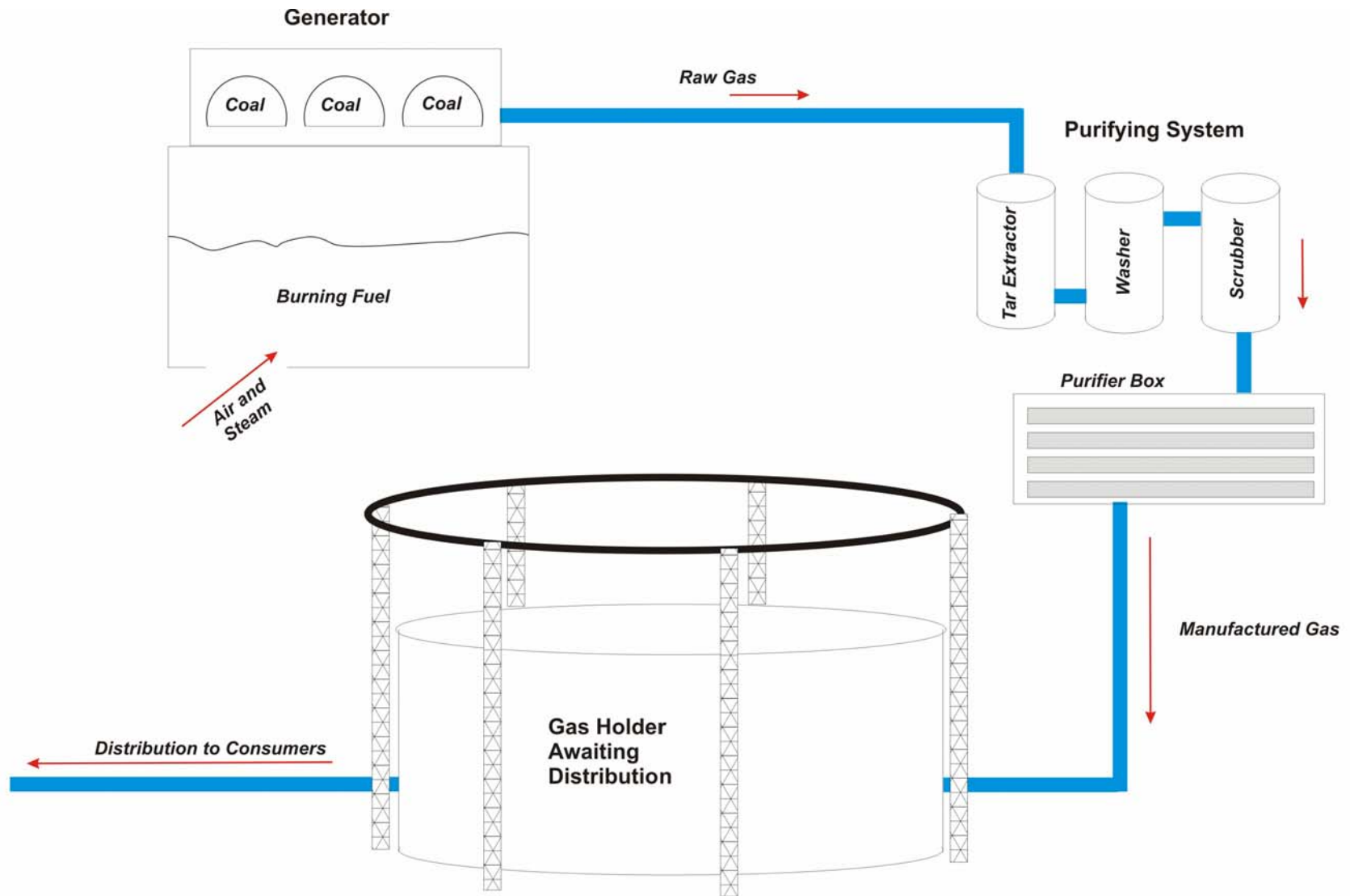
The earliest method of gas manufacture was a relatively straightforward process known as coal carbonization. The figure labeled “The Gas Manufacturing Process: Overview” on the next page demonstrates the process.

The generator consists of one or more “benches”, each one consisting of a coal fired furnace and up to six cylindrical ceramic containers known as retorts. The retorts would be loaded with oily bituminous coal. Beneath the bench was an iron pan which would be filled with water. When the fire was lit in the bench, the water would boil and become steam, which mixed with the air entering the furnace.

By carefully controlling the amounts of air and steam entering the fire, the engineer could control the relative amounts of carbon monoxide (CO) and carbon dioxide (CO₂) produced. These fumes heated the retorts packed with coal, and when steam was introduced into the retorts, it reacted with the carbon in the coal to produce CO and hydrogen, both of which are flammable and were the primary constituents of gas. Also, by becoming red hot, the coal in the retorts gave off vapors rich in hydrocarbons. These hydrocarbons made the gas flame brighter, an important quality when the gas was intended for lighting. Once the coal in the retorts had given off all its volatile gasses, it could be used in the furnace as fuel.

After leaving the retorts, the carbon-rich gas was cooled to between 100° and 60° Fahrenheit, and sent through a set of purifiers. The first stage, condensation, simply cooled the gas, allowing the heavier hydrocarbons to condense into tiny droplets of tar aerosolized in the gas. The tar extractor, the second stage, removed this tar. One popular model did so by forcing the gas through hundreds of tiny holes, forcing the tar droplets to collide and merge, precipitating out of the gas completely. This coal tar was collected and could be used as fuel or sold as feedstock to the chemical industry.

The third stage of purification, washing and scrubbing, removed ammonia compounds from the gas. Ammonia dissolves easily in cool water, so the gas would be bubbled through a tank of water (washing), then pass through a scrubber which acted by spraying water through the gas. The wash water was called ammoniacal liquor, and would be condensed and sold.



The Gas Manufacturing Process: Overview

Finally the gas needed to have hydrogen sulfide (H_2S) removed from it. Hydrogen sulfide has a strong rotten egg smell and is toxic in high doses. Even low doses cause irritation, headaches, and dizziness, so it was important to remove it before delivering the gas to consumers' homes.

This was done through a fairly simple process. Iron oxide (Fe_2O_3) shavings, obtained by mixing iron filings with damp wood chips and letting them rust, were placed in trays in a series of purifier boxes. The gas passed through the purifier boxes, and the hydrogen sulfide would react with the iron oxide from the damp wood chips to form iron sulfide (Fe_2S_3). Any cyanide (CN) compounds in the gas would also be removed by the iron oxide filings, producing a ferricyanide.

At least once a week, when the iron oxide in the box was exhausted, the material could be "revivified" by placing it in heaps on the floor. Oxygen in the air would combine with the iron sulfide, reducing it back to iron oxide, and producing elemental sulfur as a byproduct. The iron oxide could then be reused several times until saturated with sulfur and discarded or sold.

If chemical analysis showed the gas contained too much carbon dioxide, it could be removed by sending the gas through another set of purifier boxes filled with trays of hydrated lime.

The finished gas could now be sent to the gas holder to await distribution to consumers.

Carburetted Water Gas Method

After 1875 the carburetted water gas (CWG) method became the most commonly used in the United States. CWG contained more illuminating hydrocarbon compounds than coal gas, producing the brighter flame that consumers wanted for illumination, and could be manufactured more efficiently.

In the CWG process, the generator was modified to include a carburettor and a superheater. Both of these structures were built of firebrick laid in a checker board pattern. The carburettor and superheater would both be heated to high temperatures during the manufacturing process. The figure on the next page demonstrates CWG manufacturing.

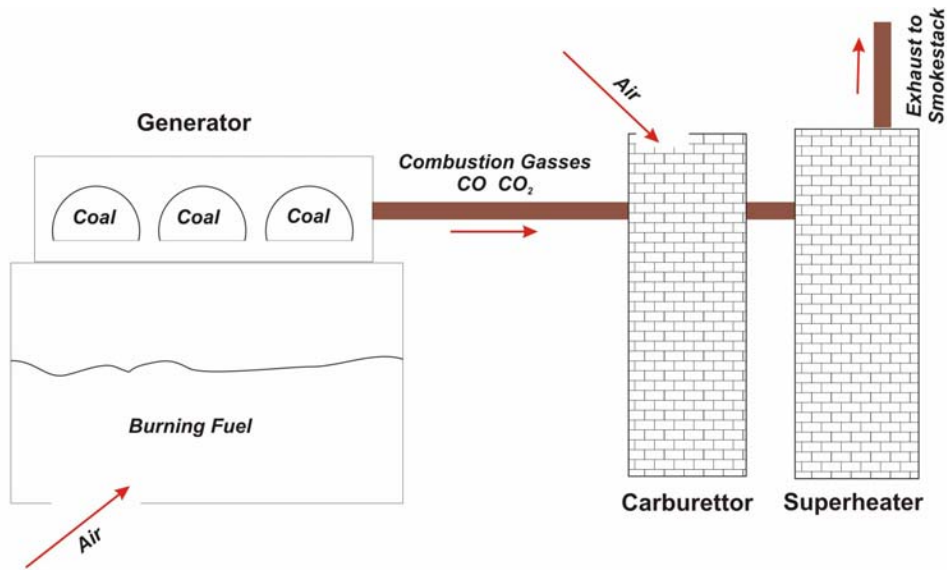
The process had two states, a blow cycle and a run cycle. In the blow cycle, air would be forced through the burning fuel in order to produce large amounts of heat. When the hot fumes passed into the carburettor, more air was blown in to complete combustion and produce more heat. The waste gasses passed through the superheater and were directed out of the smokestack and into the atmosphere.

Once the system was sufficiently hot, the run cycle would begin. The engineer would direct steam, rather than air, into the generator, and it would react with the burning fuel and hot coal in the retorts to make what was known as "blue gas" or "water gas." This gas burned hot and well, but it didn't have enough hydrocarbon compounds suspended in it to make a good light.

Hydrocarbons were added by spraying crude oil, or lighter "gas oil," onto the hot bricks in the carburettor. This thermocracked the oil into smaller compounds, which would be permanently fixed in a gaseous state by exposure to the high temperature in the superheater.

Once made, the CWG would be sent through the same purification and delivery process as coal gas.

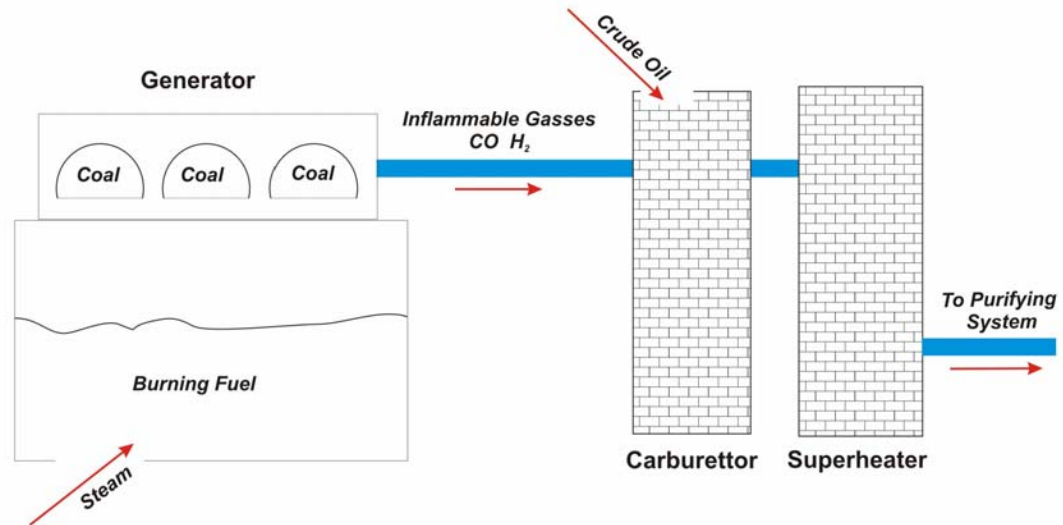
Water gas, without carburation, continued to be produced even after natural gas became available nationwide. Because water gas is chemically similar to natural gas, it was possible to make gas during times when natural gas supplies were limited, or there was high demand, and it could be used in the same appliances as natural gas.



**Blow Cycle
Produces Heat**

7

**Run Cycle
Produces CWG**



The Carburetted Water Gas Manufacturing Process: Blow and Run Cycles

**To The People of Junction City:
WOULD YOU USE GAS?**

A manufactured gas plant is anticipated in your city and it is the desire of the parties interested, to obtain information as to whether the people of Junction City would support the undertaking of such a plant being installed.

The plant, should it be installed, will be one of the most modern and efficient gas plants; one that will be a credit to the city.

Its purpose will be to serve the people with a most useful commodity--GAS.

If you want this plant to be built in Junction it is necessary for you to give your support to the undertaking by using gas.

The investors are putting the matter up to you. *Shall this plant be built or not?*

Five hundred contracts are necessary to make the proposition feasible. If these contracts are secured work will be started early this spring.

Read carefully the contract as it appears in this ad, then fill out contract and mail to L. E. SPEAR, Bartell House.

We shall then know that you wish to be one of the five hundred, and that you desire to support and advance the upbuilding of Junction City.

Clip out attached coupon today; Now; while the matter has your attention, and mail it in.

We need your support and co-operation. Boost for Gas and progress.

MAIL TO L. E. SPEAR, BARTELL HOUSE, TODAY.

**JUNCTION CITY GAS PLANT.
Service Contract.**

J. J. Donelan, his successors or assigns.

The undersigned hereby authorizes J. J. Donelan, his successors or assigns, to run a service pipe from the gas mains into the basement of the hereinafter described property:

Name of Street..... No. of House.....

The undersigned agrees to pay \$5.00 to cover necessary labor for the installation of said service.

Conditionary Clauses.

1. That this contract shall be void if gas plant is not installed.
2. That J. J. Donelan, his successor or assigns, will furnish, without extra charge, meter, governor, pipe and fittings necessary for the installation of said service.
3. That this material is to remain the property of J. J. Donelan, his successors or assigns.
4. That the applicant agrees to permit the gas men to install pipes to his basement any time after construction of plant.
5. That the applicant is under no other obligations than to pay the above stipulated, \$5.00 service charge, when work has been completed.

Date..... Signed.....

Junction City awarded its manufactured gas enterprise to J. J. Donelson, who promised to build a plant if enough citizens pledged to use gas. Advertisements like this were placed in the Junction City Union. Construction began in May 1913 and customers were using gas stoves by August.

Gas Distribution

The gas was delivered to consumers through a series of pipes laid underneath the city streets. Usually the gas works was located at a low elevation relative to the rest of the city because gas is naturally lighter than air and would rise through the mains.

One of the problems encountered was that of condensation in the pipes. The gas would pick up humidity from the purification process, and on very cold days this water would condense or freeze in the pipes, blocking or perhaps breaking them. Other substances also

condensed; naphthalene, the chemical used in mothballs and a primary component of coal tar, would often precipitate into crystals in the pipes. Naphthalene is associated with anemia, liver damage, and cataracts, and may be a carcinogen. Its unpleasant odor made it an unwelcome addition to the gas.

In order to control condensate, the distribution lines included drip pots in low spots. These pots acted as sumps, collecting water and tars from the gas. Workers would regularly maintain the pots by pumping them out.

Manufactured Gas in Daily Life

Before gas could be used for light, heating, and cooking, the building had to have gas pipes installed. Fitters would install pipes from a meter on the distribution line to each room in which gas would be used. The pipe required a corrosion resistant coating that prevented it from reacting with compounds in the gas.

Lighting fixtures could be installed on the walls or ceiling, and were often elaborately decorated. Many of our modern electrical lamps and chandeliers are based on the designs for gas lamps.

A kitchen stove had burners and an oven heated by gas. In order to use any of these, the owner would simply turn a valve and light the gas with a match. Gas cooking stoves were particularly appreciated in the summer, because when the cook was finished preparing a meal, she could just turn the stove off. Wood or coal stoves, by contrast, would continue heating the kitchen until the fire burned out. Heating stoves were often small enough to fit on a shelf or a table, and were connected to the pipes by special valves that could be connected and disconnected easily, allowing the heater to be moved from room to room.

One of the primary uses of gas was to fuel street lights. Lighting the streets improved safety, reduced crime, and encouraged people to socialize in the evening. Shops could stay open later, and the city's downtown could become an entertainment district, with theaters and fine restaurants, as well as a business center. The street lights were maintained by lamplighters, who would light and extinguish the gas and polish the soot off the glass.

Gas lighting wasn't perfect. The pipes would make noise, and burning gas left soot on the walls and ceilings. The gas itself had a distinctive unpleasant odor. The burners had to be properly adjusted and provide the correct mixture of gas and air, otherwise the gas wouldn't burn cleanly and compounds like

carbon monoxide could poison the residents. If a gas pipe leaked, or a valve was left open, enough gas could build up in a room to cause an explosion. Several contaminants found in gas, such as hydrogen sulphide, cyanide, and naphthalene, could make residents seriously ill after inhaling them.

In the 1890s, gas mantles became available. These were thumb-shaped mesh bags impregnated with thorium, which incandesces at high temperatures. The burning gas would heat the bag, which would glow brightly. The gas mantle, now often made with non-radioactive yttrium, is still used in propane-powered camp lanterns.

The End of Gas Manufacturing

Pittsburg, Kansas, had abundant coal with which to power its industries; Lawrence had its Kaw River dam and water mills. Iola, in Allen County, discovered it had rich and accessible reserves of natural gas, and began successfully promoting itself as the next industrial center in Kansas. Natural gas was so abundant in Iola that every citizen was initially given as much gas as they wanted for \$1 per month. Allen County aggressively recruited fuel hungry industries such as zinc smelting, portland cement manufacturing, and glass making to locate in Iola and the neighboring cities of La Harpe and Gas. Gas field entrepreneurs quickly learned how to store and transport natural gas to locations away from the gas fields, and by 1908, eleven manufactured gas plants statewide had been abandoned.

Electric power was being developed in Kansas about the same time as manufactured gas. Photographs of downtown Topeka from the early 1870s show electric street cars, and in many cases, the manufactured gas plant also began to generate electricity for domestic and industrial use. With the development of a successful incandescent light bulb by Thomas Edison in 1879, gas lighting now had a competitor, and

many gas consumers retrofitted their gas lighting fixtures to use the new power source. Electricity didn't produce soot or odors like gas would, and proved to be very popular. Electricity, provided by a gasoline-powered generator, was particularly advantageous on farms and households which were too far from town to be connected to the gas mains.

By 1930, the last manufactured gas plant in the state closed its doors. Gas was still manufactured in other parts of the United States until a nationwide system of natural gas pipes was completed in the 1960s. Europe, without ready access to natural gas, continued to manufacture gas into the 1980s, when an exploitable reserve of natural gas was discovered in the North Sea. The buildings housing the gas holders have been considered cultural and historical landmarks, and many have been converted into living, retail, or office space.

Manufactured Gas and its Environmental Legacy

Although it was relatively clean-burning at the consumer's end, gas was anything but clean to make. In recent years, there has been a lot of interest in locating and assessing the environmental impact of former manufactured gas plants in the United States. The process of making gas left behind substances such as coal ash, clinkers, coal and oil tars, lampblack, ammonia, cyanide compounds, and emulsions of oil or tar in water.

Some of these materials had commercial value and could be resold or used. Coal tar, lampblack, sulfur, and ammonia could be used as feedstock for the chemical industry. Coal tar could also be used as fuel in the furnaces. Coal ash and cinders were often used as inexpensive construction fill or to treat icy roads in the winter.

Residual material that could not be sold was often stored or disposed of on site. These materials might include water contaminated with ammonia and tar, which might be dumped into



These gasometers in Vienna were used until 1984, and have since been converted to retail, office, and living space.

the nearest creek or river. Coal tar could be stored in a tar well—a pit often lined with brick or concrete. Even if the tar was later recovered and sold, it might have leaked through cracks in the lining into the soil. Coal tar would also collect in the gas holder tank, and could leak from there into the soil. Spent lime and iron shavings used in the purification process, along with the wood chips or ground corn cobs used to increase the surface area of the purifier material, would be spread or buried on-site.

Once the plant was decommissioned, it was usually torn down. Leftover equipment, residual materials, and construction debris would be used to fill in the gas holder tank. The city of Wellington decided to turn their former manufactured gas plant into a park and community center. In order to fill the gas holder tank, the entire city cleaned out their closets, basements, and yards, and used the trash as fill.

In her history of Sellers Park, Marie Seelers Van Denenter wrote:

“On the property was also a deep pit 54 feet in diameter and 20 feet deep, originally known as the “gasometer” or “holding tank” which was inadequately covered. It was filled with stagnant water and debris and gave off a foul odor. Filling this pit was a primary concern of the Cary Circle women because of the possible danger to children playing in the area. The problem was how to get it filled.

It was decided there wasn’t anything Wellington needed more than a citywide cleanup and no better place for the trash than this deep hole. Therefore, with the approval of the City Commission for a cleanup, every club and organization was asked to help, and a week was set aside in March (1914) for all property owners and all renters to cleanup their premises, and on March 21st, all discarded trash would be hauled away free. Publicity, donated by the two daily and one weekly newspapers, urged citizens to contribute anything they wanted to get rid of, and produced an overwhelming response. Many men with teams and wagons gave their

time and equipment free of charge to help with the hauling. There were old stoves, broken household furniture, iron beds and bedsprings, cupboards, broken china, and trash of every kind and description, and a great many loads went into the hole. Everyone seemed to catch the spirit, with one city ward vying with another to see which would contribute the most trash to fill the old gas tank. It is doubtful if Wellington ever presented a more shining appearance than in the week following this scouring.

The first cleanup and dumping of rubbish which took several hundred loads to fill was a great success, but the trash soon sank and more was needed. The following year another cleanup was proclaimed and with the support of the citizens the level of the pit was again achieved.”

The gas generation building was turned into a clubhouse, and used for many years for parties, banquets, and community gatherings. After World War II, the Park House was turned into a recreation center managed by the local school district. Park House is now the Panhandle Railroad Museum.



Park House in Wellington was used as a community center and now houses the Panhandle Railroad Museum.



Removing the contents of the gas holder tank at the former manufactured gas plant in Manhattan. The contents are primarily water, woody debris, soil, and hard-parts refuse.



Excavated material from the site placed in the gas holder tank to soak up water contaminated with coal tar. The contaminated material was removed and properly disposed of at a hazardous waste disposal facility.



Excavation revealed underground foundations and structures. These were left in place when clean fill was installed.



The outside wall of the coal tar well. This kind of brick construction was typical of underground structures at a manufactured gas plant.



Filling the gas holder with clean fill. The bottom of the gas holder tank was broken to prevent water from continuing to collect in it.



The site after remediation was completed. It can now be redeveloped and put back into use.

The Remediation of a Former Manufactured Gas Plant

The substances usually associated with a former manufactured gas plant are hazardous, consisting of coal tars containing polynuclear aromatic hydrocarbons (PAHs) and volatile organic chemicals (VOCs), purifier residues that may contain sulfur and cyanides, and coal ashes that may contain heavy metals such as arsenic. However, these substances are typically immobile when buried in the subsurface and do not migrate appreciable distances by, for example, contaminating very large amounts of ground water. Some of these contaminants would have, over the time since the former manufactured gas plant was closed, have evaporated or been subject to natural biodegradation in the environment. Remedial efforts usually involve contaminant source removal and/or containment, and a long term commitment to assessing and monitoring ground water quality.

There are many strategies that can be applied to remediation, ranging from simple excavation of impacted soil and residual tars for disposal in an approved landfill, to on-site treatment options, to placing Environmental Use Controls on the property to limit current and future land use. These remedial strategies can be applied to soil, sediments, and ground water.

Selection of the best remedial alternative is only made after careful and thorough characterization of the nature and scope of contamination, and only after consideration of stringent screening criteria, including the overall protection of human health and the environment; compliance with applicable or relevant and appropriate requirements (ARARs); long-term effectiveness and permanence, reductions of contaminant toxicity, mobility, and volume through treatment; short-term effectiveness; cost;

state acceptance; implementability; and, perhaps most importantly, community acceptance. In a few cases, after thorough site assessment, no remedial action at all is required.

The cleanup costs at former manufactured gas plants are highly variable, depending on the amount of impacted material, how deep below the ground surface it is buried, and the availability of an appropriate disposal facility.

Locating and cleaning out the gas holder tank and coal tar well, if it exists, are a high priority. Experience has shown that these are the locations in which contamination is most likely to be concentrated. Remediation often consists of digging out and removing the contents of these underground structures, assessing the removed material for its hazardous characteristics, and disposing of it offsite in an approved waste disposal facility. The gas holder and tar well may then have the brick or concrete linings broken in order that water does not collect in the structure, and then are filled with clean gravel and soil. Soil, debris, and other materials which are judged to be non-hazardous can be consolidated onto one section of the site and covered with an engineered cap which is designed to protect the subsurface soil and prevent rain water from percolating into the subsurface. The cap can be paved and used a building foundation or a parking lot, or planted with grass.

In most cases, these activities successfully remediate the site to below Kansas Risk-Based Standards for non-residential properties. If low levels of contamination remain in the subsurface, the remediation process can be completed by placing an Environmental Use Control on the property, adding language to the deed which restricts certain future activities on the site such as digging or excavation, and prevents the installation and use of wells.

Manufactured Gas in our Future

America is currently seeking new forms of energy, and manufactured gas, now known as “syngas”, may make a comeback. The gasification process for coal; oil; or the biomass from wood, vegetable oil, or garbage is a well-understood method of making hydrogen. Hydrogen is a fuel that burns without releasing pollutants or greenhouse gasses into the atmosphere, and is being considered as a fuel for cars. Some companies are developing new technologies that may make manufacturing syngas both economical and clean by improving the efficiency of the gasification process and developing more effective methods of capturing and removing contaminants. If biomass, rather than natural gas or coal, is used as the primary feedstock, gasification can even be made carbon-neutral. Whether manufactured gas is once again used as a practical source for fuel remains to be seen.

STATE OF KANSAS
DEPARTMENT OF HEALTH AND ENVIRONMENT
CONSENT ORDER

WESTERN RESOURCES INC.

Case No. 94-E-0172

RECEIVED

OCT 11 1994

LEGAL
DEPARTMENT

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STATE OF KANSAS
 DEPARTMENT OF HEALTH AND ENVIRONMENT
 CONSENT ORDER

IN THE MATTER OF:)	CONSENT ORDER
)	
)	
WESTERN RESOURCES INC.)	No. 94-E-0172

ARTICLE I. JURISDICTION

1. This Consent Order is entered into by Western Resources Inc. (hereinafter referred to as "Western Resources" or "Respondent") and the Kansas Department of Health and Environment (hereinafter, "KDHE") pursuant to K.S.A. 65-3430, 65-3453 and 65-3455. The Consent Order concerns the performance by Western Resources of certain environmental investigation and remedial activities at a former manufactured gas plants ("MGPs" or "Sites") located across the State of Kansas. The legal description of each Site is included in Exhibit A which is attached hereto and incorporated into this Consent Order.

2. Respondent's participation in this Consent Order shall not constitute or be construed as an admission of liability, for any purposes, or an admission of KDHE's findings or determinations contained in this Consent Order. However, by signing this Consent Order, Respondent consents to KDHE's jurisdiction to issue this Consent Order, and agrees to comply with and be bound by the terms of this Consent Order and will not contest the Secretary's jurisdiction to enforce the terms of this Consent Order in

accordance with K.S.A. 65-3453.

3. In the event that the applicable Kansas or federal environmental statutes are modified or amended after the effective date hereof, and except for completed actions and/or operable units, KDHE and Respondent agree that any activities required to be performed at the Site (or at additional Sites as mutually agreed by the Parties) pursuant to this Consent Order will be subject to the newly modified or amended Kansas or federal environmental statutes.

4. Western Resources and KDHE acknowledge that the MGPs listed on Exhibit "A" were owned and/or operated by multiple corporate entities and/or individuals and that the real estate constituting the Site may be owned by parties who did or did not own/operate the Site. The MGPs listed on Exhibit "A" are presented for informational purposes only and do not constitute an admission of liability, for any purposes, by Western Resources. KDHE has not at this time made findings or determinations that Western Resources is a liable party at the MGPs listed on Exhibit "A".

5. Western Resources may present information to KDHE that evidences or refutes that Western Resources, its predecessors, or other unrelated corporate and/or individual parties are potentially liable at a specific MGP. KDHE agrees to consider such information and determine an appropriate course of action.

ARTICLE II. STATEMENT OF PURPOSE

1. In entering into this Consent Order, the mutual objective of KDHE and the Respondent is to expedite effective response activity to determine the source, nature, extent and impact of MGP contamination by performing one or more of the following

activities: PA, CI/CAS, CAP/CA, RI/FS, RD/RA, SI, ESI or removal or other remedial action as mutually agreed upon by the parties in accordance with the selected respective Statement of Work ("SOW"), if one exists or a modified SOW agreed to by both parties. In the event that a CERCLA response action is selected, the work shall be undertaken in a manner consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. Part 300 et seq. commonly referred to as the "NCP").

2. Western Resources and KDHE intend that this Consent Order may be modified, upon the parties' mutual consent, to add or delete MGP's for appropriate environmental investigation activities. Either Western Resources or KDHE may propose to add or delete MGP sites under the provisions of Article XIX of this Consent Order. The exact format and procedures for subsequent environmental investigations and/or removal and/or other remedial action(s) must be mutually agreed upon by the parties.

ARTICLE III. STATEMENT OF FACTS

1. Beginning in the 1850's, the manufactured gas industry provided gas service in Kansas.

2. Manufactured gas plants produced gas for lighting and heating purposes by converting coal (and sometimes coal and petroleum) into a gas product.

3. The United States Environmental Protection Agency has estimated that manufactured gas plants operated at over 1500 locations throughout the United States.

4. The availability of natural gas delivered by pipeline made manufactured gas obsolete and manufactured gas production was

limited to peaking loads and finally was terminated by the 1950's.

5. By-products of manufactured gas production such as coal tar were produced because the coal was not wholly consumed during manufacturing. Coal tars were valuable by-products and were typically stored on-site for sale and transported to users as an ingredient in the manufacture of asphalt, cosmetics, chewing gum, plastics and other products.

6. Residuals of manufactured gas production include certain substances that possessed no economic value such as emulsified coal tars, purifier (or oxide) box materials, clinker and sometimes petroleum. Residuals may have been stored on-site in a variety of above and below ground structures.

As a purification step during the production of manufactured gas, oxide boxes were commonly used to remove contaminants from the manufactured gas. Purifier box materials typically consist of wood chips, iron oxide, and chemicals removed from the manufactured gas during purification, such as iron sulfides and stable ferrocyanide complexes. Weathered spent oxide box filler exhibits an intense blue pigmentation caused by ferric ferrocyanide, $Fe_4[Fe(CN)_6]_3$, a chemical compound which is used commercially as a pigment and is commonly known as Prussian Blue. The Merck Index lists the use of Prussian Blue as a pigment in applications such as printing inks, paints, alkyl resin enamels, linoleum, carbon papers and artists colors.

7. Some MGP's have been listed on the United States Environmental Protection Agency's National Priorities List because the presence of coal gasification residuals were found to present a significant exposure risk to human health or the environment.

8. Chemical constituents which have been found in coal gasification residuals include polynuclear aromatic hydrocarbons, volatile aromatics, metals, phenolics and various inorganics.

9. Western Resources and KDHE recognize that the manufactured gas industry's past practices were state-of-the art at the time, but that these historic practices may not reflect modern environmental requirements.

10. The Respondent desires to insure that the public health, welfare and the environment at or near the Site is protected from any release or threat of release of hazardous substances.

11. Site specific Findings of Fact are set forth in Exhibit 2, attached hereto.

ARTICLE IV. CONCLUSIONS OF LAW

The following Conclusions of Law are not admitted or consented to by the Respondent, but have been determined solely by KDHE for purposes of this Consent Order only.

1. Certain of the waste previously described and the constituents thereof released or threatened to be released are "hazardous substances" as defined in K.S.A. 65-3452a.

2. Under the terms of Article I, Paragraph 5, of this Consent Order, the KDHE may determine that at certain MGPs, the Respondent is a "person responsible for the health or environmental hazard created by the hazardous substance" as defined in K.S.A. 65-3453(a)(3). Other corporate entities and/or individuals not identified in this Consent Order may also be a person responsible for the health or environmental hazard created by the hazardous substance.

ARTICLE V. DETERMINATIONS

Based on the Statement of Facts and Conclusions of Law set forth above, which are not admitted or consented to by the Respondent, KDHE has determined that the actual or threatened or potential releases(s) of hazardous substances into the surface water and ground water, and onto the soils of the Site constitutes an actual or potential threat to public health and the environment. KDHE finds that the actions required by this Consent Order are in accordance with K.S.A.'s 65-3443, 65-3453 and 65-3455, and are necessary to protect the public health and the environment.

ARTICLE VI. WORK TO BE PERFORMED

It is hereby AGREED TO AND ORDERED that, following Respondent's selection of a response action for a specific site and KDHE's approval of that selection, Respondent will prepare a draft Work Plan consistent with the appropriate KDHE Scope of Work ("SOW") appearing on Page 3.

1. Within ninety (90) days of the mutual selection of the response action for a specific site in accordance with Article II, Western Resources shall submit the respective draft Work Plan to KDHE. All submittals shall be developed in accordance with this Consent Order, the SOW and those portions of applicable guidance documents provided by KDHE.

The Work Plan shall describe the field activities called for in the Statement of Work. The Work Plan shall be developed consistent with the NCP, if appropriate, and in accordance with appropriate U.S. EPA and KDHE guidance.

2. Western Resources shall, implement the work described in

the Work Plan in accordance with the implementation schedule contained in the approved Work Plan for the Site. As approved, each component of the Work Plan, and approved modifications thereto, shall be deemed incorporated into this Consent Order and made an enforceable part of this Consent Order. All work shall be conducted in accordance with, and not inconsistent with the Act, CERCLA, the NCP (if appropriate) and any amendments thereto, and the requirements of this Consent Order, including any standards, specifications, and schedules contained in the Statement of Work and the Work Plan.

3. Each MGP-specific Work Plan shall contain an implementation schedule which outlines the schedule for submission of deliverables for the response action.

4. The Quality Assurance Project Plan ("QAPP") shall, at a minimum, describe the quality control, quality assurance, sampling protocol, and chain of custody procedures that shall be implemented in carrying out the tasks required by this Consent Order. The QAPP shall be developed in accordance and not inconsistent with the U.S. EPA "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans" (QAMS-005/80), EPA-600/4-83-004; NTIS PB 83-170514.

5. The Respondent shall prepare a Field Sampling Plan (FSP) specifying the necessary activities to obtain representative and valid site data as required by the SOW. The FSP shall state the sampling objective; necessary equipment; sampling types, locations, and frequency; analysis of interest; and a schedule of sampling events. The FSP shall be prepared in accordance with the methods and procedures outlined in the United States Environmental

Protection Agency documents EPA/540/G-89/004 (Guidance for Conducting Remedial Investigation and Feasibility Study Under CERCLA) and EPA/540/P-87/001 (A Compendium of Superfund Field Operation Methods).

6. Western Resources shall submit a Site Health and Safety Plan. This Plan shall be in conformance with applicable Occupational Safety and Health Administration and EPA requirements, including, but not limited to, those at 29 C.F.R. Part 1910. KDHE may review and comment on the Site Health and Safety Plan, however KDHE will not approve or disapprove the Site Health and Safety Plan.

7. Respondent shall notify KDHE at least seven (7) days before conducting any well drilling, installation of equipment, or sampling. At the request of KDHE, Respondent shall provide or allow KDHE or its authorized representatives to take split samples of all samples collected by Respondent pursuant to this Consent Order. Similarly, at the request of Respondent, KDHE shall allow Respondent or its authorized representatives to take split or duplicate samples of all samples collected by KDHE under this Consent Order. KDHE shall notify Respondent at least seven (7) days before conducting any sampling under this Consent Order, provided, however, that if seven (7) days notice of sample collection activity is not possible, KDHE and Respondent shall give such advance notice to enable each party to have a representative present during said sample collection activity.

8. The Respondent shall provide KDHE with written quarterly Site specific progress reports. At a minimum these progress reports shall: (1) describe the actions taken to achieve compliance

with the Consent Order for the reporting period; and (2) describe the actions scheduled for the next reporting period. These reports shall be mailed to KDHE by the tenth day of each quarter following the date of this Consent Order. These progress reports shall continue until the earlier of three events occurs: Respondent submits the respective final Site specific document and such Site specific document is approved by KDHE; KDHE discontinues the progress report requirement in writing; or until the termination of this Consent Order pursuant to ARTICLE XXIV.

9. After review of each plan, report, or other item which is required to be submitted for approval pursuant to this Consent Order, KDHE will:

- a. approve, in whole or in part, the submission;
- b. approve the submission upon specified conditions;
- c. disapprove, in whole or in part, the submission directing the Respondent to modify the submission; or
- d. any combination of the above.

After receipt of Notice of Disapproval (in whole or in part), the Respondent may either: (1) amend and submit to KDHE revised reports and perform such additional or modified work to cure the deficiencies in the reports or work agreed to in accordance with KDHE's recommendations, or (2) invoke the Dispute Resolution procedures in ARTICLE XXII.

In the event of subsequent disapproval of such revised reports or additional or modified work and subsequent invocation by Respondent of the Dispute Resolution procedures in ARTICLE XXII, KDHE retains the right to perform additional or modified work, prepare the reports, pursuant to its authority under K.S.A. 65-

3453(a), and/or undertake any judicial or other remedy available to it by law.

10. If the response action is pursuant to CERCLA, the activities conducted by the Respondent pursuant to this Consent Order under and consistent with the approved Work Plan, are believed to be consistent with the National Contingency Plan.

ARTICLE VII. DESIGNATED PROJECT COORDINATORS

Within fifteen (15) days of the effective date of this Consent Order, the Respondent shall designate a Project Coordinator, and KDHE hereby designates Gary Watkins as its Project Coordinator. The Project Coordinators so designated shall be responsible for overseeing the duties and responsibilities of their respective parties. It is understood that the Respondent's Project Coordinator shall not have responsibility for overseeing the discharge of the responsibilities of KDHE; and, likewise, KDHE's project Coordinator shall not have responsibility for overseeing the discharge of the responsibilities of the Respondent. Communications between KDHE and the Respondent and all documents, including reports, approvals and other correspondence, concerning the activities performed pursuant to the terms and conditions of this Consent Order, shall be directed through the Project Coordinators.

The Respondent and KDHE each have the right to change their respective Project Coordinator. Such a change shall be accomplished by notifying the other party in writing at least five (5) business days prior to the change.

The absence of KDHE's Project Coordinator at the work site

shall not be cause for stoppage of work, nor cause for rejection of the results of any work.

The Project Coordinators do not have the authority to modify in any way the terms of this Order except as provided under ARTICLE XIX of this Consent Order.

ARTICLE VIII. ACCESS AND DATA DOCUMENT AVAILABILITY

To the extent that the Respondent controls the Site, KDHE and/or its authorized representatives shall have the authority to enter and freely move about all property at the Site at all reasonable times without prior notification for the purposes of, among others: inspecting data records, operating logs, and contracts related to the Site; reviewing the progress of the Respondent in carrying out the provisions of this Consent Order; conducting such tests as KDHE or the Project Coordinator deems necessary; using a camera, sound recording, or other documentary type equipment; and verifying the data submitted to KDHE by the Respondent. The Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, and other writings, pertaining to work undertaken pursuant to this Consent Order. Nothing contained herein shall be deemed a waiver of the attorney-client privilege or the protection provided by the attorney work product doctrine.

To the extent that the Site or any other property to which access is required for the implementation of this Consent Order is owned or controlled by persons other than the Respondent, Respondent shall use reasonable efforts to secure from such persons access for Respondent, as well as for KDHE, and its

representatives, including, but not limited to, their contractors, as necessary to effectuate this Consent Order. In the event Respondent is unsuccessful, KDHE agrees to assist Respondent in gaining such access.

The Respondent may assert a business confidentiality claim covering part or all of the information submitted pursuant to the terms of this Consent Order in the manner set out in K.S.A. 65-3447. The information covered by such a claim will be disclosed by KDHE only to the extent, and by the means of the procedures, set forth in K.S.A. 65-3447. Such a claim may be made by placing on the information, at the time it is submitted to KDHE, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret". Allegedly confidential portions of otherwise non-confidential documents should be clearly identified and may be submitted separately to facilitate identification and handling by KDHE. If confidential treatment is sought only until a certain date or until occurrence of a certain event, the notice should so state. If no such claim accompanies the information when it is received by KDHE, it may be made available to the public by KDHE without further notice to the Respondent.

All of the above shall not be subject to notice by KDHE to the Respondent of KDHE's intention to exercise its rights to conduct inspections, including the authority to make copies of tests, test results, pictures, sound recordings and documents. Notwithstanding the above, at least five (5) business days notice shall be given to the Respondent prior to KDHE's exercising of said right if KDHE requests the presence of the Respondent's contractor.

ARTICLE IX. RECORD PRESERVATION

The Respondent shall preserve, during the period of this Consent Order and for a minimum of six (6) years after the Consent Order's termination, all records and documents in its possession or in the possession of its divisions, employees, agents, accountants, contractors, or attorneys which relate in any way to the Sites or work performed pursuant to this Consent Order, notwithstanding any document retention policy to the contrary. The records and documents may be retained by the Respondent on microfilm or other appropriate medium. After this six year period, the Respondent shall notify KDHE not less than sixty (60) calendar days prior to the destruction of any such documents. Upon request by KDHE, the Respondent shall make available to KDHE, such records or copies of any such records. Said documents may be destroyed and/or discarded by Respondent if KDHE does not request records within sixty (60) days. Notwithstanding the foregoing, any and all records and documents referenced above may be destroyed without notice ten (10) years after the termination of this Consent Order.

All attorney documents, and all internal memorandums, letters and other such material of Respondent, not submitted to KDHE, between Respondent and its affiliated corporations, their directors, officers, and employees, or the officers, employees, and representatives of Respondent, are deemed confidential by Respondent. KDHE does not admit these documents are privileged for the purpose of discovery.

ARTICLE X. RESERVATION OF RIGHTS

1. It is agreed between KDHE and the Respondent that the

Respondent will undertake studies and actions under this Consent Order with the State of Kansas as represented by KDHE, and that the Respondent intends to continue such work with KDHE for compliance with the terms of this Consent Order. Should it be determined subsequent to the entry of this Consent Order that additional tasks not mentioned in this Consent Order need to be accomplished, KDHE reserves the right to require the Respondent to perform these additional investigative and/or remedial tasks consistent with the scope and intent of this Consent Order. In the event that Respondent declines to perform any additional or modified tasks, the Respondent reserves the right to seek Dispute Resolution.

ARTICLE XI. REIMBURSEMENT OF COSTS

The Respondent shall, pursuant to K.S.A. 65-3453(a)(4), reimburse KDHE for response (including, if appropriate, development of a baseline risk assessment, community relation plan, public information program and maintenance of the administrative file) and oversight costs incurred with respect to this Consent Order. KDHE agrees to provide Respondent a Site specific written description of its costs and expenses (including its contractors). KDHE hereby agrees to waive and forego collection from the Respondent of any and all response and oversight costs incurred prior to the date of this Consent Order. Future reimbursement demands for KDHE costs and expenses incurred after the effective date of this Consent Order will be sent to the Respondent and payment is due within sixty (60) calendar days of receipt of the accounting, except for those charges which are contested. Contested charges are subject to dispute resolution.

ARTICLE XII. SUCCESSFUL COMPLETION OF THE RESPECTIVE ACTIVITY

Upon completion of the requirements of this Consent Order, including the payment of response and oversight costs incurred by KDHE in accordance with ARTICLE XI, KDHE shall use its best efforts to issue within thirty (30) days certification to the Respondent that the responsibilities under this Consent Order have been completed and successfully discharged and that the work as performed on the specific site is believed to be consistent with the provisions of the National Contingency Plan.

ARTICLE XIII. FORBEARANCE FROM ADDITIONAL STUDIES

KDHE agrees that the activities being undertaken by the Respondent for this Site constitute the only response action which KDHE is undertaking or is causing to be undertaken for the Site. The parties hereto understand and agree that other governmental agencies may have jurisdiction over the subject matter of this Order and that it is in the public interest to conduct the response action for this Site consistent with all applicable programs.

The above paragraph shall not preclude KDHE from undertaking or causing to be undertaken any investigations that may be necessary to study conditions at or near the Site which presents actual or potential threats to the public health or welfare or the environment. In the event that KDHE determines that such further investigations are necessary, KDHE agrees to use its best efforts to avoid duplication of and interference with the Respondents' activities under this Consent Order, and shall initiate such studies or require the Respondent to initiate such studies only after notice to the Respondent of KDHE's intent and statement of

facts supporting the need for such studies.

ARTICLE XIV. OTHER CLAIMS

Nothing in this Consent Order shall constitute or be construed as a release by any party of any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation not a signatory to this Consent Order for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from each Site.

ARTICLE XV. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to this Consent Order shall be undertaken in accordance with the requirements of all applicable, local, state, and federal laws and regulations. It is understood that both KDHE and the Respondent shall notify each other of all applicable, local, state, and federal laws and regulations.

ARTICLE XVI. LIABILITY

Neither the State of Kansas nor the Respondent, nor any agent thereof shall be liable for any injuries or damage to persons or property from acts or omissions of the other, nor its servants, receivers, trustees, successors or assigns, including but not limited to firms, corporations, subsidiaries, contractors, or consultants in carrying out activities required of the parties to

this Consent Order and pursuant to this Consent Order. Neither the State of Kansas, nor any agency thereof shall be held out as a party of any contract entered into by the Respondent in carrying out activities pursuant to this Consent Order.

ARTICLE XVII. EFFECTIVE DATE

The effective date of this Consent Order shall be the date last inscribed on the signature page.

ARTICLE XVIII. PENALTIES FOR NON-COMPLIANCE

The Respondent is advised that violation or failure or refusal to comply with this Consent Order, or any portion thereof, may subject the Respondent to civil penalties under K.S.A. 65-3419, K.S.A. 65-170d and/or K.S.A. 65-3444. If said failure is caused by KDHE's delay, Respondent shall be given time commensurate with said delay to effect a cure prior to the imposition of any penalty. The Respondent reserves the right to contest any such penalties. Penalties shall not accrue during good faith dispute about work to be performed or during good faith contests of penalties assessed.

ARTICLE XIX. SUBSEQUENT MODIFICATION

This Consent Order may be amended only by the mutual agreement of KDHE and the Respondent. Such amendments shall be in writing and shall have as the effective date, that date on which such amendments are signed by KDHE and the Respondent. The Respondent may, upon mutual agreement with KDHE and in accordance with the provisions of this ARTICLE XIX, modify this Consent Order so that another Site (or Sites) is made part of this Consent Order, in

which case such additional Site (or Sites) shall be subject to the provisions of this Consent Order.

Any reports, plans, specifications, schedules, and attachments required by this Consent Order are, upon approval by KDHE, incorporated into this Consent Order. Any noncompliance with such approved reports, plans, specifications, schedules and attachments may be considered by KDHE to be failure to achieve the requirements of this Consent Order and, upon conclusion of the Dispute Resolution procedures set forth in ARTICLE XXII may subject the Respondent to appropriate penalties as provided by law.

No formal advice, guidance, suggestions, or comments by KDHE regarding reports, plans, specification, schedules, and any other writing submitted by the Respondent will be construed as relieving the Respondent of its obligation to obtain such formal approval as may be required by this Consent Order. Such advice or suggestions shall not be binding upon Respondent unless committed to writing as modifications to this Consent Order.

ARTICLE XX. PARTIES BOUND

This Consent Order shall apply to and be binding upon KDHE and the Respondent, their agents, successors, and assigns and upon all persons, contractors, and consultant acting under or for either KDHE or the Respondent or both. This Consent Order shall not be interpreted to in any way restrict Respondent's ability to transfer assets or real property. The Respondent shall provide a copy of this Consent Order to each contractor, sub-contractor, and consultant retained to conduct any portion of the work performed pursuant to this Consent Order prior to said contractor's, sub-

contractor's, or consultant's initiation of work to be conducted under this Consent Order, unless such work has already been initiated or completed prior to the date of this Consent Order, in which case a copy shall be provided as soon thereafter as is reasonably practicable.

ARTICLE XXI. FORCE MAJEURE

If any event occurs which causes delay in the achievement of the requirements of this Consent Order, the Respondent shall have the burden of proof that the delay was caused by circumstances beyond the reasonable control of the Respondent which could not have been overcome by due diligence. The Respondent shall promptly notify KDHE's Project Coordinator orally within seven (7) days and shall, within twenty-one (21) calendar days of such oral notification to KDHE, notify KDHE in writing of the anticipated length and cause of the delay, and measures taken and/or to be taken to prevent or minimize the delay, and timetable by which the Respondent intends to implement these measures. If the parties can agree that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of the Respondent, the time for performance hereunder shall be extended for a period equal to the delay resulting from such circumstances. The Respondent shall adopt all reasonable measures to avoid or minimize delay. Failure of the Respondent to comply with the notice requirements of this paragraph shall render this paragraph void and constitute a waiver of the Respondent's right to request a waiver of the requirements of this Consent Order.

ARTICLE XXII. DISPUTE RESOLUTION

If the Respondent objects to any decision made by KDHE pursuant to this Consent Order, the Respondent shall notify KDHE in writing of their objections within fourteen (14) days of receipt of the decision. KDHE and the Respondent shall then have an additional sixty (60) days from the receipt by KDHE of the notification of objection to reach agreement. After this sixty (60) day period, KDHE shall immediately provide a written statement of its decisions to the Respondent. No liability of any kind, including penalties, shall accrue or be payable during the period of the Dispute Resolution. The decision of KDHE is final agency action subject to judicial review under Kansas Judicial Review Act (K.S.A. 77-601 et seq.) in the event the agency decision is arbitrary and capricious.

ARTICLE XXIII. ADDITIONAL SIGNATORIES

Other parties who wish to assist in achieving the purposes of this Consent Order may become Respondent - signatories to the Consent Order after its original effective date upon the concurrence of KDHE and the Respondent. Any party that becomes a Respondent - signatory after the effective date of this Consent Order shall be deemed, for the purposes of its rights and obligations under this Consent Order, to have been a signatory Respondent as of the effective date of this Consent Order.

ARTICLE XXIV. TERMINATION AND SATISFACTION

The provisions of this Consent Order shall be deemed satisfied thirty (30) days after completion of the requirements of ARTICLE VI

and the payment of response and oversight costs incurred by KDHE in accordance with ARTICLE XI. KDHE shall use its best efforts to issue within thirty (30) days certification to the Respondent that the responsibilities under this Consent Order have been completed and successfully discharged and that the work is believed to be consistent with the provisions of the National Contingency Plan, if appropriate. Any questions regarding this Order should be directed to:

Gary Watkins
Kansas Department of Health and Environment
Bureau of Environmental Remediation
Forbes Field, Building 740
Topeka, Kansas 66620-0001

ARTICLE XXV. CONTRIBUTION AND PROTECTION/EFFECT OF SETTLEMENT

The Parties agree that the Respondent, with regard to claims for Contribution against the Respondent for matters addressed by this Consent Order, is entitled to such protection from contribution actions or claims as provided by Kansas or federal law.

IN WITNESS WHEREOF, KDHE and the Respondent have executed this document by their duly authorized representatives on the respective dates written hereunder.

This Consent Order shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.

Robert C. Harder
Robert C. Harder, Secretary
Kansas Department of Health
and Environment

10/7/94
Date

R.M. Haden
Richard M. Haden
Executive Vice President
Field Services
Kansas Power & Light Company

9-15-94
Date

CERTIFICATE OF MAILING

I hereby certify that on this 10th day of October 1994, I deposited a true and correct copy of the above and foregoing Consent Order in the United States Mail, postage prepaid, and addressed to:

Jeffrey Southard
Western Resources Legal Department
818 Kansas Avenue
P.O. Box 889
Topeka, Kansas 66601

Sheesa Johnson
KDHE Staff Person

EXHIBIT A

Location of Site - City	Address {Legal Description}
Hutchinson	200 West Second {Lots 44, 46, 48, 50, 52, 54, 56 & 58, Second Avenue West, City of Hutchinson, Kansas}
Leavenworth	Short and South Main Sts. {Commencing at the NE corner of Block N, City of Leaven- worth Proper; thence West to the East line of Main Street; thence South on said East line of Main Street 150 feet; thence East to the East line of said Block N; thence North on the East line of said block to the place of begin- ning (commencing point), being a tract measuring 150 feet by 110 feet}
	and
	{All that part and portion of Block N, City of Leavenworth Proper; lying between Main and Second Streets and South of Short Street}

Kansas Gas Service Manufactured Gas Plant (MGP) Status - March 2017

Status	Abilene	Atchison	Concordia	Emporia	Hutchinson	Junction City	Kansas City	Leavenworth	Manhattan	Parsons	Salina	Topeka	Summary	Status													
ADMINISTRATIVE														ADMINISTRATIVE													
ONE Gas Owns Site	Yes	No	No	Yes	No	No	Yes	Yes	No	Yes	No	Yes	6 of 12	ONE Gas Owns Site													
KGS Sevice Center Site	No	No	No	Yes	No	No	Yes	No	No	Yes	No	Yes	4 of 12	KGS Sevice Center Site													
Environmental Use Control Filed	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes	7 of 12	Environmental Use Control Filed													
SOIL														SOIL													
Limited Source Removal Conducted	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	9 of 12	Limited Source Removal Conducted													
Source Not Identified or Removal Not Required	No	No	No	No	Yes	No	No	Yes	No	No	No	No	2 of 12	Source Not Identified or Removal Not Required													
GROUNDWATER														GROUNDWATER													
Regulatory "Groundwater" Present	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	8 of 12	Regulatory "Groundwater" Present													
Ongoing Groundwater Monitoring	2016	2016	2016	No	2016	No	2016	No	2016	No	2016	2016	8 of 12	Ongoing Groundwater Monitoring													
On-Site Groundwater Wells	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	8 of 12	On-Site Groundwater Wells													
Off-Site Groundwater Wells	Yes	Yes	No	No	Yes	No	Yes	No	Yes	No	No	No	5 of 12	Off-Site Groundwater Wells													
VAPOR INTRUSION														VAPOR INTRUSION													
Vapor Intrusion Screening Conducted	No	Yes	N/A	Yes	Yes	No	No	N/A	No	No	No	No	3 of 12	Vapor Intrusion Screening Conducted													
REGULATORY STATUS														REGULATORY STATUS													
Feasibility Study or Assessment Completed	Ongoing	Ongoing	Soil Only	Soil Only	Soil Only	Soil Only	Soil Only	Soil Only	Soil Only	Soil Only	Soil Only	Soil Only	12 of 12	Feasibility Study or Assessment Completed													
Additional Actions Required	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	12 of 12	Additional Actions Required													

Kansas Gas Service Manufactured Gas Plant (MGP) Status

Abilene	Buildings removed from site after initial source removal. A limited on-site & off-site Supplemental Site Investigation (SSI) completed July 2016 identified contamination requiring additional investigation and probable remediation. Additional investigation ongoing in March 2017 to further delineate extent of contamination and remediation option feasibility
Atchison	Site divided into two parcels separated by city street. Investigations indicate source material remains in and surrounding two gas holders on north parcel and one tar well on south parcel. A 10-story public housing building occupies a portion of the north parcel and partially overlies the larger gas holder. KDHE approved an Interim Removal Action (IRA) Work Plan for the southern parcel. A project to address source materials within the tar well is planned for late 2017 or early 2018. A Feasibility Study for the north parcel is under development.
Concordia	An Interim Removal Action was completed in 2008. An Environmental Use Control (deed restriction) is in place. A low level of Arsenic that exceed groundwater standards is present. KDHE approved a draft Corrective Action Study in 2014 and is developing an Agency Decision Statement including public participation requirements that will lead to a preferred remedial alternative.
Emporia	Gas holder contents could not feasibly be removed beneath the Kansas Gas Service building still present. Environmental Use Control recorded in 2010. No comments were received during the Public Comment Period for a KDHE draft Agency Decision Statement (ADS). The ADS was finalized in 2012. No active monitoring, investigation or remediation are required at this time and until such time that site conditions change or the building(s) are removed as long as the restrictions imposed in the Environmental Use Control are observed.
Hutchinson	Environmental Use Control in place. No remaining gas holder or tar well were located during a limited investigation. Groundwater wells show continued limited contamination. Currently working with KDHE to identify if the areas of highest groundwater contamination may have originated from an adjacent railroad site or other source.
Junction City	Interim Removal Action completed in 2008. No tar well was identified. Not feasible to excavate under existing buildings. Site occupied by an automotive/bus repair/other facility for 60 years. Unsure if contamination currently present is related to past MGP operations or former and existing underground fuel storage tanks in the direct vicinity of the site. A project to draft a Supplemental Site Investigation work plan is scheduled for late 2017 or 2018.
Kansas City	Interim (limited) source removal activities were conducted in 2002. Tar well not located. Contamination impacts still detected with ongoing groundwater monitoring. Work to develop a Supplemental Site Investigation workplan is scheduled to occur in 2017 with additional site work scheduled for 2018.
Leavenworth	No gas holder, tar well or concentrated area of source material were identified during a limited site investigation. Impacted soil discovered during site investigation and was removed. An Environmental Use Control is in place for the site. The City of Leavenworth has a 99-year lease on portions of site for public use. In 2015 the City constructed a parking lot over a portion of the site subject to the EUC and effectively adds another layer of "cap" to isolate contamination.
Manhattan	Site owned by City of Manhattan. An Interim Removal Action and reporting completed in 2006 resulted in the removal of over 5,500 tons of contaminated soil. In 2012 the City of Manhattan constructed a Public Works building on a portion of the site following consultation with the KDHE. The building occupies an area subject to the Environmental Use Control. A Supplemental Site Investigation workplan was approved by KDHE with fieldwork scheduled for 2017.
Parsons	An Environmental Use Control is recorded for the site. Kansas Gas Service building(s) still occupy portions of the historic MGP operations. A limited source removal project was unable to address contamination still remaining under existing building(s). Remaining contamination to be investigated and possibly remediated if/when building is removed.
Salina	Site currently occupied by an automotive repair facility and is adjacent to various commercial/industrial facilities with associated contamination. Interim Removal Action completed in 2007. Scheduled for Supplemental Site Investigation proposal in 2018.
Topeka	Interim Removal Action completed to address source material that is not located under buildings currently utilized by Kansas Gas Service. An Environmental Use Control is recorded for the site. Source material remaining under existing buildings to be addressed when buildings are removed. Ongoing groundwater monitoring results may result in additional monitoring wells or investigation activities.

Manufactured Gas Plant Consent Order History/Summary

94-E--172: KDHE/Western Resources, Inc. (WRI)

- WRI agreed to conduct investigations and remediations at Hutchinson and Leavenworth
- WRI agreed to accept terms of this CO for any other sites added at later date.

Amendment 1: January 17, 1996

- Added Newton site

Amendment 2: August 13, 1996

- Added Parsons site

Amendment 3: October 8, 1996

- Added Kansas City site (2 parcels)

Amendment 4: December 10, 1997

- Added WAI, Inc. (ONEOK) as Respondent-Signatory
- WAI excluded from Newton site, excluded if Arkansas City and/or Pittsburg added

Amendment 5: January 13, 2003

- Added Arkansas City site

Amendment 6: May 5, 2003

- Changed Western Resources, Inc. to Westar Energy, Inc.
- Changed WAI, Inc. to ONEOK, Inc., added 8 sites to ONEOK liability

Abilene	Junction City
Atchison	Manhattan
Concordia	Salina
Emporia	Topeka

Amendment 7: July 26, 2010

- Added Pittsburg site

Amendment 8: January 31, 2014 (Labeled "Eighth Amendment")

- Added and substituted ONE Gas, Inc. as a Respondent in place of ONEOK.

STATE OF KANSAS

DEPARTMENT OF HEALTH AND ENVIRONMENT

WESTAR

IN THE MATTER OF)
WESTERN RESOURCES, INC.)
)
)
_____)

Case No. 94-E-0172

AMENDMENT TO CONSENT ORDER

Now on this 17 day of January, 1998, the Kansas Department of Health and Environment (KDHE) and Western Resources, Inc. mutually agree to amend the terms of the Consent Order entered into in Case No. 94-E--0172 pursuant to Article XIX of said Order.

The parties hereby add the following site to Exhibit A:

The former manufactured gas plant ("MGP") site located at 206 West Second Street, Newton, Kansas ("Newton MGP").

The KDHE has determined that for the purposes of the Order only, an actual or threatened or potential release(s) of hazardous substances into the environment exists at the Newton MGP. Such release constitutes an actual or potential threat to public health and the environment. Said plant is hereby incorporated into and made a part of said order and is subject to all terms and conditions thereof.

This Amendment shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.

James J. O'Connell
James J. O'Connell, Secretary
Kansas Department of Health
and Environment

17 Jan 96
Date

R. M. Haden
Richard M. Haden
Executive Vice President
Field Services
Kansas Power & Light Company

12-19-95
Date

CERTIFICATE OF SERVICE

I do hereby certify that a copy of the above and foregoing document was served this 18th day of JANUARY, 1996, by United States Mail, first class, postage prepaid, to the following:

Alan Kettle
WESTERN RESOURCES
818 Kansas Avenue
Topeka, Kansas 66603

Linda Smith-Pard
KDHE Staff Person

STATE OF KANSAS

DEPARTMENT OF HEALTH AND ENVIRONMENT

IN THE MATTER OF)
WESTERN RESOURCES, INC.)
)
_____)

Case No. 94-E-0172

AMENDMENT TO CONSENT ORDER

Now on this 13th day of August, 1996, the Kansas Department of Health and Environment (KDHE) and Western Resources, Inc., mutually agree to amend the terms of the Consent Order entered into in Case No. 94-E-0172 pursuant to Article XIX of said Order.

The parties hereby add the following site to Exhibit A:

The former manufactured gas plant ("MGP") site located at the southeast corner of the intersection of Morton and 21st Streets in Parsons, Kansas, described as Lots four (4), five (5), six (6), seven (7), and eight (8), Block Number eighty-nine (89) of the City of Parsons, Kansas. ("Parson MGP")

The KDHE has determined that for the purposes of the Order only, an actual or threatened or potential release(s) of hazardous substances into the environment exists at the Parson MGP. Such release constitutes an actual or potential threat to public health and the environment. Said Plant is hereby incorporated into and made a part of said order and is subject to all terms and conditions thereof.

This Amendment shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.

James F. O'Connell
James F. O'Connell, Secretary
Kansas Department of Health
and Environment

13 August 1996
Date

R. M. Haden
Richard M. Haden
Executive Vice President
Field Services
Western Resources, Inc.

7/19/96
Date

CERTIFICATE OF SERVICE

I do hereby certify that a copy of the above and foregoing document was served this 15 day of August, 1996, by United States Mail, first class, postage prepaid, to the following:

Linda Smith Word
KDHE Staff Person

STATE OF KANSAS

RECEIVED

DEPARTMENT OF HEALTH AND ENVIRONMENT

NOV - 4 1996

IN THE MATTER OF)
WESTERN RESOURCES, INC.)
_____)

Case No. 94-E-0172

BUREAU OF ENVIRONMENTAL REMEDIATION

AMENDMENT TO CONSENT ORDER

Now on this 8th day of October, 1996, the Kansas Department of Health and Environment (KDHE) and Western Resources, Inc., mutually agree to amend the terms of the Consent Order entered into in Case No. 94-E-0172 pursuant to Article XIX of said Order.

The parties hereby add the following site to Exhibit A:

The former manufactured gas plant ("MGP") site located at the northeast and southeast corners of the intersection of 3rd Street and Everett Avenue in Kansas City, Kansas, described as Lots One (1), Two (2), Three (3), Four (4), Five (5), and Six (6), Block Twenty-one (21), Wyandotte City, now in and a part of Kansas City, Wyandotte County, Kansas (in the southeast quarter of Section 3, Township 11, Range 25, in Wyandotte County, Kansas),

and

Lots One (1), Two (2), Three (3), Four (4), Five (5), and Six (6), Block Twenty-two (22), Wyandotte City, now in and a part of Kansas City, Wyandotte County, Kansas.

Commonly known as 1407 North 3rd Street, Kansas City, Kansas.

The KDHE has determined that for the purposes of the Order only, an actual or threatened or potential release(s) of hazardous substances into the environment exists at the

Kansas City, Kansas, MGP. Such release constitutes an actual or potential threat to public health and the environment. Said Plant is hereby incorporated into and made a part of said order and is subject to all terms and conditions thereof.

This Amendment shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.

James J. O'Connell
James J. O'Connell, Secretary
Kansas Department of Health
and Environment

8 Oct 96
Date

R. M. Haden
Richard M. Haden
Executive Vice President
Field Services
Western Resources, Inc.

8/9/96
Date

CERTIFICATE OF SERVICE

I do hereby certify that a copy of the above and foregoing document was served this 9th day of October, 1996, by United States Mail, first class, postage prepaid, to the following:

Gynnda Smith Ward
KDHE Staff Person

STATE OF KANSAS
DEPARTMENT OF HEALTH AND ENVIRONMENT

IN THE MATTER OF)
WESTERN RESOURCES, INC.)
)
)
)
)
)
)
)

Case No. 94-E-0172

*Westar
= Ark City
= Newton
= Pittsburg*

AMENDMENT TO CONSENT ORDER

Now on this 10th day of December, 1997, the Kansas Department of Health and Environment ("KDHE"), Western Resources, Inc., and WAI, Inc., ("WAI") mutually agree to amend the terms of the Consent Order entered into in Case No. 94-E-0172 ("Consent Order") pursuant to Article XXIII of said Order.

The parties hereby add WAI, Inc., as a Respondent-Signatory to assist in achieving the purposes of the Consent Order with the following exceptions:

1. The parties hereby agree that WAI will not be deemed a Respondent-Signatory for purpose of the Consent Order with respect to the former Manufactured Gas Plant ("MGP") site located at 206 West Second Street, Newton, Kansas ("Newton MGP"); and
2. Pursuant to Article II.2 of the Consent Order, the parties may mutually consent to add or delete former MGPs for appropriate environmental investigation activities. The parties hereby agree that if the parties ever add the former MGP sites located in Arkansas City, Kansas, and Pittsburg, Kansas, as requiring environmental investigation activities under this Consent Order, WAI will not be deemed a Respondent-Signatory with respect to those sites.

This Amendment shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.

*WAI = Oneok
WAI ≠ Westar Energy*


Kansas Department of Health and Environment



, Secretary

12-10-97
Date

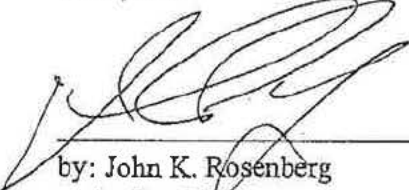
Western Resources, Inc.



by: Thomas L. Grennan
Title: Vice President, Generation Services

November 24, 1997
Date

WAI, Inc.



by: John K. Rosenberg
Title: President

November 24, 1997
Date

CERTIFICATE OF MAILING

I hereby certify that on this 11 day of December, 1997, a true and correct copy of the above and foregoing Amendment to Consent Order was deposited in the U.S.mail, postage prepaid, and addressed to:

Galen Biery
Legal Department
Western Resources, Inc.
818 Kansas Avenue
Topeka, Kansas 66612


KDHE Staff Member

*Rob - Jackie
File*

CONCURRENCE SHEET

BUREAU OF ENVIRONMENTAL REMEDIATION

	Name	Date	Comments
Project Manager			
Unit Chief			
Section Chief			
Bureau Manager	[Redacted]	11/4/97	Western Resources - One Oak - Amendment
Legal Office	<i>P. Casey</i>	12/5/97	
Director of Legal	<i>J. Anderson</i>	12/8/97	
Director of Env.	<i>R. [Redacted]</i>	12/9/97	
Secretary	<i>gjm</i>	12/10/97	

IN THE MATTER OF:

CASE NUMBER:

PLEASE RETURN TO OFFICE OF LEGAL SERVICES

*Re: Western Resources, Inc.
(94 E 0172)*

*12/11/97 Signed Amendment to Consent
Order to Legal*

RECEIVED

DEC 11 1997

BUREAU OF ENVIRONMENTAL REMEDIATION



KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Gary R. Mitchell, Secretary

RECEIVED

December 11, 1997

DEC 12 1997

Western Resources, Inc.
Legal Department
Attn: Galen Biery
818 Kansas Ave.
Topeka, Kansas 66612

BUREAU OF
ENVIRONMENTAL
REMEDICATION

Re: Amendment to Western
Resources Consent Agreement

Dear Galen,

I am forwarding two copies of the above-referenced Amendment, which has been signed by the Secretary, to you for appropriate distribution.

Please advise if I need to take further action in this matter.

Happy Holidays,

L. Patricia Casey

STATE OF KANSAS
THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

In the Matter of
Western Resources, Inc.

Case No. 94-E-0172

AMENDMENT TO CONSENT ORDER

Now on this 13th day of January, 2003, the Kansas Department of Health and Environment ("KDHE") and Western Resources Inc., mutually agree to amend the terms of the Consent Order entered into in Case No. 94-E-0172 ("Consent Order") pursuant to Article XIX of said Order.

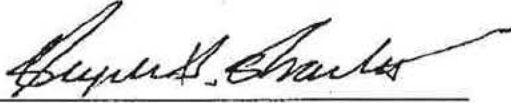
The parties hereby add the following site (hereinafter "Site") to Exhibit A:

The Arkansas City, Former Manufactured Gas Plant (Ark City FMGP) site address is, 715 south First Street, Arkansas City, Kansas, 67005. The site is located, "... at a point 615.5 feet south and 30 feet west of the northeast corner of the northeast quarter [NE 1/4] of Section thirty-six (36), Township thirty-four (34) south, Range three (3) east. Thence south two hundred sixteen and 3/4 (216 3/4) feet to a stone. Thence westerly two hundred thirty and 3/4 (230 3/4) feet right of way of canal and a stone. Thence north westerly along said right of way two hundred forty three and 7/12 (243 7/12) feet to a stone. Thence easterly three hundred forty two (342) feet to beginning."

The KDHE has determined that for the purposes of the Order only, an actual or threatened or potential release(s) of hazardous substances into the environment exists at the Site. Such release constitutes an actual or potential threat to public health and the environment. The Site is hereby incorporated into and made a part of said order and is subject to all terms and conditions thereof.

This Amendment shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.

Kansas Department of Health and Environment



Clyde D. Graeber, Secretary

1-13-03
Date

Western Resources, Inc. , dba Westar Energy

By: Kelly B. Harrison

January 2, 2003
Date

Printed Name: Kelly B. Harrison

Title: VP - Regulatory

CERTIFICATE OF MAILING

I hereby certify that on this 15th day of January, 2003, a true and correct copy of the above and foregoing Consent Order was deposited in the United States Mail, postage prepaid, and addressed to:



KDHE Staff Person

C2-018-70044 2.0

Exhibit JEH-5

RECEIVED

JAN 15 2003

BUREAU OF ENVIRONMENTAL REMEDIATION



KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
KATHLEEN SEBELIUS, GOVERNOR
Roderick L. Bremby, Secretary

January 15, 2003

Tom Brown, P.E.
Sr. Manager, Water and Waste Programs
818 South Kansas Avenue
PO Box 889
Topeka Kansas 66601

Re: Western Resources, Inc. (Arkansas City, Kansas)
Case No. 94-E-0172

Dear Mr. Brown:

Enclosed is your copy of the executed Amendment to Consent Order for the above referenced facility.

Thank you for your cooperation and if you have additional concerns or questions, feel free to contact Erika Bessey at (785) 296-5334.

Sincerely,

Kama J Maruska

KDHE Staff Member

encl

pc John Cook

LEGAL SERVICES

Charles Curtis Building
1000 SW Jackson Suite 560
(785) 296-5334

Printed on Recycled Paper

Topeka, KS 66612-1368
FAX (785) 296-7119 or 291-3607

ONEOK AMENDMENT

STATE OF KANSAS

DEPARTMENT OF HEALTH AND ENVIRONMENT

IN THE MATTER OF)
WESTERN RESOURCES, INC.)
)
)
_____)

Case No. 94-E-0172

AMENDMENT TO CONSENT ORDER

Now on this 5th day of May, 2003, the Kansas Department of Health and Environment (KDHE), Westar Energy, Inc., formerly known as Western Resources, Inc., and ONEOK, Inc., formerly known as WAI, Inc., mutually agree to amend the terms of the Consent Order entered into in Case No. 94-E-0172 pursuant to Article XIX of said Order.

The parties hereby add the following former manufactured gas plant (MGP) sites to Exhibit A of the subject Order:

ATCHISON COUNTY

Intersection of Main and South Seventh Streets in Atchison, Kansas, described as:

Lots Five (5) through Seven (7), Block Forty-six (46), Old Atchison,

AND

Lots One (1) through Three (3) Block Forty-seven (47), Old Atchison,

AND

Lots One (1) through Five (5), Block Five (5) in L.C. Challiss Addition to the City of Atchison, all in the City of Atchison, Atchison County, Kansas.

CLOUD COUNTY

410 Mill Street in Concordia, Kansas, described as:

A part of Mill Block 195 and vacated 2nd Street, City of Concordia, Cloud County, Kansas; more particularly described as follows:

A tract beginning at a point 150.0 feet North of the Northwest corner of Mill Block 176, City of Concordia, and on the East side of Republic Street, and South side of Mill Street; thence East on the South side of Mill Street and 150.0 feet North of the North line of said Block 176, 230.9 feet to the approximate East right of way line of the abandoned Union Pacific Railroad spur; thence Southerly 150.6 feet on the said approximate East right of way line to the North line of said Block 175 and 15.5 feet East of the Northwest corner of said Lot 7, Block 176; thence West on the North line of Block 176, 243.5 feet to the Northwest corner of said Block 176 and the East line of Republic Street; thence North on the East line of Republic Street, 150.0 feet to the point of beginning.

DICKINSON COUNTY

Intersection of South Mulberry and West South Second Streets in Abilene, Kansas, described as:

All of Lots numbered Five (5), Six (6), Seven (7), and Eight (8) in Block Ten (10), original Town of Abilene, Dickinson County, Kansas.

GEARY COUNTY

325 Southeast Fourth Street in Junction City, Kansas, described as:

A parcel of land in Lots numbered Two (2) and Three (3), Section Twelve (12), township Twelve (12), Range Five (5) East of the 6th principal meridian, Geary County, Kansas, described as follows: beginning at the southeast corner of Block Forty-one (41) in Junction City, running thence east to the west line of the right of way of the Union Pacific Railway Company, thence in a southerly direction along the west line of the right of way to a point in the east line of Block number fifty-seven (57) in Junction City, Kansas, where the west line of said right of way intersects said Block Fifty-seven (57); thence north along the east corporate limits of Junction City to the place of beginning.

LYON COUNTY

Intersection of East Third and North Mechanic Streets in Emporia, Kansas, described as:

Even Lots 30 through 42, Mechanics Street, City of Emporia, Lyon County, Kansas.

RILEY COUNTY

Intersection of South Eleventh and El Paso Streets in Manhattan, Kansas, described as:

Lots 437, 438, 439, and 440, Ward 5, City of Manhattan, Riley County, Kansas.

SALINE COUNTY

403 North Third Street in Salina, Kansas, described as:

Lots 14, 16, and 18, Block 50, Original Plat, City of Salina, Saline County, Kansas. (a/k/a Lots 14,16, and 18 on 3rd Street, Original Town of Salina)

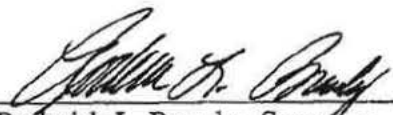
SHAWNEE COUNTY

200 East First Street in Topeka, Kansas, described as:

Odd Lots 13 through 23 on North Monroe Street; Even Lots 122 through 144 on East First Street; All in Crane's Addition to the City of Topeka, Shawnee county, Kansas.

The KDHE has determined that for the purposes of the Order only, an actual or threatened or potential release(s) of hazardous substances into the environment exists at the above listed MGP Sites. Such release constitutes an actual or potential threat to public health and the environment. Said sites are hereby incorporated into and made a part of said Order and are subject to all terms and conditions thereof.

This amendment shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.


Roderick L. Bremby, Secretary
Kansas Department of Health
and Environment

5-5-03
Date

Kelly B. Ham
Westar Energy, Inc.

April 10, 2007
Date

[Signature]
ONEOK, Inc.



4/11/03
Date

CERTIFICATE OF SERVICE

I do hereby certify that a copy of the above and foregoing document was served this 5th day of May, 2003, by United States Mail, first class, postage prepaid, to the following:

Westar Energy, Inc.
818 S. Kansas Avenue
Topeka, KS 66612
Attn: Martin J. Bregman
Executive Director, Law

ONEOK, Inc.
P.O. Box 871
Tulsa, OK 74102
Attn: Sue Griffin
Associate General Counsel

KANSAS DEPARTMENT OF HEALTH
AND ENVIRONMENT

Kama J Maruska
By: Kama J Maruska
Title: Senior Admin. Assistant



K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

Exhibit JEH-5
RECEIVED
MAY 06 2003
BUREAU OF
ENVIRONMENTAL REMEDIATION

May 5, 2003

ONEOK, Inc.
Attn: Sue Griffin
Associate General Counsel
PO Box 871
Tulsa, OK 74102

Westar Energy, Inc.
Attn: Martin J. Bergmann
Executive Director, Law
818 S Kansas Avenue
Topeka, KS 66612

Re: Western Resources, Inc.
Case No. 94-E-0172

Dear Ms. Griffin and Mr. Bergmann:

Enclosed is your copy of the executed Amendment to Consent Order for the above referenced facility.

Thank you for your cooperation and if you have additional concerns or questions, feel free to contact Erika Bessey at (785) 296-5334.

Sincerely,

Kama J Maruska

Kama J Maruska

Senior Administrative Assistant

encl

pc John Cook

OFFICE OF THE SECRETARY
LEGAL SERVICES

CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE. 560, TOPEKA, KS 66612-1368
Voice 785-296-5334 Fax 785-296-7119 <http://www.kdhe.state.ks.us>

STATE OF KANSAS
DEPARTMENT OF HEALTH AND ENVIRONMENT

IN THE MATTER OF)
WESTERN RESOURCES, INC.) Case No. 94-E-0172
_____)

AMENDMENT TO CONSENT ORDER

Now on this 26th day of July, 2010, the Kansas Department of Health and Environment (KDHE) and WESTAR ENERGY, Inc., (formerly known as Western Resources, Inc.), and ONEOK, Inc., (formerly known as WAI, Inc.), agree to amend the terms of the Consent Order entered into Case No. 94-E-0172 pursuant to Articles II and XIX of said Order by adding the following former manufactured gas plant (MGP) site to Exhibit A of the subject Order:

CRAWFORD COUNTY

The former manufactured gas plant ("MGP") site located at 2nd and Locust Streets (southwest corner), Pittsburg, Kansas ("Pittsburg MGP")

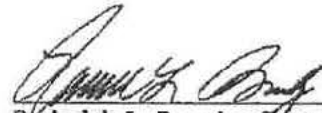
"Lots two hundred and eleven (211), two hundred and twelve (212), two hundred and thirteen (213), two hundred and fourteen (214), two hundred and fifteen (215), and two hundred and sixteen (216), Block thirty-nine (39) in the 'Town of Pittsburg' now the City of Pittsburg, Kansas, according to the plat thereof."

Provided however, that pursuant to the Amendment to Consent Order, dated December 10, 1997, wherein WAI, Inc, (now known as ONEOK, Inc.) was added as a Respondent-Signatory of Consent Order Case, No. 94-E-0172, and wherein it was explicitly provided that WAI, Inc, will not be deemed a Respondent-Signatory of the former MGP site in

Pittsburg, Kansas, ONEOK, Inc f/k/a/ WAI, Inc, shall not be considered a Respondent-Signatory nor be bound to perform remedial activities as provided in the Order at this site, and the responsibility for remedial activities at the Pittsburg MGP under the Consent Order shall be with Westar Energy, Inc., f/k/a Western Resources, Inc..

The KDHE has determined that for the purpose of the Order only, an actual or threatened or potential release(s) of hazardous substances into the environment exists at the former Pittsburg MGP. Such release constitutes an actual or potential threat to public health and the environment. Said MGP is hereby incorporated into and made a part of said Order and is subject to all terms and conditions thereof.

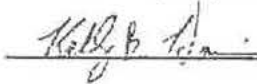
This Amendment shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.



Roderick L. Bremby, Secretary
Kansas Department of
Health and Environment

7/26/2010
Date

WESTAR Energy, Inc.

By: Kelly B. Harrison
VP-Transmission + Environmental


June 29, 2010
Date

ONEOK, Inc.

By:

Date

Pittsburg, Kansas, ONEOK, Inc f/k/a/ WAI, Inc, shall not be considered a Respondent-Signatory nor be bound to perform remedial activities as provided in the Order at this site, and the responsibility for remedial activities at the Pittsburg MGP under the Consent Order shall be with Westar Energy, Inc., f/k/a Western Resources, Inc..

The KDHE has determined that for the purpose of the Order only, an actual or threatened or potential release(s) of hazardous substances into the environment exists at the former Pittsburg MGP. Such release constitutes an actual or potential threat to public health and the environment. Said MGP is hereby incorporated into and made a part of said Order and is subject to all terms and conditions thereof.

This Amendment shall be effective as of the date signed by the Secretary, Kansas Department of Health and Environment.

Roderick L. Bremby, Secretary
Kansas Department of
Health and Environment

Date

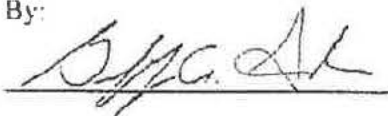
WESTAR Energy, Inc.

By:

Date

ONEOK, Inc.

By:

134


Date

07/13/10

CERTIFICATE OF SERVICE

I hereby certify that a copy of the above and foregoing document was served this 28th day of July, 2010, by United States Mail, first class, postage prepaid, to the following:

WESTAR ENERGY
818 South Kansas Avenue
PO Box 889
Topeka, Kansas 66601
Attn: Craig Swartzendruber, Manager
Environmental Compliance Systems

ONEOK, Inc.
100 West Fifth Street
Tulsa, OK 74103-4298
P.O. Box 871
Tulsa, OK 74102-0871
Attn: Vicky C. Hale
Vice President and Associate General Counsel -
Compliance and Regulatory

KANSAS DEPARTMENT OF
HEALTH AND ENVIRONMENT

JoAnne D. Myers
By: JoAnne D. Myers
Title: Sr. Administrative Assitant

**STATE OF KANSAS
DEPARTMENT OF HEALTH AND ENVIRONMENT**

<p>IN THE MATTER OF</p> <p>WESTERN RESOURCES, INC.</p> <p>Westar Energy, Inc. f/k/a</p> <p>Western Resources , Inc.,</p> <p>and</p> <p>ONEOK, Inc. f/k/a</p> <p>WAI, Inc.</p> <p><u>Respondents.</u></p>	<p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p> <p>)</p>	<p>Case No. 94-E-0172</p>
---	--	----------------------------------

EIGHTH AMENDMENT TO CONSENT ORDER

(“Eighth Amendment”)

Effective the 31st day of January, 2014, (“Date of Eighth Amendment”) the Kansas Department of Health and Environment (“KDHE”), Westar Energy, Inc., formerly known as Western Resources, Inc. (“Westar”), ONEOK, Inc., formerly known as WAI, Inc. (“ONEOK”), and ONE Gas, Inc. (collectively the “Parties”), mutually agree to amend the terms of the Consent Order entered into in Case No. 94-E-0172 (the “Consent Order”), on October 7, 1994, and all subsequent Amendments to the Consent Order, pursuant to Article XXIII of said Consent Order.

The Parties hereby mutually agree to add and substitute ONE Gas, Inc., as a Respondent in place of ONEOK, to meet the terms of the Consent Order and all Amendments to the Consent Order. This Eighth Amendment shall be effective as of the above Date of the Eighth Amendment.

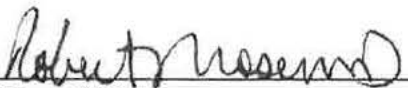
ONE Gas, Inc, upon receipt of this signed Eighth Amendment shall designate a project coordinator who shall be responsible for overseeing the implementation of this Consent Order and shall provide said coordinator's name and contact information to KDHE.

Each Party has full knowledge of and has consented to this Eighth Amendment to the Consent Order, and represents and warrants that each person who executes this Eighth Amendment to the Consent Order on its behalf is duly authorized to execute this Eighth Amendment on behalf of the respective Party and legally bind the Party represented to this Eighth Amendment.

IT IS SO ORDERED.

KANSAS DEPARTMENT OF
HEALTH AND ENVIRONMENT

By:

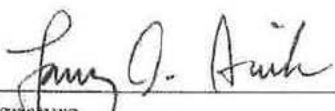


Robert Moser, MD
Secretary

1/13/2014
Date

Westar Energy, Inc.

By:



Signature

Larry D. Irick
Vice President, General Counsel and Corporate Secretary

1/2/14
Date

ONEOK, Inc

By:



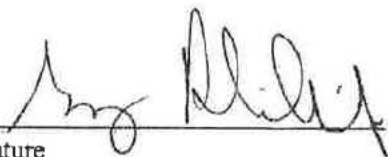
Wesley J. Christensen
Signature

Wesley J. Christensen
Senior Vice President, Operations

1/2/14
Date

ONE Gas, Inc.

By:



Signature



Greg Phillips
Senior Vice President, Operations

01/07/2014

Date

CERTIFICATE OF SERVICE

I hereby certify that true and accurate copy of the above and foregoing document was served this 14th day of January, 2014, by United States Mail, first-class, postage pre-paid, to the following:

Westar Energy, Inc.
818 S. Kansas Avenue
Topeka, KS 66612
Attn: Patrick Smith, Esq.

ONEOK, Inc.
100 West Fifth Street, MD 2-2
Tulsa, OK 74103
Attn.: David C. McSweeney, Esq.

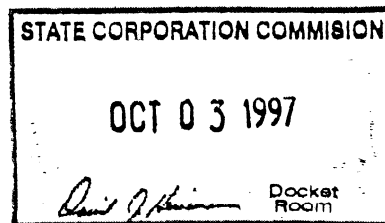
ONE Gas, Inc.
100 West Fifth Street, MD 2-2
Tulsa, OK 74103
Attn.: Joseph L. McCormick, Esq.



KDHE Staff Member

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

Before Commissioners: John Wine, Chair
Susan M. Seltsam, Commissioner
Cynthia L. Claus, Commissioner



In the Matter of the Joint Application of Western Resources, Inc.,)
ONEOK Inc., and WAI, Inc. for Approval of the Contribution from)
Western Resources, Inc. to WAI, Inc. of all of the Natural Gas) Docket No.
Transportation and Distribution Assets, Subsidies and Certificates of) 97-WSRG-486-MER
Western Resources, Inc.; for the Merger of WAI, Inc. with ONEOK,)
Inc.; for the Acquisition by Western Resources, Inc. of Shares of)
Capital Stock of WAI, Inc.; for Authority for WAI, Inc. to Issue Stock)
and Instruments of Debt; and for Related Relief.)
)

**JOINT MOTION FOR COMMISSION APPROVAL
OF STIPULATION AND AGREEMENT**

COME Now before the State Corporation Commission of the State of Kansas [“Commission”], Western Resources, Inc. [“Western Resources”], ONEOK Inc. [“ONEOK”], WAI, Inc. [“WAI”], the Citizens’ Utility Ratepayer Board [“CURB”], and the Commission Staff [“Staff”], and hereby file this Joint Motion requesting that the Commission issue an Order accepting the Stipulation and Agreement and finding that the authority sought in the Application be granted subject to the terms and conditions set forth in the Stipulation and Agreement. In support of their Joint Motion, the parties state as follows:

1. Western Resources is a Kansas corporation, in good standing in all respects, with its principal offices and place of business located at 8 18 Kansas Avenue, Topeka, Kansas 666 12. Western Resources presently owns and operates a gas distribution system in portions of Kansas, including the Mid Continent Marketing Center, pursuant to certificates of public convenience and necessity issued by the KCC and subject to the jurisdiction of the KCC and Westar Gas Marketing Inc. There is already on file with the KCC restated Articles of Incorporation and Bylaws which are incorporated herein by reference.
2. ONEOK is a Delaware corporation with its principal offices and place of business located at 100 West Fifth Street, Tulsa, Oklahoma 74103. As more fully described below, ONEOK is a

diversified energy company engaged in the production, gathering, storage, transportation, distribution and marketing of natural gas. Through its division, Oklahoma Natural Gas (ONG), ONEOK serves approximately 730,000 natural gas utility customers in Oklahoma. A certified copy of the Certificate of Incorporation and Bylaws of ONEOK was attached to the Joint Application, marked as Schedule I, and is incorporated herein for all purposes.

3. WAI will be an Oklahoma corporation incorporated for the purposes of this transaction. At the conclusion of the transaction, ONEOK will be merged with and into WAI, the separate existence of ONEOK will cease, and WAI will continue as the surviving corporation. WAI plans to change its name to ONEOK, Inc. at the time the transaction is completed. A certified copy of WAI's Articles of Incorporation and Bylaws has been filed, marked as Schedule 2, and is incorporated herein for all purposes. A certified copy of WAI's authority to do business in Kansas was filed marked Schedule 3 and is incorporated herein for all purposes.

4. On February 24, 1997 Western Resources, ONEOK and WAI filed a Joint Application seeking an Order and Certificate authorizing Western Resources to contribute to WAI all of its natural gas transportation and distribution properties in the State of Kansas, including its certificates and the capital stock of certain subsidiaries; authorizing ONEOK to merge with WAI; authorizing Western Resources to acquire shares of the capital stock of WAI; authorizing WAI to issue capital stock and instrument of debt; and for all other related relief that may be required to fulfill the intents and purposes of the parties to the transactions.

5. On March 3, 1997 CURB filed its Petition to Intervene which was granted by the KCC. On March 5, 1997, Motion to Intervene were filed by Local Union 304 of the International Brotherhood of Electric Workers, AFL-CIO; the United Steelworkers of America, AFL-CIO; and the United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States

and Canada. On March 17, 1997, a Petition for Intervention was filed by Mountain Iron & Supply Company. On April 2, 1997, a Petition to Intervene was filed by Williams Natural Gas Company. On July 9, 1997, a Motion to Intervene was filed by the Board of Public Utilities of Kansas City, Kansas. The Commission has granted limited intervention to the above-named parties.

6. On July 8, 1997 the KCC issued a procedural order in this proceeding. Pursuant to said Order, Staff and CURB were directed to file direct testimony on September 2, 1997. Joint Applicants were ordered to file rebuttal testimony on September 26, 1997. A technical hearing was scheduled for October 6, 1997.

7. Western Resources, ONEOK, WAI, Staff and CURB have reached a Stipulation and Agreement as to all issues which have been raised in this proceeding. The Stipulation and Agreement is attached hereto and incorporated herein by reference. The Stipulation and Agreement has also been provided to the other parties of record who have been granted limited intervention.

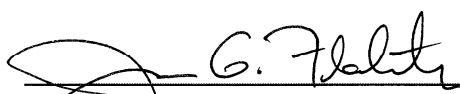
8. Western Resources, ONEOK, WAI, Staff and CURB have agreed, that in accordance with the acquisition and merger standards articulated by the Commission in the Kansas Power & Light Company, KCA Corporation and Kansas Gas & Electric Company merger, Docket No. 174,155-U, and subject to the following conditions, the Joint Application filed in this proceeding and the authority requested therein should be approved and granted by the Commission. The conditions on approval of the Joint Application are as set out in the attached Stipulation and Agreement.

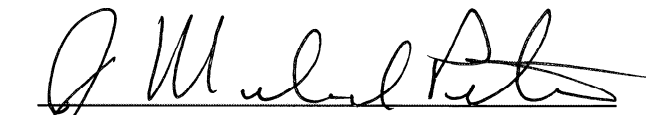
9. Western Resources, ONEOK, WAI, Staff and CURB respectfully request that the Commission consider and rule on this motion as a preliminary matter at the technical hearing set for October 6, 1997. The Joint Applicants and Staff will each present a witness to testify as to why this Stipulation and Agreement is in the public interest. Under the terms of the Stipulation and Agreement, if the Commission approves and grants this Motion, the parties have agreed to submit the prefiled


testimony and exhibits into the record and waive cross examination of the witnesses. In the event the Commission would deny this Motion, the parties have agreed to proceed with the hearing. Staff shall be allowed to submit live surrebuttal testimony at the technical hearing if this Motion is denied.

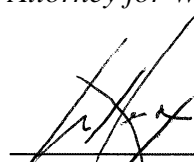
WHEREFORE, for the reasons set forth herein, Western Resources, ONEOK, WAI, Staff and CURB request that this Joint Motion be granted and that the Stipulation and Agreement be approved and the authority sought by the Joint Applicants, as conditioned by the terms contained in the Joint Application, be granted.

Dated this 3rd day of October, 1997.


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Attorney for CURB

CERTIFICATE OF SERVICE

(Docket No. 97-WSRG-486-MER)

I, LisaBerry, hereby certify that a copy of the foregoing **“JOINT MOTION FOR COMMISSION APPROVAL OF STIPULATION AND AGREEMENT”** was placed in the United States mail, first class postage prepaid, this 3rd day of October, 1997, to:

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James Ludwig
Executive Director, Regulatory Affairs
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ON BEHALF OF:
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- ONEOK INC.
- WAI, INC.

Walker Hendrix
Consumer Counsel
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ON BEHALF OF:
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ON BEHALF OF:
- MOUNTAIN IRON & SUPPLY COMPANY

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ON BEHALF OF:
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ON BEHALF OF:

- UNITED ASSOCIATION OF JOURNEYMEN
AND APPRENTICES OF THE PLUMBING AND
PIPE FITTING INDUSTRY OF THE UNITED
STATES AND CANADA
- UNITED STEELWORKERS OF AMERICA,
AFL-CIO
- INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, AFL-CIO

Gregg D. Ottinger
Duncan & Allen
1575 Eye Street, N.W.
Washington, D.C. 20005- 1175

ON BEHALF OF

- BOARD OF PUBLIC UTILITIES OF KANSAS
CITY, KANSAS



Larry Cowger

BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Joint Application of Western Resources, Inc., ONEOK Inc., and WAI, Inc. for Approval of the Transfer from Western Resources, Inc. to WAI, Inc. of all of the Natural Gas Transportation and Distribution Assets, Subsidiaries and Certificates of Western Resources, Inc.; for the Merger of WAI, Inc., with ONEOK Inc.; for the acquisition by Western Resources, Inc. of Shares of Capital Stock of WAI, Inc.; for Authority for WAI, Inc. to Issue Stock and Instruments of Debt; and for Related Relief)
)
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)
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) Docket No. 97-WSRG-486-MER
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STIPULATION AND AGREEMENT

Western Resources, Inc. (Western or Western Resources), ONEOK Inc. (ONEOK), WAI, Inc. (WAI) (collectively “Joint Applicants”), the Kansas Corporation Commission Staff (Staff), and the Citizens’ Utility Ratepayers Board (CURB) have reached the following stipulations and agreements. This Stipulation and Agreement is submitted to the Kansas Corporation Commission (KCC or Commission) by the above-mentioned parties for approval pursuant to the terms set forth herein.

I. DESCRIPTION OF THE PROCEEDINGS

1. Western is a Kansas corporation, in good standing in all respects, with its principal offices and place of business located at 818 Kansas Avenue, Topeka, Kansas 66612. Western presently owns and operates a gas distribution system in portions of Kansas, including the Mid Continent Marketing Center, pursuant to certificates of public convenience and necessity issued by the KCC and subject to the jurisdiction of the KCC and Westar Gas Marketing Inc. There is already on file with the KCC restated Articles of Incorporation and Bylaws which are incorporated herein

by reference.

2. ONEOK is a Delaware corporation with its principal offices and place of business located at 100 West Fifth Street, Tulsa, Oklahoma 74103. As more fully described below, ONEOK is a diversified energy company engaged in the production, gathering, storage, transportation, distribution and marketing of natural gas. Through its division, Oklahoma Natural Gas (ONG), ONEOK serves approximately 730,000 natural gas utility customers in Oklahoma. A certified copy of the Certificate of Incorporation and Bylaws of ONEOK was attached to the Joint Application, marked as Schedule I, and is incorporated herein for all purposes.

3. WAI will be an Oklahoma corporation incorporated for the purposes of this transaction. At the conclusion of the transaction, ONEOK will be merged with and into WAI, the separate existence of ONEOK will cease, and WAI will continue as the surviving corporation. WAI plans to change its name to ONEOK, Inc. at the time the transaction is completed. A certified copy of WAI's Articles of Incorporation and Bylaws has been filed, marked as Schedule 2, and is incorporated herein for all purposes. A certified copy of WAI's authority to do business in Kansas was filed marked Schedule 3 and is incorporated herein for all purposes.

4. On February 24, 1997 Western, ONEOK and WAI filed a Joint Application seeking an Order and Certificate authorizing Western to contribute to WAI all of its natural gas transportation and distribution properties in the State of Kansas, including its certificates and the capital stock of certain subsidiaries; authorizing ONEOK to merge with WAI; authorizing Western to acquire shares of the capital stock of WAI; authorizing WAI to issue capital stock and instrument of debt; and for all other related relief that may be required to fulfill the intents and purposes of the parties to the transactions.

5. On March 3, 1997 CURB filed its Petition to Intervene which was granted by the KCC. On March 5, 1997, Motions to Intervene were filed by Local Union 304 of the International Brotherhood of Electric Workers, AFL-CIO; the United Steelworkers of America, AFL-CIO; and the United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada. On March 17, 1997, a Petition for Intervention was filed by Mountain Iron & Supply Company. On April 2, 1997, a Petition to Intervene was filed by Williams Natural Gas Company. On July 9, 1997, a Motion to Intervene was filed by the Board of Public Utilities of Kansas City, Kansas.

6. On July 8, 1997 the KCC issued a procedural order in this proceeding. Pursuant to said Order, Staff and CURB were directed to file direct testimony on September 2, 1997. Joint Applicants were ordered to file rebuttal testimony on September 26, 1997. A technical hearing was scheduled for October 6, 1997.

II. TERMS OF THE STIPULATION AND AGREEMENT

7. Subject to the conditions and reservations set forth herein, the parties have evaluated the proposed Western-ONEOK-WA1 transaction under the standards articulated by the KCC in the Kansas Power & Light Company, KCA Corporation and Kansas Gas & Electric Company acquisition proceedings, KCC Docket No. 174,155-Q and agree that, in accordance with those standards, adoption of this Stipulation and Agreement is in the public interest.

A. CONDITIONS ON APPROVAL OF APPLICATION OF MERGER

8. The signatories to this Stipulation and Agreement will recommend to the KCC, and support at any hearing for approval of this settlement, that the transaction more fully described in

the application in this case resulting in the ownership and operation of the Western gas business by ONEOK and the acquisition of ONEOK stock by Western be approved and that the following conditions be ordered as part of that approval:

A. Reservations Relating to Public Comments.

Pursuant to the Commission's scheduling order, the public is allowed to provide written comments to the Commission concerning the proposed transaction between Western and ONEOK. That public comment period runs through October 6, 1997. If after reviewing the public comments, Staff or CURB believe that additional terms should be included in this Stipulation and Agreement, Staff and CURB shall have the right to submit those additional terms to Western and ONEOK for their review and approval. If the parties are unable to reach agreement on the additional terms arising from the public comments, then Staff and CURB reserve the right to withdraw from the Stipulation and Agreement and shall not be bound by any of the agreements or provisions hereof. If Staff or CURB withdraw from this Stipulation and Agreement, then this matter shall proceed to hearing as scheduled.

B. Quality of Service Standards.

The parties recognize that for purposes of this case, the Commission has no experience with ONEOK as the manager of a gas utility and the Commission Staff wishes to establish special performance standards to assure quality of service for Western Resources' existing Kansas gas customers.

ONEOK will commit to maintain the same quality of service as that now provided by Western. Such quality of service will be measured by the quality of service guidelines, to be reported annually to the KCC, as set forth in the testimony of Staff Witness Buchanan

with certain modifications, as will be specified below.

a) For clarification, the following standards are adapted from Ms. Buchanan's testimony:

The answered call rate shall exceed 95% per year. For the purpose of assessing penalties, a departure of actual performance from the standard of 0.5% will be necessary to reach the first 1% deviation and a departure of .25% will be expressed as a 1% deviation thereafter. For example:

An answered call rate of 94.50% = 1% deviation
 An answered call rate of 94.25% = 2% deviation
 An answered call rate of 94.00% = 3% deviation
 An answered call rate of 93.75% = 4% deviation

The number of estimated bills per 1000 customers should not exceed 2 14 per year. In addition, the Commission's decision in Docket No. 97-GIMG-514-GIG (a review of billing practices) should replace this standard and should also replace any penalty or rewards for the estimated bill standard which are established by the Commission in this docket. For the purpose of assessing penalties, a departure of actual performance from the standard of 5% will be expressed as a 1% deviation. For example:

225 estimated bill per 1000 customers = 1% deviation
 236 estimated bill per 1000 customers = 2% deviation
 247 estimated bill per 1000 customers = 3% deviation

Ninety-six percent (96%) of tracked complaints should be responded to within 24 hours. Deviations will be expressed in increments of 1%. For example:

95.04% of tracked complaints responded to in 24 hours = 1% deviation
 94.08% of tracked complaints responded to in 24 hours = 2% deviation
 93.12% of tracked complaints responded to in 24 hours = 3% deviation

On an annual basis, the average response time to odor reports should not exceed 27.50 minutes. For the purpose of assessing penalties, a departure of thirty (30) seconds of actual performance from the standard will be expressed as a 1% deviation.

For example:

Response time of 28.00 minutes = 1% deviation
Response time of 28.50 minutes = 2% deviation
Response time of 29.00 minutes = 3% deviation

On an annual basis, the average age of leaks in inventory should not exceed 18 months. Deviations will be expressed in increments of 1%. For example:

Average age of leak in inventory of 18.18 months = 1% deviation
Average age of leak in inventory of 18.36 months = 2% deviation
Average age of leak in inventory of 18.54 months = 3% deviation

b) The Service Appointment standard recommended in testimony will be eliminated and ONEOK agrees to adopt Western's Service Guarantee program. The Service Guarantee Program assures customers that the company will keep service appointments. The company will credit the customer 25 percent of the current month's energy bill, up to \$250, if the company fails to keep the appointment.

c) The parties recognize that there may be certain extraordinary events which occur from time to time, which are (1) beyond the control of the utility, such as an act of nature, and (2) which may effect the utility's ability to meet the service standards agreed hereto. Upon the occurrence of one of these extraordinary events (as that term is further defined in paragraph 0), ONEOK shall document the event and the impact that said event has had on the performance of the utility. Before assessing penalties, the Commission will give ONEOK the opportunity to present

such documentation. The Commission's staff and CURB will have the opportunity to respond to ONEOK's claims. After considering the information provided by the parties, the Commission will determine whether it is appropriate to deviate from the penalty schedule.

d) Penalties will be determined as follows:

Each standard will be worth 20 points in a 100 point index. If ONEOK's performance falls below any of the five (5) established standards, points will be deducted for each standard which falls below the baseline. The deduction will be based on the percentage by which the standard falls below the baseline (see part (a) for a discussion of the calculation of a 1% deviation). For example, if actual performance falls below the standard by 2%, the deduction would be .4 points ($20 \times .02$). If ONEOK achieves or exceeds the baseline in any particular standard, it will receive the full 20 points. The net point total will be calculated by adding together the total points from each standard. A penalty will be imposed on an annual (12 month) basis when the point total falls to 99.8 or below according to the following scale:

99 - 99.8 points	\$100,000
98 - 98.9	\$250,000
97 - 97.9	\$500,000
96 - 96.9	\$750,000
94 - 95.9	\$1,500,000
93.9 and under	\$2,000,000

Thus, if the company's performance meets each standard, it will have a total of 100 points and no penalty will be assessed. No penalties will be assessed until the company's performance deviates from at least one standard by 1%. The maximum

penalty which can be assessed is \$2,000,000.

Penalties will be assessed by the Commission only upon application by Staff for the assessment of a penalty and upon full opportunity for ONEOK to present evidence of any extraordinary events, as defined herein at paragraphs B(c) and 0, to the Commission.

e) In addition, ONEOK agrees to continue the current pipeline safety program, which includes the items beyond the minimum standards such as retaining their audit staff and the proactive approach to pipeline safety compliance monitoring, retaining their materials laboratory and staff to evaluate products and conduct failure analyses, cast iron and bare steel replacement practices, and low pressure distribution system upgrades. ONEOK agrees to continue Western's practice of cooperating with the Staff when making changes to its operating standards manual. The Commission's Pipeline Safety staff will monitor ONEOK's commitment to these items. Further, ONEOK agrees to continue the Project Deserve program or a similar program which provides low income customers with bill payment assistance. ONEOK agrees to continue Western's informal practice of not disconnecting a customer if the amount owed by the customer is less than \$100.00 for a bill less than 30 days overdue and if the amount owed is less than \$50.00 for bills that are 60 days or more overdue unless ONEOK determines that a policy change is warranted for business purposes, at which time ONEOK agrees to notify the Commission of the change and the reason for the change.

f) Nothing in this agreement shall imply that the five stated quality of

service standards comprise all criteria by which service quality can be evaluated. The parties acknowledge that the special performance standards adopted herein are not currently required for existing Kansas utilities.

g) ONEOK agrees that a diminishment of the quality of service compared to that delivered by the incumbent provider, Western, is not in the public interest.

h) The parties to this Stipulation and Agreement agree that if the Commission has not established statewide utility performance standards and penalties and/or rewards within three years from the date of closing of this transaction, ONEOK shall be allowed to petition the Commission to modify or eliminate the performance standards and penalties agreed to herein.

Except as otherwise specifically provided herein, it is specifically agreed that the parties to this Stipulation and Agreement shall not be deemed to have approved or acquiesced in the performance standards or penalty provisions set forth herein in any future proceedings before the Commission in which performance standards or penalties and/or rewards are considered.

C. Capital Structure.

In its next rate filing ONEOK shall base its request upon its actual capital structure not to exceed 57% equity, (which reflects ONEOK's capital structure as of August 1, 1997). If its actual equity capitalization ratio exceeds 57%, ONEOK agrees to base its request upon a hypothetical capital structure, not to exceed a common equity component of 57%. Staff and other parties shall have the right to argue that the filed equity capitalization (hypothetical

or actual) is atypical and should not be adopted in the Commission's determination of appropriate rates.

D. Rate Filing Moratorium.

ONEOK will not file a general rate increase sooner than 36 months from the closing of the transaction provided that the Commission issues in this case its order allowing ONEOK to receive the accounting orders previously issued to Western and to continue to defer SFAS 106 and SFAS 112 costs as a recoverable regulatory asset. The deferral shall continue until the date new general rates become effective. ONEOK shall begin expensing the SFAS 106 and SFAS 112 costs when rates from its next rate case become effective. The parties recognize that the 240 day statutory time in which the KCC must act on a rate change will extend the effective time of any rate increase to more than three years from the date of closing.

This provision does not preclude ONEOK from proposing changes in rates related to cost of gas pursuant to the KCC rules related to PGA and ACA clauses or from complying with the KCC's rules or new policies concerning non-traditional rate structures, unbundled rates, new services, incentive rates, or other rates which would provide voluntary options for customers. This provision does not preclude ONEOK from filing a revenue neutral rate design case during the moratorium period. This provision shall not be binding on ONEOK, if there are changes in law or other extraordinary events over which ONEOK has no control and which result in a material adverse change in ONEOK's Kansas jurisdictional natural gas business revenues, revenue requirements, or operations.

E. Impact on Electric Customers of Western.

Western Resources acknowledges that evidence in this case supports the potential for a \$4.6 million to a \$5.2 million flowback of administrative costs to its electric cost of service. Unless an offsetting benefit is shown, any incremental cost of this transaction imposed on its remaining electric utility business should be removed from cost of service in its next electric rate determination. Western Resources agrees that it will have the burden of showing that there has been no detriment to electric customers from this transaction but will be entitled to demonstrate that the costs have been mitigated or offset, in whole or in part, by benefits attributable to the ONEOK/Western Resources alliance.

F. Acquisition Premium.

In no event shall Western or ONEOK seek or be permitted to recover a portion of the acquisition premium attributable to this transaction from ONEOK or Western's Kansas jurisdictional customers.

G. Proposed Tariff Changes.

ONEOK will withdraw the proposed tariff changes it filed in this application and may request these specific tariff changes in a separate proceeding. The signatories agree not to object, on procedural grounds, to ONEOK seeking these tariff changes outside a general rate proceeding. Such separate proceeding is not constrained by the provisions of paragraph D, above.

H. Transaction Costs.

The Kansas jurisdictional portion of the Merger transaction costs will be amortized and recovered in rates over a 40 year period with no rate base treatment. Recovery of transaction costs will be limited to actual prudent and reasonable costs directly related to

effectuating the merger.

I. Affiliates.

In response to the concerns about affiliate relations, ONEOK acknowledges that the operation of the Kansas gas business will be governed by the applicable Kansas statutes and rules of the KCC governing affiliate relations. In addition ONEOK agrees to develop a cost allocation manual which details how costs are directly charged, assigned and allocated between its jurisdictions and affiliates, and to provide Staff with a copy of the manual upon completion.

J. Effective Date of Approval of Merger.

These signatories to this Stipulation and Agreement request that the approval of the Joint Application filed in this matter be effective on or before October 15, 1997.

K. Environmental Standards.

ONEOK will maintain the relative level of environmental performance practiced by Western as of August 21, 1997, including the number of employees currently and exclusively assigned to Kansas gas environmental matters. Staff reserves the right to address the subject of a decline of environmental performance and propose appropriate remedies to the Commission.

L. Marketing Agreement.

The Marketing Agreement has not been provided to the Commission Staff. The Joint Applicants will submit their Marketing Agreement to the Staff of the KCC upon its completion. Nothing in this agreement shall prohibit the Staff or CURB from raising regulatory issues associated with the marketing agreement in future proceedings, with either

Western and/or ONEOK.

M. Income Tax Implications.

Tax counsel for the Joint Applicants have yet to provide an opinion on whether the transaction is tax free in nature. This opinion shall be provided to the Staff of the KCC upon receipt by the Joint Applicants. To the extent that the transaction is not in all material respects a “tax free” transaction, this stipulation shall be deemed null and void. Further, ratepayers shall be held harmless from all negative tax implications (whether deemed by all parties to be material or non-material) arising from this transaction.

N. Procedure.

The terms of this settlement will be submitted to the KCC for its approval. It is contemplated that the Joint Applicants will prefile their rebuttal testimony and that Staff be afforded the opportunity for live surrebuttal, but that the hearing scheduled in this docket will be limited, as to the signatories to this settlement, to the question of the approval of this agreement. In the event that the settlement is not approved in its entirety, without modification, then the record shall be reopened for the submission of rebuttal testimony and cross examination of witnesses. In such event, the substantive provisions of this settlement shall be void and of no effect and may not be admitted into evidence for any purpose.

O. Definitions.

For purposes of this settlement, the term “extraordinary event” which is beyond the control of the utility shall include acts of God, strikes, lockouts or other industrial disturbances, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes fires, storms, floods, washouts, arrests and restraints of

governments and people, acts, orders, laws or regulations or government authority, civil disturbances, explosions breakage or accident to machinery or lines of pipe other than those caused by the utility's negligence, the necessity for making repairs or alterations to machinery, equipment or lines of pipe, freezing of lines of pipe which could not have been prevented by the utility's use of standard and custom industry practice, partial or entire failure of supply of natural gas which could not have been prevented by the utility's use of standard and custom industry practice, acts of independent and unaffiliated third parties which damage or interfere with the kind herein enumerated or otherwise beyond the control of the utility.

If using standard and custom industry practice, the utility could have avoided the extraordinary event, then the impact of such event shall not be removed from the measurement of the performance of the utility. The utility shall be responsible for the work of all affiliates and independent contractors who perform utility service and the performance by all affiliates and independent contractors shall be included in the measurements which have been agreed to herein.

III. RESERVATIONS

9. Except as specifically provided above, this Stipulation and Agreement represents a negotiated settlement for the sole purpose of disposing of this case, and none of the signatories of this Stipulation and Agreement shall be prejudiced or bound in any manner by the terms of the Stipulation and Agreement in any other proceeding or in this proceeding should the Stipulation and Agreement not be accepted by the KCC in its entirety, or should the acquisition and merger not occur.

10. Except as otherwise specifically provided herein, the parties to this Stipulation and Agreement shall not be deemed to have approved or acquiesced to any rate making principle, valuation method, depreciation principle or method, or rate design proposal underlying or allegedly underling this Stipulation and Agreement. Further, this Stipulation and Agreement does not foreclose Staff, CURB, or other parties from challenging the appropriateness of any cost of service in any future rate case filed by ONEOK.

11. In the event the KCC accepts the specific terms of this Stipulation and Agreement, the parties waive their respective rights to cross examine witnesses, and present oral arguments or written briefs to the KCC. The parties also waive their rights to request reconsideration of the KCC order approving this Stipulation and Agreement and waive their rights to seek judicial review of said order.

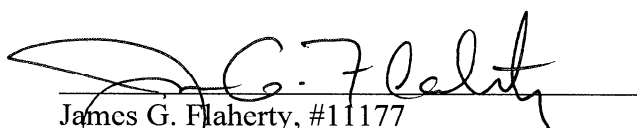
12. The terms set forth in the Stipulation and Agreement are the result of extensive negotiations among the signatory parties. Because the terms are interdependent, if the KCC does not approve and adopt all of the terms of this Stipulation and Agreement, this Stipulation and Agreement shall be void and no signatory shall be bound by any of the agreements or provisions hereof.

13. The Staff shall have the right to submit to the KCC, in memorandum form, an explanation of its rationale for entering into this Stipulation and Agreement, and to provide the KCC whatever further explanations the KCC requests. The Staffs memorandum shall not become a part of the record of this proceeding in the event the KCC does not approve the Stipulation and Agreement. Any rationales advanced by the Staff in such a memorandum are its own and not acquiesced in or otherwise adopted by the other parties.

14. This agreement may be executed in several counterparts and all so executed shall constitute but one and the same instrument binding all parties hereto, notwithstanding that all of the parties are not signatory to the same counterparts, each of which shall be fully effective as an original.

WHEREFORE, on behalf of their respective clients, the undersigned attorneys respectfully request that the KCC approve this Stipulation and Agreement in its entirety and that the KCC issue an order in this matter approving the Application for an Order and Certificate authorizing Western to contribute to WAI all of its natural gas transportation and distribution properties in the State of Kansas, including its certificates and the capital stock of certain subsidiaries; authorizing ONEOK to merge with WAI; authorizing Western to acquire shares of the capital stock of WAI; authorizing WAI to issue capital stock and instruments of debt; and for all other related relief that may be required to fulfill the intents and purposes of the parties to the transaction.

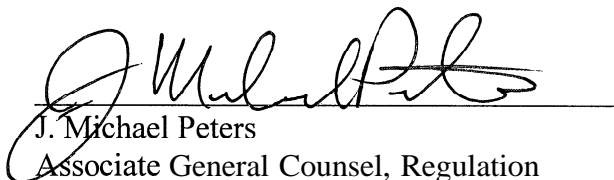
DATED this 30th day of OCTOBER, 1997.



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THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

Before Commissioners: John Wine, Chair
 Susan M. Seltsam
 Cynthia L. Claus

In the Matter of the Joint Application of Western)
Resources, Inc., ONEOK Inc., and WAI, Inc. for)
Approval of the Contribution from Western)
Resources, Inc. to WAI, Inc. of all of the Natural)
Gas Transportation and Distribution Assets,)
Subsidiaries and Certificates of Western Resources,)
Inc.; for the Merger of WAI, Inc. with ONEOK,)
Inc.; for the Acquisition by Western Resources, Inc.)
of Shares of Capital Stock of WAI, Inc.; for)
Authority for WAI, Inc. to Issue Stock and)
Instruments of Debt; and for Related Relief.)

Docket No.
97-WSRG-486-MER

Order No. 12
ORDER GRANTING JOINT MOTION AND APPROVING
STIPULATION AND AGREEMENT

NOW, the above-captioned matter comes before the State Corporation Commission of the State of Kansas (Commission). Having examined its files and records, and being duly advised in the premises, the Commission finds as follows:

Procedural And Jurisdictional Statement

1. On February 24, 1997, Western Resources, Inc. ("Western" or "WRI"), ONEOK, Inc. ("ONEOK"), and WAI, Inc. ("WAI") (collectively "Joint Applicants") filed an Application requesting approval: to transfer all of Western's natural gas assets, certificates and debt to WAI; to merge ONEOK into WAI; for Western to acquire shares of the capital stock of WAI; for WAI to issue capital stock and debt instruments; and, other related relief.

2. Western is a Kansas corporation in good standing, properly certificated by the Commission as a local distribution company. ONEOK is a Delaware corporation. ONEOK is a diversified energy company engaged in the production, gathering, storage, transportation, distribution and marketing of natural gas. Through its division, Oklahoma Natural Gas ("ONG"), ONEOK serves approximately 730,000 natural gas utility retail customers in Oklahoma. If the proposed Stipulation is approved, the new ONEOK or WAI will become a public utility under the provisions of K.S.A. 66-104 and be subject to the Commission's jurisdiction as a local distribution company doing business in the State of Kansas.

3. On March 11, 1997, the Commission suspended the Joint Application and deferred the effective date 240 days from the date of the Joint Application to allow sufficient time for full investigation of the matter.

4. On March 28, 1997, Joint Applicants filed a Motion to Amend Joint Application to include additional schedules, exhibits and testimony. Joint Applicants stated that the amended application should be "deemed a new application" for the purposes of K.S.A. 66-117(b)(1) and the 240-day period should recommence from the date the amendment was filed.

5. On July 8, 1997, the Commission issued an Order directing Western to provide notice to its customers of the Joint Application by both direct billing inserts and publication in county newspapers in each county served by Western. The Commission also directed Western to notify its customers of the opportunity to file written comments with

the Commission on or before October 6, 1997. The Commission also scheduled the hearing to be held on October 6, 1997.

6. On October 6, 1997 the technical hearing was held. Having found proper notice, the Commission found it had jurisdiction to hear this matter at that time and date. Appearances of counsel were: James G. Flaherty on behalf of ONEOK and WAI; J. Michael Peters on behalf of Western; Walker Hendrix and Brady Cantrell on behalf of the Citizens' Utility Ratepayer Board ("CURB"); Gregg D. Ottinger on behalf of the Board of Public Utility ("BPU"); and Larry Cowger and Eric Heath on behalf of Staff. The United Steelworkers of America, AFL-CIO ("Steelworkers Union"), the Local Union 304 of the International Brotherhood of Electrical Workers, AFL-CIO ("Local 304"), the United Association of Journeymen and Apprentices of Plumbing and Pipe Fitting Industry of the United States and Canada ("United Association") (collectively referred to as "the Unions") and Williams Natural Gas Company ("WNG") did not appear at the October 6 hearing. At the hearing Joint Applicants, CURB, and Staff presented the Stipulation and Agreement ("Stipulation") resolving all disputed matters in this proceeding. The parties agreed to submit the testimony and exhibits into the record and waived the right to cross-examine. (Tr. at 6).

7. During his opening statement, counsel for Staff stated that the signatory parties tried to contact the other intervenors on Friday, October 3, 1997, and supply them with the joint motion and proposed Stipulation. Staff asked the Commission to take administrative notice of the fact that the intervenor, Mountain Iron and Supply Company

(Mountain Iron), indicated by letter dated September 30, 1997, that it would not participate in the October 6 hearing. Counsel for Staff further stated that Mountain Iron faxed a letter to the parties on October 6, 1997, that Mountain Iron concurs with the Stipulation. (Tr. at 7). At the hearing, counsel for BPU asked to file comments on the Stipulation. The Commission granted BPU's request and allowed BPU to file comments by October 10, 1997.

8. On October 10, 1997, BPU filed its comments on the Stipulation. BPU states that in response to its concerns ONEOK has agreed that it will not close or reduce operations at the downtown Kansas City office during the three-year period following the closing of the merger at issue in this proceeding. The three-year period coincides with the minimum three-year rate moratorium and quality of service plan which are contained in the Stipulation.

9. BPU further stated that ONEOK has agreed that should it determine to out source meter reading or billing services for Kansas City operations in the future, it will provide any request for proposal to BPU. BPU shall be given an opportunity to submit a bid to provide those services to ONEOK and ONEOK shall give good faith consideration to that bid. ONEOK and BPU also agreed on an arrangement to provide price stability for certain BPU gas purchases. In light of these agreements BPU has no objection to the Stipulation. However, BPU noted that these agreements and its lack of objection to the Stipulation are conditioned upon ONEOK and Western closing the transaction at issue in this proceeding.

10. Joint Applicants requested approval of their merger application pursuant to K.S.A. 66-104, 66-125, 66-127, 66-136 and 66-1,200, *et seq.* K.S.A. 66-125 is limited to investor owned electric utilities incorporated in the State of Kansas. In the present case the securities will be issued by new ONEOK, and thus are not subject to the provisions of K.S.A. 66-125. K.S.A. 66-127 prohibits any public utility, domestic or foreign, from purchasing or acquiring, taking or holding any part of any capital stock, bonds or other forms of indebtedness of any competing utility either as owner or pledgee, unless authorized by the Commission. K.S.A. 66-136 provides that no certificate granted to a public utility shall be assigned or transferred, nor shall any contract or agreement affecting such certificate be valid or of any force or effect unless approved by the Commission.

11. Western is a natural gas public utility, as defined in K.S.A. 66-104, authorized to do business in the state of Kansas and subject to the jurisdiction of the Commission. Furthermore, the surviving corporation, ONEOK will be a natural gas public utility as defined by K.S.A. 66-104 subject to the jurisdiction of the Commission. Therefore, the Commission has authority and jurisdiction over the subject matter and parties herein pursuant to K.S.A. 66-104, 66-125, 66-127, 66-136 and 66-1,200, *et seq.* K.S.A. 66-125.

STANDARD OF REVIEW OF SETTLEMENT AGREEMENTS

12. The parties evaluated the proposed Western-ONEOK-WAI transaction under the standards articulated by the Commission in the Kansas Power & Light Company, KCA Corporation and Kansas Gas & Electric Company acquisition proceedings, Docket Nos. 172,745-U and 174,155-U ("1991 Merger Order"). In that proceeding the Commission

adopted specific factors it weighs and considers in determining whether proposed transactions promote the public interest. The parties agree that in accordance with those standards adoption of the Stipulation is in the public interest.

13. The 1991 Merger Order outlined a general standard to govern whether a merger or acquisition is in the public interest as it related to the KPL/KGE merger. (*See* 1991 Merger Order at 34). Utility mergers are complex transactions that affect both ratepayers and shareholders for many years to come and have significant implications for the utility service to be provided. In view of this potential public impact, a merger should be approved where the applicant can demonstrate that the merger will promote the public interest. (1991 Merger Order at 35) (emphasis added). The Commission's interpretation of the public interest standard has never been static. In this case, the Commission recognizes the 1991 standards and revises those standards to apply to today's mergers especially with respect to quality of service.

14. The Commission's determination on the Stipulation must constitute a reasoned decision supported by substantial competent evidence. The Commission's decision is also subject to the requirements of the Kansas Administrative Procedure Act ("KAPA") that agency actions not be arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law. *Southwest Kan. Royalty Owners Ass'n. v. Kansas Corporation Comm'n*, 244 Kan. 157, 165, 769 P.2d 1 (1989). *See also*, K.S.A. 77-621(c) (1989).

15. Generally, settlements are favored in the law. *Bright v. LSI Corp.*, 254 Kan. 853, 900 P.2d 686 (1994). The Commission, like a trial court dealing in matters affecting public

interest, is not controlled by stipulation, settlement offers or other agreements. If the Commission approves a settlement, unanimous or otherwise, it is effectively adopting that settlement as its own independent resolution on the merits of the case. *Mobil Oil Corp. v. FPC*, 417 U.S. 283, 94 S.Ct. 2328, 41 L.Ed. 2d 72 (1974).

16. Joint Applicants, CURB and Staff were the signatory parties to the Stipulation. At the October 6 hearing, only the signatory parties to the Stipulation and BPU appeared. Mountain Iron faxed a letter to the parties concurring with the Stipulation. BPU has filed its comments and does not object to the Stipulation. No party has filed an objection to the Stipulation. WNG and the Unions did not appear at the hearing nor did they file any comment to the Stipulation. In view of these facts, the Commission considers the Stipulation to be unanimous.

STIPULATION AND AGREEMENT

17. **Reservations Relating to Public Comments.** Under this provision Staff and CURB reserved the right to submit additional terms to the Stipulation if they believed, after reviewing the comments submitted by the public, additional terms were needed. The parties would then have an opportunity to reach agreement on any additional terms. If no agreement on additional terms was achieved, Staff and CURB reserved the right to withdraw from the Stipulation and not be bound by any provision thereof. The public comment period ran through October 6, 1997. Staff and CURB have not filed any additional terms to the Stipulation since the comment period ended.

18. **Quality of Service Standards.** Under this section ONEOK will commit to maintain the same quality of service as that now provided by Western. The quality of service will be measured by the quality of service guidelines to be reported annually to the Commission. The Stipulation adopted the standards from the testimony of Ms. Buchanan, Staff's witness. (Dittemore, Tr. at 48). There are five methods that quality of service will be measured by ONEOK:

- i) The answered call rate shall exceed ninety-five (95) percent per year. For the purpose of assessing penalties, a departure of actual performance from the standard of 0.5 percent will be necessary to reach the first 1 percent deviation and a departure of .25 percent will be expressed as a 1 percent deviation thereafter;
- ii) the number of estimated bills per 1000 customers should not exceed 214 per year. (Buchanan's testimony at 10). In addition, the Commission's decision in Docket No. 97-GIMG-514-GIG (a review of billing practices) should replace this standard and any penalty or reward for the estimated bill standard which is established by the Commission in this docket. For the purpose of assessing penalties, a departure of actual performance from the standard of 5 percent will be expressed as a 1 percent deviation;
- iii) ninety-six (96) percent of tracked complaints should be responded to within 24 hours (Buchanan's testimony at 11-12);
- iv) the average response time to odor reports should not exceed 27.50 minutes. For the purpose of assessing penalties, a departure of thirty (30) seconds of actual performance from the standard will be expressed as a 1 percent deviation.; and
- v) the average age of leaks in inventory should not exceed 18 months. Deviations will be expressed in increments of 1 percent. (See also Dittemore, Tr. at 48).

19. In Section IIB(b) the Service Appointment standard recommended in the testimony will be eliminated and ONEOK agrees to adopt Western's Service Guarantee program. This service standard assures customers that the company will keep service appointments. ONEOK will credit the customer 25 percent of the current month's energy bill, up to \$250, if the company fails to keep the appointment. This is not a program that is subject to the Commission's tariff. It is currently a voluntary program of Western that ONEOK will adopt as part of its customer service operation. (*See also, Martin, Tr. at 38-39*).

20. Under Section IIB(c) the parties recognize that there may be certain extraordinary events which occur that are beyond the control of the utility and which may effect the utility's ability to meet the service standards under the terms of the Stipulation. Should such an event occur, ONEOK shall document the event and its impact on ONEOK's performance. ONEOK will have an opportunity to present its claims to the Commission and the Commission will determine whether it is appropriate to assess a penalty.

21. The quality of service standards under Section IIB(d) set significant financial penalties if quality of service falls below the standards which the customers now enjoy. The potential penalties range from \$100,000 up to a maximum of \$2 million per year. (*Dittemore, Tr. at 49*). Each standard will be worth 20 points in a 100 point index. If ONEOK's performance falls below any of the five established standards, points will be deducted for each standard which falls below the baseline. Should the company's performance meet each standard, it will have 100 points with no penalty. No penalty will be assessed until the company's performance deviates from at least one standard by one

percent. Only upon application by Staff and after a full opportunity for ONEOK to present evidence of any extraordinary events shall the Commission assess penalty.

22. Under Section IIB(e) ONEOK agrees to continue: i) the current pipeline safety program; ii) Western's practice of cooperating with Staff when making changes to its operating standards manual; iii) the Project Deserve program or a similar program which provides low income customers with bill payment assistance; and, iv) Western's informal practice of not disconnecting a customer if the amount owed by the customer is less than \$100.00 for a bill less than 30 days overdue, or if the amount owed is less than \$50.00 for bills that are 60 days or more overdue, unless ONEOK determines that a policy change is warranted, at which time ONEOK agrees to notify the Commission of the change.

23. Section IIB(f) provides that nothing in the Stipulation shall imply that the five stated quality of service standards comprise all the criteria by which the service quality can be evaluated. The signatory parties also acknowledged that the special performance standards adopted by the Stipulation are not currently required for existing Kansas utilities.

24. ONEOK agrees in Section IIB(g) that a diminishment of the quality of service compared to that delivered by Western is not in the public interest.

25. Under Section IIB(h) the parties agree that if the Commission has not established statewide utility performance standards and penalties or rewards within three years from the date of the closing of the transaction, ONEOK shall be allowed to petition

the Commission to modify or eliminate the performance standards and penalties agreed to in the Stipulation.

26. **Capital Structure.** ONEOK agrees in Section II(C) that in its next general rate filing it shall base its request upon its actual capital structure not to exceed 57 percent equity (which reflects ONEOK's capital structure as of August 1, 1997). If its actual equity capitalization ratio exceeds 57 percent, ONEOK agrees to base its request upon a hypothetical capital structure, not to exceed a common equity component of 57 percent. Staff and the other parties shall have the right to argue that the filed equity capitalization is atypical and should not be adopted in the Commission's determination of appropriate rates. This section caps the maximum amount of equity within ONEOK's capital structure on which ONEOK could include in the next general rate filing. (*See* Dittmore, Tr. at 49).

27. **Rate Filing Moratorium.** Under Section II(D) ONEOK agrees not to file a general rate increase sooner than 36 months from the closing of the transaction, provided that the Commission issues an order allowing ONEOK to receive the accounting orders previously issued to Western and to continue to defer SFAS 106 and SFAS 112 costs as a recoverable regulatory asset. This is confirmed by the testimony of Mr. Eugene Dubay on behalf of ONEOK. (Tr. at 20). ONEOK may propose a rate change related to cost of gas pursuant to the Commission rules related to PGA and ACA clauses or other rates which would provide voluntary options for customers. This provision does not preclude ONEOK from filing a revenue neutral rate design case during the moratorium period. Under this provision the customers will not experience an increase in rates for three years. The

testimony submitted into record suggested that under the existing rate structure, Western could be under-earning. However, the Commission reviewed and approved the Western's rates as recently as December, 1996. The Commission believes the existing rates are within the low end of "zone of reasonableness" and will allow ONEOK to maintain its financial integrity and its ability to attract capital. Nonetheless, the rate moratorium could result in ratepayer savings of at least \$12 million per year during the moratorium period. The moratorium will have the effect of an incentive mechanism to encourage ONEOK to become more economically efficient.

28. **Impact On Electric Customers Of Western.** Western acknowledges in Section II(E) that evidence in the case supports the potential for a \$4.6 to \$5.2 million flowback of administrative costs to its electric cost of service, with the range representing Western's number and Staff's number. (Tr. at 73). The Stipulation also states that unless an offsetting benefit is shown, any incremental cost of this transaction imposed on Western's remaining electric utility business should be removed from cost of service in its next electric rate determination. Western has the burden to show that there is no detriment to electric customers as a result of the transaction. However, Western is entitled to show that these costs have been offset or mitigated by benefits directly resulting from the alliance. (See also Tr. at 40 and 79).

29. **Acquisition Premium.** An acquisition premium is the difference between the market value of compensation received and the underlying net book value of assets acquired in a utility transaction. (Dittemore's testimony at 15). Under Section II(F) neither

Western nor ONEOK shall seek or be permitted to recover a portion of the acquisition premium attributable to this transaction from ONEOK's or Western's Kansas jurisdictional customers. (See also Dubay, Tr. at 20). This means that neither ONEOK nor Western can later file an application seeking to recover this premium. No Kansas customers will have to pay any additional charge for this premium, which is estimated to be \$64 million. (Tr. at 47).

30. **Proposed Tariff Changes.** In Section II(G) ONEOK agrees to withdraw the proposed tariff changes it filed in this application but may request those specific tariff changes in a separate proceeding. The signatory parties agree not to object on procedural grounds to ONEOK seeking these tariff changes outside a general rate proceeding. This separate proceeding is not constrained by the provision of the Rate Moratorium provision under section IID. At the hearing of October 6, 1997, Mr. Dubay testified that those tariff changes would be mainly in purchased gas adjustments (PGA). (Dubay, Tr. at 60-63). Mr. Dittmore also testified that ONEOK may file some PGA tariff whereby the cost of gas component would be fixed for a period of time. It is Mr. Dittmore's belief that ONEOK may file for the line extension tariffs and the miscellaneous service charge increases contained in the original Joint Application and not be in violation of the Stipulation. Staff will have the right to object and participate in any of these tariff changes proceedings. (Dittmore, Tr. at 83).

31. During the public comment period the Consumer Protection Office of the Commission received a total of 144 comments. 121 comments were opposed to the

approval of the merger or were opposed to the proposed tariff changes such as the initiation charge and/or the increase in the reconnection charge. These comments also expressed concerns regarding the quality of service. Seven comments were in support of approving the merger. Of the remaining 15 contacts, the topics ranged from inquiries to objections on the customer notification card. The Commission notes that the majority of the comments concerned the proposed tariff changes and quality of service. Under the Stipulation, ONEOK has agreed to withdraw the tariff changes. Although under the Stipulation ONEOK has the right to file these specific tariff changes within the three year moratorium, the filing will have to be outside a general rate proceeding and will be subject to full Commission review. Further, the Stipulation provides and adopts the strict quality of service standards similar to those proposed by Staff in its testimony.

32. **Transaction Costs.** The transaction costs have been estimated to be \$7 million. (Tr. at 81). The Kansas jurisdictional portion of the merger transaction costs will be amortized and recovered in rates over a forty (40) year period with no rate base treatment. The recovery of transaction costs will be limited to actual prudent and reasonable costs directly related to effectuating the merger. The Stipulation indicates that the transaction costs are not to be included in the rate base. At the October 6 hearing, Mr. Dubay agreed with Staff that 45 percent of the transaction costs are Kansas jurisdictional. (Dubay, Tr. at 66).

33. **Affiliates.** Under Section II(I) ONEOK acknowledges that the operation of the Kansas gas business will be governed by the applicable Kansas statutes and rules of the

Commission governing affiliate relations. ONEOK also agrees to develop a cost allocation manual detailing how costs are directly charged, assigned and allocated between its jurisdictions and affiliates, and to provide Staff with a copy of the manual upon completion.

Miscellaneous Provisions:

34. The signatory parties request that the approval of the Joint Application be effective on or before October 15, 1997.

35. ONEOK agrees to maintain the level of environmental performance practiced by Western as of August 21, 1997, including the number of employees currently and exclusively assigned to Kansas gas environmental matters. Under this provision Staff reserves the right to address the subject of a decline of environmental performance and to propose appropriate remedies to the Commission.

36. Joint Applicants agree to submit their Marketing Agreement to Staff upon its completion. Nothing in the agreement shall prohibit the Staff or CURB from raising regulatory issues associated with the marketing agreement in future proceedings with either Western or ONEOK. Mr. Dubay testified at the hearing that he anticipated having the marketing agreement done within the next two weeks. It is Mr. Dubay's understanding that the agreement will only address the marketing of home security systems on behalf of Western. (Dubay, Tr. at 66).

37. Assurance from Joint Applicants' tax counsel is to be provided to Staff. Joint Applicants have stated that ratepayers shall be held harmless from all negative tax

implications arising from this transaction. (See also Dubai, Tr. at 70). There were questions raised at the hearing regarding when the Stipulation shall be deemed null and void. Mr. Dubai stated that at this point he perceives nothing that would change the agreement to make it null and void. Further, ONEOK and Western have not discussed changing any of the terms of the agreement. (Dubai, Tr. at 67, 68).

38. The Stipulation has been submitted to the Commission for approval and contains an entirety clause. Should the Stipulation not be approved in its entirety without modification, the record will be reopened for the submission of rebuttal testimony and cross examination of witnesses. If this occurs, the substantive provisions of this Stipulation are null and void and may not be admitted as evidence for any purpose.

39. The definitions, terms of standard and custom industry practice, and the reservations are set forth in the Stipulation. These provisions are hereby adopted by reference.

**THE STIPULATION IS REASONABLE AND SHOULD BE
APPROVED IN THE PUBLIC INTEREST**

40. The Commission recognizes that stipulations contain compromises by all parties. In determining whether a stipulation is in the public interest, consideration must be given to both the immediate and future effects on consumers.

41. ONEOK is qualified by its experience in Oklahoma and financial strength to operate in the natural gas industry in Kansas. ONEOK will provide Western's customers with continuity of the same quality of service and is subject to penalties if it fails to comply as described above. The Stipulation provides a moratorium on a general rate increase for

three years from the closing of the subject transaction, giving ONEOK and consumers rate stability for these three years.

42. In the 1991 Merger Order the Commission determined that merger-generated savings should be quantifiable and realizable. The Kansas jurisdictional portion of the merger transaction costs will be amortized and recovered in rates over a 40 year period with no rate base treatment. Further, Western agrees that any incremental cost of this merger transaction imposed on its remaining electric utility business should be removed from cost of service for purposes of determining future rates, except to the extent Western is able to demonstrate that these costs have been offset by benefits directly resulting from the subject transaction.

43. Approving the Stipulation will result in a number of benefits to the Kansas ratepayers and the shareholders of the Joint Applicants. The Commission finds that there is substantial competent evidence, based on the prefiled testimony and exhibits of record, to support the provisions in the Stipulation. The Stipulation is a reasonable settlement of many issues that arose from the Joint Application. The Commission finds that it is in the public interest to approve the Stipulation. This document is the result of long negotiations and compromise between the parties and for the benefit of the ratepayers. However, the Commission, by approving the Stipulation, is not establishing a precedent for future proceedings.

44. The Joint Application and Stipulation meet the statutory criteria as previously discussed. The Commission approves the transactions contemplated by Western, ONEOK,

and WAI including (i) Western's contribution of assets, certificates and debt to WAI; (ii) the issuance of the capital stock of WAI by Western; (iii) the merger of ONEOK and WAI; and (iv) the issuance by WAI of its capital stock to shareholders of ONEOK and assumption by WAI of ONEOK's debt.

45. The Commission hereby authorizes Western, effective upon consummation of the merger, to discontinue all gas services. The Commission hereby authorizes WAI (ONEOK,) to succeed to all of Western's rights, title and interests in its natural gas utility plant and facilities, and to all franchises, certificates, consents and permits relating to the operation of such plant and facilities pursuant to K.S.A. 66-136.

46. The Commission notes that, following the merger, Western will own up to 9.9 percent of the outstanding common stock of ONEOK. Western will also have preferred stock equaling up to 45 percent of the outstanding equity of ONEOK. If the Public Utilities Holding Company Act (PUHCA) is repealed, or if an exemption is obtained by ONEOK, Western may, at its option, convert, the preferred stock to common stock. (Crane's testimony at 8-9). The Commission will require ONEOK and Western to provide notice promptly if this event occurs. The Commission reminds the parties that no assignment or transfer of certificate or agreement impacting Kansas ratepayers may be implemented without the prior approval of the Commission. (K.S.A. 66-136).

47. In event the transaction is not closed, as contemplated by the Stipulation and Agreement, the parties shall notify the Commission immediately and such notification shall

constitute a new application and the 240-day statutory provision of K.S.A. 66-117(b) shall be restarted.

IT IS, THEREFORE, BY THE COMMISSION ORDERED THAT:

The Joint Motion for Commission Approval of Stipulation and Agreement filed by the Joint Applicants, CURB and Staff is hereby granted and the Stipulation and Agreement is hereby approved in its entirety as set forth in this Order.

The additional agreements between ONEOK and BPU are hereby approved.

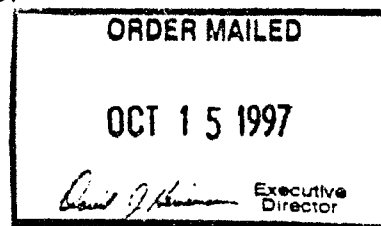
A party may file a petition for reconsideration of this Order within fifteen (15) days of the service of this Order. If this Order is mailed, service is complete upon mailing, and three days may be added to the above time limit.

The Commission retains jurisdiction over the subject matter and the parties for the purpose of entering such further order or orders as it may deem necessary and proper.

BY THE COMMISSION IT IS SO ORDERED.

Wine Chr.; Seltsam, Com.; Claus, Com.

Da.ed: OCT 15 1997



David Heinemann
Executive Director

Q: Please state your name and your business address.

A: Paul Dietz, Kansas Corporation Commission, 1500 S.W. Arrowhead Rd., Topeka, Kansas 66604-4027.

Q: In what capacity are you employed by the Commission?

A: I am employed as a Senior Research Economist. My responsibilities include the analysis of various issues related to regulatory policy and the analysis of certain rate case issues.

Q: What is your educational background?

A: I possess a Bachelor of Science degree in Economics from the University of Kansas, and I am pursuing a Master's degree in Business Administration also from the University of Kansas.

Q: What is contained in this testimony?

A: This testimony is divided into two sections. In **Section One**, I support Staff's weather normalization of OneOk's revenues for the test year ending November 30, 1996. In **Section Two**, I support Staff's position on the effects of the merger on the Kansas environment.

Section One:

Weather Normalization Adjustment Purpose of this testimony: Q: What is the purpose of your testimony in this proceeding?

A: I am supporting Staff's estimate of weather normalization "adjustments" to Western Resources' pre merger annual revenues for the year ending November 30, 1996. Staff's objective is to rebut the evidence supplied by OneOk Inc. in the testimony of Eugene N. Dubay regarding his proposed weather norming "adjustment" of \$7,673,000. Typically, a weather norming adjustment would not be performed at the time of a merger application. However, because OneOk's assertions and analyses that Western Resources is under earning are based upon and include a weather normalized quantity, Staff has performed the following weather norming analysis.

Q: Why is Staff concerned about weather normalization adjustments in general?

A: Rates are determined on the basis of information accumulated during a 12-month historical period called the TEST YEAR. This accumulated information includes sales, operating costs, and revenue -- all variables that can be affected by weather if the customers demanding natural gas are sensitive to weather conditions (particularly air temperature). Thus, if the actual weather during the test year is equal to normal weather (defined by Staff to be the NOAA 30-year average), then test year sales, operating costs, and revenues are taken as normal vis a vis the weather component of gas demand. However, if the weather for the test year is not normal, as in the present case, test year sales, operating costs, and revenue would not be normal and should be adjusted before they are used to calculate rates. This adjustment will help ensure that rates are not skewed by the effects of abnormal weather experienced during the test year. Staff notes that in the present special case, only test year revenues are

being adjusted.

Q: What are Staff's recommended weather normalization adjustments for OneOk?

A: For the Test Year ending November 30, 1996:

Residential volume adjustment: -1,792,200 mcf

Commercial volume adjustment: - 747,861 mcf

Commercial Transportation adj: - 220,061 mcf

Resale volume adjustment: - 10,504 mcf

Total volume adjustment: -2,770,626 mcf

Q: Did Staff follow its usual method for obtaining an estimate?

A: Yes it did, but with one proviso. Staff made a few consolidations of weather stations used previously in 193-305-U. A full description of Staff's approach in the present case appears below.

Q: Has Staff's method of weather normalization been accepted by the Commission in previous cases?

A: While not formally accepted, the Commission has approved the settlement of many rate cases (e.g., Docket No's 193,306-U, 193,307-U, 192,781-U, 191,990-U, Etc.) in which Staff's method was applied to produce Staff's weather normalization adjustments.⁽¹⁾

Weather Normalizing Adjustment

Q: How did Staff derive the weather normalizing adjustment for the present case?

A: Staff's procedure is summarized by four basic steps:

1. Select reasonable weather stations.
2. Calculate departures of actual temperatures from normal and determine customer counts.
3. Estimate customer sensitivity to temperature.
4. Use adjustment formulas to calculate adjustments.

Step One: Select reasonable weather stations

Q: How does Staff select weather stations?

A: Because actual weather conditions vary widely across Kansas, significant consideration must be given to weather station selection -- especially across an area as large as the one in the present case.⁽²⁾ Staff uses the following criteria to select weather stations:

1.) Partition (or disaggregate) the utility's service territory into smaller regions (keeping in mind that each of these subregions must contain a weather station). This partitioning depends on a number of factors such as: the availability of company data on a disaggregated basis, the availability of weather data at different locations, and the location of the major customer concentrations. 2.) For each subregion, select a weather station.

More frequently than not, Staff selects the weather station closest to the largest city in each of Staff's selected subregions. By selecting weather stations this way, Staff ensures actual weather conditions are being sampled exactly in those locations where there exists large concentrations of customers with (potentially) weather sensitive loads. Staff strives to select its weather stations closest to reasonably large, yet possibly diffusely located, concentrations of consumers.⁽³⁾ See Exhibit PD-1 for a list of Staff's selected weather stations. In the present case, due to Staff's time constraint, Staff consolidated the 20 preferred weather stations selected in Docket 193,305-U (96-WSRG-099-RTS) into 12 stations. Consideration for grouping stations experiencing like weather under normal conditions was a guiding principle for **this consolidation**.

**Step Two: Calculate departures of actual temperatures from normal
and determine customer counts.**

Q: How does Staff determine the deviation of actual temperature from normal temperature over the test year?

A: Each of Staff's selected weather stations is supervised by the National Oceanic and Atmospheric Administration (NOAA) and the National Weather Service. Monthly actual and normal cooling and heating degree days are found in the NOAA publication titled, Climatological Data of Kansas. Both cooling and heating degree days are derived by calculating the daily average air temperature difference from a base of 65 degrees Fahrenheit - a temperature considered to be comfort neutral for most people.⁽⁴⁾ Thus, for a cooling degree day one would calculate: ((observed daily low temperature + observed daily high temperature)/ 2) minus 65 degrees (please note that any result that is less than zero for both cooling and heating degree days is by definition equal to zero for calculation purposes). For a heating degree day, one would calculate: 65 degrees minus ((observed daily low temperature + observed daily high temperature)/2). These daily calculations are then summed according to months and are reported as monthly actual cooling or heating degree days.

The normal cooling and heating degree days that Staff uses in its calculations are the statistical mean derived from 30 years of monthly observations at each weather station as calculated and reported by the NOAA. Finally, Staff calculates the deviation of monthly actual temperature from monthly normal temperature over the test year by subtracting Actual HDD from Normal HDD (called the HDD departure), and Actual CDD from Normal CDD (called the CDD departure). Exhibit PD-2 shows the temperature departures used by Staff in the present case.

Q: Has Staff adjusted this weather data to compensate for the timing adjustment used in Docket 193-305-U and 193-306-U?

A: Yes, it has. The need for this adjustment stems from the manner in which the sales data are collected and recorded by the Local Distribution Company (LDC). The LDC does not attempt to read the meters of all customers or even all customers of a particular class on the same day. Instead, the LDC reads the meters throughout the month based on a billing cycle it has developed. For example, meters read February 1st are booked as February sales even though they are clearly January actual sales that have been affected by January weather. Likewise, meters read February 14th contain half January and half February sales with their corresponding weather. Finally, meters read February 28th contain mostly February actual sales that have been affected by February weather. This produces a timing difference between booked sales and actual sales which Staff must correct in its analysis. Thus, the weather data is adjusted to more closely match the period of booked

sales. Staff does this by averaging the weather over the current and preceding time period. For example:

Let AveHDD(t) denote the averaged HDDs for month t and t-1.

It is calculated as follows: $\text{AveHDD}(t) = (\text{HDD}(t) + \text{HDD}(t-1))/2$

Q: How did Staff determine customer counts?

A: Monthly customer count data was provided by Western Resources and reviewed by staff for discontinuities, possible recording errors, and possible outliers.

Step Three: Estimate customer sensitivity to temperature

Q: How does Staff estimate the temperature sensitivity of consumer demand?

A: Staff uses a simple regression model and ordinary least squares (OLS) estimation in order to arrive at its estimates. A complete description of this process can be found in Docket 193,305-U and consolidated Dockets 193,306-U - 193,307-U.

Q: Did Staff perform this regression analysis in the present case?

A: No, Staff did not. Instead, Staff extrapolated the sensitivity calculations (i.e., beta coefficients) derived in the analysis submitted by Staff witness Janet Buchanan in Docket 193,305-U to the present case. This analysis was developed in the course of Western Resources' last natural gas rate case. It involved the same territory, roughly the same populations, and roughly the same housing and appliance stock as the present case does. Staff believes it is likely that the weather sensitivity of a large population like the one that appears in both cases changes very slowly over time. Such change is typically the result of technological improvement and increased fuel efficiency. Thus, because a short period of time has passed relative to the amount of time needed to change a large population's sensitivities, Staff has applied the sensitivities determined in 193,305-U to the present case. The Beta coefficients used in the present case are shown in Exhibit PD-3.

Step Four: Use adjustment formulas to calculate sales adjustments.

Q: What adjustment mechanism was used to determine the recommended adjustments?

A: The basic adjustment mechanism can be stated as follows:

$$\text{WNA} = (\text{HDD departure}) \times (\text{Beta}_1) \times (\text{Customers})$$

where,

WNA = total adjustment

HDD departure = total units of departure from normal

$Beta_1$ = average customer usage per unit change in temp (beta coefficient)

Customers = average number of test year customers

Q: Can you please explain how the adjustment mechanism works?

A: Suppose temperatures are cooler than normal during the winter season. The units of departure from normal in this example will be negative since actual heating degree days (HDDs) will be greater than normal HDDs. For each unit of departure, the average customer's usage will be adjusted based on the estimated coefficient $Beta_1$. Multiplying this per customer adjustment by the average number of customers in a particular class and region gives the total adjustment to sales volume for that class in that region. In this example, the adjustment to test year sales is negative (as was expected) since the test year sales volume would have been higher than normal given the abnormally cold temperatures.

Notice how the adjustment mechanism works:

1) When actual temperatures are normal (i.e., the units of departure equal zero) the adjustment is always zero;

When actual temperatures are cooler than normal the adjustment is always negative;

When actual temperatures are warmer than normal the adjustment is always positive.

Q: What are your recommended adjustments for each of the customer classes in each region?

A: The recommended adjustments for residential, commercial, commercial transportation, and sales for resale customers in each region are listed in Tables PD-4, respectively. In general, the test year temperature was colder than normal. Therefore, sales units (measured in Mcf's) must be subtracted from the actual test year sales volume to more closely reflect the volume of sales that would have occurred had test year temperatures been normal. Staff recommends a total weather normalizing adjustment of -2,770,626 mcf for the year ended November 30, 1996.

Q: How does this compare with OneOk's proposed adjustment?

A: OneOk only proposed a revenue adjustment in their testimony, not a volume adjustment. Staff Witness Bell presents Staff's accounting adjustment to reflect the sales adjustments supported in this testimony.

Comparison of Weather Normalization Methodologies

Q: Did OneOk use the weather normalization method agreed to by Staff, Western Resources, and the Commission in previous S&A's ?

A: No, OneOk did not. In fact, they ignored the method spelled out in the Commission approved S&A issued for the combined electric dockets, 193,306-U and 193-307-U, which is the same basic method spelled out in the gas docket number 193,305-U. Western Resources and Staff both use this basic method for gas and electric cases. Staff expects OneOk to adopt the Western Resources / Staff method for any future filings with the Commission since this basic method has been agreed to by the parties involved up to this point.

Q: How does OneOk's weather normalization adjustment (WNA) method in the present case compare with the method promoted by Staff?

A: OneOk's WNA in the present case falls far short of the method promoted by Staff and Western Resources. Staff data request number 187 shows the calculations OneOk made to reach its WNA. OneOk did not perform any regression analysis of customer sensitivity to weather in their analysis. In addition, OneOk selected only four weather stations to represent the weather for the entire state of Kansas during the test year (Wichita, Chanute, Topeka, and Salina). The simple median of the percentage variance from normal weather was then selected from these four sites. No weighting was given to the populations surrounding these stations, meaning that the weather for Chanute was given as much weight as the weather in Wichita. This resulted in OneOk's conclusion that the weather for WRI's entire service territory was 5.01 % below normal.

OneOk did not take into consideration that the weather around major population centers was quite different from their 5.01 % estimate. For example, Olathe weather was less than one percent different from normal as opposed to Topeka's six and one-half percent difference. Thus, Olathe's weather could have been used to determine the WNA more accurately for Johnson County's weather sensitive customers. In general, OneOk's model does a poor job of linking populations with the weather they experienced during the test year. Because of this fact, OneOk's method likely produces results that are widely variable, and therefore, are less reliable.

Finally, OneOk calculated its adjustment based on residential customers alone. No indication was given to Staff from OneOk that showed consideration for commercial gas consumption, commercial gas transportation, or irrigation customers. Staff has demonstrated that these customers do have sensitivity to weather. This is seen by Staff to as a defect in OneOk's general method.

Section Two:

Merger Standards Regarding Effects on the Environment and Public Health

Purpose of this testimony:

Q: What is the purpose of your testimony in this section?

A: This testimony addresses Staff's position on the application of the Commission's merger standards regarding the effects of a merger on the Kansas environment. The Commission defined its merger standards in Docket Nos. 172,745-U and 174,155-U⁽⁵⁾. While all of these merger standards apply in the immediate case, I will only address two of them in this testimony. They are: the effect of the transaction on the environment, and what effect the transaction has on public safety (ie., Public health). Staff is concerned that New OneOk may not maintain Western Resources' current commitment to meeting (and / or exceeding) Kansas environmental standards. Staff believes that the treatment of environmental matters by Western Resources (WRI) in Kansas may be quite different from what other utilities would provide on a forward going basis. The Commission may want to consider steps to ensure that WRI's current and historical environmental management efforts (hereafter, WRI's environmental performance) is not degraded by the actions of New OneOk management should the proposed merger be approved.

Q: Does Kansas have a regulatory agency that promulgates and enforces the Kansas environmental standards?

A: Yes. The Department of Health and Environment has jurisdiction over these matters. They are required to monitor environmental compliance issues like the ones currently encountered by WRI.

Q: Will KDHE continue to monitor and regulate the efforts of the proposed New OneOK environmental management in Kansas should the merger be approved?

A: Yes, this department is perhaps the best resource Kansas rate payers have to ensure that any management team responsible for environmental management maintains acceptable compliance performance. The KDHE already has consent order agreements with WRI that bind any successors, including New OneOk, should the merger be approved.

Q: How does KDHE perceive WRI's environmental management efforts in the present case?

A: The KDHE wrote in its response to Staff data request 356 that,

"Western Resource's environmental management program in Kansas is rated very good to excellent. Western Resources has been very aggressive in addressing both known and newly discovered environmental problems. The only delays that have occurred can be explained by funding issues which are generally addressed through the annual budgeting process.

KDHE would rank Western Resources' environmental management efforts as compared with other utilities as one of the top utilities operating in Kansas.

KDHE is very satisfied with Western Resource's environmental performance. It is KDHE's opinion that Western Resource's environmental program is a 'model' program which other utilities should strive to achieve."

Q: It appears that WRI's environmental performance is good relative to other Kansas utilities. Does Staff have any evidence that suggests WRI's environmental performance may be relatively better than other non-Kansas utilities?

A: Yes, but it's limited to how WRI compares to OneOk specifically, rather than how WRI compares to other non-Kansas utilities generally. WRI performed a due diligence study of OneOk's current environmental management program, in which WRI expressed concern over several issues regarding OneOk's ability to manage the environmental concerns of Kansas. WRI states, " **_**"[\(6\)](#) OneOk confirmed WRI's claims in data request number 119.

Q: What were the concerns WRI had about OneOk's Manufactured Gas Plant (MGP) Sites?

A: WRI states, " **_**"[\(7\)](#) **_**". WRI is either involved or has liability in no less than 15 MGP sites which will require **ongoing** environmental management resources regardless of who is managing the company. At any rate, it appears that OneOk's management and personnel is less experienced in this area than WRI's.

Q: What is WRI's current treatment of MGP sites?

A: WRI's treatment of MGP sites is described in KDHE consent order #94-E-0172. WRI indicated in data request number 106 that it is actively involved in 5 sites (ie., Leavenworth, Kansas City, Kansas, Parsons, Newton, and Hutchinson) and has liability in 10 more sites (ie., Atchison, Topeka, Emporia, Abilene, Manhattan, Junction City, Salina, Concordia, Arkansas City, And Pittsburg). These are extensive and ongoing projects which will require expertise and resources for many years. WRI's current and ongoing environmental management efforts appear to be split between these MGP sites and their air emission evaluation and permitting program.

Q: What specific concerns did WRI have regarding OneOk's air emissions program?

A: WRI felt that, "*** **"⁽⁸⁾ WRI states in data request number 108 that this is most likely caused by the fact that the State of Oklahoma was one of the last states to submit a Title V permitting program to the US EPA for approval. OneOk has since begun to institute an air emission evaluation and permitting program.

Q: Has WRI instituted an air emission evaluation and permitting program?

A: Yes. WRI has successfully instituted an ongoing air emission evaluation and permitting program. This indicates that WRI has more experience operating this type of program than OneOk.

Q: What were the concerns WRI had about OneOk's mercury meter site program?

A: WRI states, "*** **"⁽⁹⁾ (Staff emphasis added).

Q: Has WRI addressed mercury meter site cleanup?

A: WRI has completed its mercury meter site cleanup as specified under a KDHE consent order. Again, this highlights WRI's superior level of environmental management experience when compared to OneOk's.

Q: What is Staff's primary concern regarding OneOk's proposed treatment of environmental issues in Kansas?

A: Staff encourages the Commission to determine whether a benchmark is needed to ensure that the historic performance of WRI's environmental management in Kansas is maintained on a forward going basis. Staff is concerned that the quality of environmental management provided currently by WRI may decline on a forward going basis without such a benchmark in place. In addition, Staff is also concerned that elements of WRI's environmental management program currently engaged in long term environmental projects in Kansas could be sent to manage Oklahoma projects to the detriment of the Kansas environment.

Q: Is it significant that Staff's misgivings follow from the misgivings expressed by WRI regarding OneOk's willingness or ability to manage Kansas environmental concerns?

A: It is very significant since this highlights a difference not only between WRI and OneOk, but possibly between Kansas regulation and Oklahoma regulation. In a nutshell, Staff has found that a possible difference exists between WRI's environmental performance and what may be New OneOk's environmental performance. Because actual Kansas environmental standards (as faced by WRI) are much higher than OneOk's are in Oklahoma, this suggests OneOk's management will be less seasoned to operate in Kansas.

Q: Does OneOk address Staff's concerns in their filing?

A: No, it does not. In fact, OneOk highlights Staff's concerns in their filing. In data request number 119, OneOk states, "It should be noted that a major difference between WRI and ONEOK is the organizational structure of their respective employee groups. WRI utilizes organized labor for many functions, which requires very specific work procedures and identifiable responsibilities for each employee and work unit...ONEOK and its subsidiaries have a nonunionized work environment predicated on employee versatility, work synergies, and empowerment. This enables ONEOK to decentralize functional control..." Staff contends that environmental

management, which includes such activities as air and drinking water monitoring, soil and drinking water remediation, etc., requires professionals trained for this task, and not just whoever has been "empowered" to do the job. Finally, OneOk states, "Our experience with compliance activities leads us to believe that much of the compliance workload is project oriented or short term in duration and usually the result of new regulation and enforcement." Staff contends that WR's involvement in the Kansas MGP sites is not short term. In fact, in data request number 134 WRI expects it's remediation effort at these sites to last at least 10 years.

Q: Is it possible that WRI has MGP superfund sites in its territory while OneOk does not?

A: It's possible, but not likely. Since coal gasification was the most common way for municipalities to obtain gas until it was available by long-distance pipe in the 1930's, it is unlikely that all of the municipalities in OneOk's current and historic service territories avoided the coal gasification process. It appears to Staff that it is not a question of whether OneOk has liability for MGP's, but when will OneOk be found by the Oklahoma environmental regulatory authorities to have liability for MGP's. When this occurs, OneOk management will need human resources with extensive experience in MGP site remediation in addition to the proper equipment. Assuming the merger, and on a forward-looking basis, these resources could be provided by New OneOk employees (many being former WRI employees) who may already be involved in long term Kansas environmental projects.

Q: What are the characteristics of the Environmental Management Department OneOk is proposing for the merged company?

A: Because the precise details of the New OneOk are still being developed, the management of OneOk could only provide sketchy details of their treatment of environmental management in the proposed new company. However, they do indicate that there will not be an Environmental Management Department (EMD). Instead, the function performed by the EMD will be rolled into a general technical services department responsible for other regulatory functions besides environmental concerns within Kansas including workplace, public, and pipeline safety.

Q: Does it appear that New OneOk may degrade the environmental management programs already put into place by WRI?

A: Not necessarily. However, WRI was asked in data request number 111 what its estimate of environmental staff requirements would be assuming the merger. They responded, "Assuming some synergies of expertise will occur in the merger, an equivalent environmental staff covering both states might be expected to be in the 7-10 FTE range." OneOk's proposal falls far short of this range. In fact, OneOk shows in its "Analysis of Cost Savings Potential" that it intends to allocate one manager of environmental services, one environmental engineer, one environmental specialist, and one industrial hygienist to Kansas and zero environmental employees to Oklahoma. This translates to a shift from one current WRI environmental management employee per 132,000 customers to one New OneOk environmental employee per 347,000 customers. This is another factor that makes Staff believe that erosion of WRI's environmental performance is possible. To counter this possible erosion, the Commission may want to monitor forward going environmental management efforts and resources in Kansas should the merger be approved.

Q: What is the current state of WRI's environmental management department?

A: WRI indicates in data request number 107 that it has an environmental management department which consists of industrial hygiene, laboratory services, and an engineering staff. Their department's budget is \$2,140,902 for 1997. This department has been in existence since 1984 and has 15 full time employees. Of these 15, 5 full time equivalent positions are allocated to the gas operations in Kansas. WRI has an environmental policy manual, training procedures, and an extensive record keeping system.

Q: What experiences, qualifications, and resources do the current WRI environmental management employees allocated to gas concerns possess?

A: These are shown in exhibit PD-5

Q: Can the quality of the experiences, qualifications, and resources of these employees be associated with the excellent environmental performance of WRI?

A: Yes, they can. It appears to Staff that maintaining the quality of WRI's current environmental management personnel is critical to maintaining WRI's relative environmental performance on a forward going basis. The Commission may want to include this issue in any benchmark it develops.

Q: Is Staff encouraging the Commission to institute safeguards to monitor the quality of New OneOk's environmental management in Kansas to ensure the maintenance of WRI's current performance in this area?

A: Yes it is. Should the merger be allowed, the Commission may want to institute either direct or indirect safeguards to help ensure the maintenance of relative environmental performance in Kansas. One option is annual KDHE performance reviews submitted to staff by New OneOk. Such reviews could indicate movement away from the quality of environmental management currently practiced by WRI. Staff notes that the KDHE is the best authority for such reviews since it is the state authority with jurisdiction over environmental matters in Kansas. Another option available would be for the Commission to require that the number of Kansas customers per environmental management employee ratio be maintained at the levels presently provided. Finally, a related option would be for the Commission to require New OneOk to maintain the quality of its environmental management employee resources available for Kansas projects at their present levels.

Q: Does this conclude your testimony?

A: Yes it does.

1. Additionally, Staff's method is very similar to the method currently being used by Western Resources for both gas and electric weather normalization.
2. WRI operates in approximately 80 counties, from as far north as Washington, as far south as Sumner, as far east as Johnson, and as far west as Grant. This is an area as long as the state and nearly as wide. Obviously, the weather encountered by WRI is as about as variable as the weather encountered by the state as a whole.
3. A priori, Staff expects higher correlation between customer use and temperature change the closer the customer and the weather station. For example, for customers located in Topeka, Staff expects their use to be more highly correlated with Topeka weather as opposed to Emporia's weather, or any other more distant weather. Striving to obtain higher correlation in this way serves to improve the subsequent regression analysis and results on which the weather normalization adjustment is primarily based.
4. That is, a temperature where most people do not use electricity for air heating or cooling.
5. The merger between Kansas Power & Light and Kansas Gas & Electric Company (see Order P. 35-36)
6. WRI response to Staff's data request number 1.
7. Ibid.
8. Ibid.
9. Ibid.