

U.S. Department of Transportation
Research and Special Programs Administration
400 Seventh St., S.W.
Washington, D.C. 20590

MAY 4 2004

Mr. Paul Proudfoot
Supervisor, Gas Safety Program
Michigan Public Service Commission
Lansing, MI 48909-7721

Dear Mr. Proudfoot:

On September 20, 2002, you notified this office that the Michigan Public Service Commission (Commission) granted the Consumers Energy Company a waiver from compliance with 49 CFR 192.481, *Atmospheric corrosion control: Monitoring, and 192.723(b)(2), Distribution systems: Leakage surveys*, for portions of residential service lines located inside buildings upstream from the outlet of customer meters. This office stayed the waiver on November 25, 2002 pending additional information to justify the granting of the waiver.

Section 192.481 requires operators to reevaluate every three years the need for atmospheric corrosion control on exposed pipelines. Section 192.723(b)(2) requires operators to conduct leakage surveys, using leak detection equipment, on distribution lines located outside business districts every five years or, if the pipeline is buried or submerged and not cathodically protected, every three years.

After reviewing supporting documentation submitted by your office to the Office of Pipeline Safety, Central Region (OPS-C) in response to the stayed waiver, you indicated that the Consumers Energy Company is in the third year of a ten year program to move residential meters to outside locations, and that the work should be completed in seven years. Based on that information and the additional information submitted by your office to OPS-C, this office concurs with the granting of the waiver with the following contingencies:

- Any extensions to the time required for the Consumers Energy Company to complete the metering project must be justified to the Commission. This is consistent with the statement in your September 20, 2002 letter where you stated, "In ten years the problem will not exist if this operator . . . is allowed through this waiver to use its resources to solve the problem permanently," and
- This waiver is exclusively applicable to residential meters, i.e., buildings designed for and currently occupied as a personal residence(s). This waiver does not apply to institutions, hotels, motels, and buildings not intended for personal residence.

Provided the Commission agrees to the aforementioned conditions, this office does not object to the issuance of this waiver; nor does this office believe that granting this waiver with the aforementioned conditions is inconsistent with pipeline safety.

Sincerely,
Stacey L. Gerard
Associate Administrator for Pipeline Safety

Memorandum

U.S. Department of Transportation
Research and
Special Programs
Administration

Central Region Office

Office of Pipeline Safety

Date: March-21, 2003

Subject: Consumers Energy Company Waiver Request, 192.481 and 192.723.
Michigan PSC.

From: Ivan A. Huntoon, Director, Central Region, DPS-26

To: Richard Huriaux

I have reviewed the response to the stay of waiver from Paul Proudfoot, Supervisor, Gas Safety Program, Michigan PSC. I think he has satisfactorily answered the questions I forwarded to you on November 12, 2002. Since Consumers Energy Company is in the third year of a ten year program to move residential meters to outside locations, the work should be completed in seven years. Therefore, it would be reasonable for the duration of the waiver to be contingent on completion of the 10-year program. We should consider stipulating that contingency and that any extensions to the time required to complete the project be justified to the Commission. As stated in Mr. Proudfoot's letter, "In ten years the problem will not exist if this operator is allowed through this waiver to use its resources to solve the problem permanently."

In the meantime, the parameters of the waivers should be clearly defined. This waiver should apply only to residential meters. That means only buildings that are designed and are currently being occupied as personal residence can use this waiver. This waiver should not include, institutions, hotels, motels, and buildings that are primarily used for other than a residence.

I, therefore, recommend that this waiver be approved, appended with the before mentioned conditions. Please give these items your consideration.

U.S. Department of Transportation
Research and Special Programs Administration
400 Seventh St, S.W.
Washington, D.C. 20590

NOV 25 2002

Mr. Paul Proudfoot
Supervisor, Gas Safety Program
Michigan Public Service Commission
Lansing, MI 48909-7721

Dear Mr. Proudfoot:

We have considered your letter of September 20, 2002, notifying us that the Commission granted the Consumers Energy Company a waiver from compliance with 49 CFR 192.481 and 192.723(b)(2) for portions of residential service lines located inside buildings upstream from the outlet of customer meters. Section 192.481 requires operators to reevaluate every 3 years the need for atmospheric corrosion control on exposed pipelines. Section 192.723(b)(2) requires operators to conduct leakage surveys, using leak detection equipment, on distribution lines located outside business districts every 5 years or, if the pipeline is buried or submerged and not cathodically protected, every 3 years.

The justification for waiver of § 192.481 is that atmospheric corrosion on interior portions of residential service lines is a slow process that rarely results in leaks. Also, on interior portions of service lines, a leakage survey is generally the only practical method of evaluating the need to control atmospheric corrosion. If a leak were to occur, it would be microscopic and smelled by meter readers, who are regularly in the vicinity of the piping. The company would annually test and certify its meter readers as capable of smelling gas at a safe level or provide those readers not certified with a gas monitor set at 5 percent of the lower explosive limit. The waiver of § 192.723(b)(2) is similarly justified by the likelihood that leaks would be detected sooner through monthly visits of meter readers than by checking for leaks once every 5 years with leak detection equipment. Any meter reader who smells gas would report the problem immediately for further investigation.

After considering the justification, we believe more substantiation is needed to assure the waiver is consistent with pipeline safety. The purpose of § 192.481 is to require evaluation of the need for corrosion control before leakage occurs. The same meter readers Consumers might assign to sniff the air for gas could just as readily visually examine the meter and observable interior piping for rust. The waiver does not explain why Consumers will not use its meter readers to make such examinations. For piping that is walled in or otherwise not readily observable, there may be no practical way to comply with § 192.481.

As to §192.723(b)(2), the waiver does not substantiate to our satisfaction that relying on the ability of meter readers to smell leaking gas would provide a level of safety equivalent to compliance with § 192.723(b)(2). We are concerned that a meter reader's sense of smell might change between annual certifications, or that the odorant level in the gas could change. Moreover, since Consumers intends to provide some meter readers with gas monitoring equipment, the meter readers could use the equipment to meet the requirements of § 192.723(b)(2). The waiver does not explain why Consumers will not take the same action at least every 5 years on all interior piping and meters.

Therefore, we object to the waiver, and under 49 U.S.C. 60118(d), the Commission's action granting the waiver is stayed. Within 90 days, the Commission may appeal this matter in writing and request an opportunity for a hearing. We will consider any additional information you submit in deciding whether to withdraw our objection.

Sincerely,
Stacey L. Gerard
Associate Administrator for Pipeline Safety

Public Service Commission
6545 Mercantile Way
P.O. Box 30221
Lansing, MI 48909-7721

September 20, 2002

Ms. Stacey Gerard
Associate Administrator
Research & Special Programs Administration Office of Pipeline Safety
400 Seventh Street, S.W. Room 2335
Washington D.C.

Dear Ms. Gerard:

Pursuant to the Natural Gas Pipeline Safety Act of 1968, as amended 49 USCA3 60118(d), a state agency with a presently effective annual certification from the Secretary of Transportation may waive compliance with a safety standard under that Act if the state agency determines that the waiver of compliance is not inconsistent with gas pipeline safety. 49 USCG 60118(d) further provides that any waiver granted by the state agency is subject to review by the Secretary of Transportation and that the state agency must give the Secretary of Transportation written notice of the waiver at least 60 days prior to the effective date of the waiver.

On October 19, 2001, Consumers Energy Company (Consumers Energy) filed an application requesting a partial waiver of Rule 606(2)(b) of the Michigan Gas Safety Standards for requirements of leakage survey and atmospheric corrosion control monitoring on inside service lines. Pursuant to due notice, interested persons were invited to submit comments or petition to intervene no later than November 29, 2001. No comments or petitions to intervene were filed. A prehearing conference was held on December 6, 2001, and Consumers Energy and the Commission Staff (Staff) participated in the proceedings.

In support of its application, Consumers Energy demonstrated that atmospheric corrosion leaks are not likely to occur where the atmosphere is not corrosive, as is generally the case for the atmosphere inside a residence. It is very rare to find leaks due to atmospheric corrosion inside a residence. If there are leaks as a result of atmospheric corrosion, these leaks usually start at microscopic pipe wall openings and are detectable at low enough levels to avoid risk to the public. The atmospheric corrosion rate is very low or non-existent for the portion of service lines between the inside wall of a residence and the meter location. Further, Consumers Energy has meter readers inside these residential buildings in the vicinity of such inside service lines to read inside meters on a regular basis throughout the year. They are capable of detecting and reporting the odor of odorized gas at low concentration levels before public safety is jeopardized. If a meter reader discovers the odor of odorized gas while reading a residential inside service line meter, a call is placed to report the leak. This call initiates the proper activity to diagnose and repair as required. In addition, Consumers Energy has instituted a 10-year plan to move 100,000 current inside residential medium-pressure meters to an outside location.

Staff reviewed the data presented and agreed that the proposed waiver will serve the public interest and that granting of the requested waiver is not inconsistent with gas pipeline safety nor the principles of risk management.

The Commission found in its September 16, 2002, order that granting the requested waiver was not inconsistent with gas pipeline safety. Since residential inside meter reading occurs more frequently than the three-year survey intervals required under CFR 192.481 or the five-year survey interval required under CFR 192.723, the requested waiver is consistent with gas pipeline safety. The proposed waiver does not apply to any inside service lines and meter set assemblies that are read by automatic/remote meter reading apparatus. In the event that Consumers Energy implements an automatic/remote meter reading system (AMR), inside medium pressure residential meters in an AMR area will either be relocated to an outside location, or an atmospheric corrosion inspection under 49 CFR 192.481 and a leak survey utilizing a leak detector device to comply with 49 CFR 192.723 will be performed by a qualified employee. Both surveys will be scheduled at the same time on intervals not to exceed three years.

This letter is intended to provide you, the Secretary's designated representative, a 60 - day notice prior to the effective date of the waiver. Enclosed you will find the following material to assist you in your review of this matter.

1. A copy of the Commission Order granting the waiver.
2. A copy of the application for the waiver and the supporting testimony.
3. A copy of the settlement agreement in this matter.

I would appreciate your expeditious review of the matter. If you have any questions regarding this matter please contact me at (517) 241-6142.

Sincerely,
Paul Proudfoot, Supervisor
Gas Safety Program

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of)
CONSUMERS ENERGY COMPANY for a partial)
waiver of the leakage survey and atmospheric) Case No. U-13156
corrosion control monitoring requirements)
imposed pursuant to Rule 606(2)(b) of the)
Michigan Gas Safety Standards.)
_____)

At the September 16, 2002 meeting of the Michigan Public Service Commission in Lansing, Michigan.

PRESENT: Hon. Laura Chappelle, Chairman
Hon. David A. Svanda, Commissioner
Hon. Robert B. Nelson, Commissioner

ORDER APPROVING SETTLEMENT AGREEMENT

On October 19, 2001, Consumers Energy Company (Consumers) filed an application requesting a partial waiver of Rule 606(2)(b) of the Michigan Gas Safety Standards, as it applies to requirements concerning leakage surveys and atmospheric corrosion control monitoring on inside service lines.

Pursuant to due notice, interested persons were invited to submit comments or petitions to intervene no later than November 29, 2001. No comments or petitions to intervene were filed.

A prehearing conference was held on December 6, 2001 before Administrative Law Judge George Schankler. Consumers and the Commission Staff (Staff) participated in the proceedings. The parties subsequently entered into a settlement agreement resolving all issues in this case.

According to the settlement agreement, the parties agree that atmospheric corrosion leaks are not likely to occur where the atmosphere is not corrosive, as is generally the case inside a residence. They also agree that if there are leaks as a result of atmospheric corrosion, those leaks usually start at microscopic pipe wall openings and are detectable at low enough levels to avoid risk to the public. Moreover, they concur that the atmospheric corrosion rate is very low or nonexistent for the portion of each service line between the inside wall of a residence and the meter location.

Further, the parties note that Consumers has meter readers inside these residential buildings (and in the vicinity of the utility's service lines) to read inside meters on a regular basis throughout the year. According to the parties, these meter readers are more than capable of detecting and reporting the odor of gas at low concentration levels before public safety is jeopardized. The parties go on to note that Consumers has instituted a 10-year plan to move 100,000 inside residential medium-pressure meters to an outside location. Moreover, Consumers will annually certify its meter readers' ability to detect odorized gas.

Finally, the settlement agreement indicates that the Staff agrees that the proposed waiver will serve the public interest and that granting the waiver is not inconsistent with gas pipeline safety or the principles of risk management.

The Commission finds that, based on statements set forth in the settlement agreement, granting the

requested waiver is reasonable and in the public interest. Because residential inside meter reading occurs more frequently than the three-year survey interval required under CFR 192.723, the requested waiver is consistent with gas pipeline safety. Moreover, the proposed waiver does not apply to any inside service lines and meter set assemblies that are read by automatic/remote meter reading (AMR) apparatus. In the event that Consumers implements an AMR system, inside medium-pressure residential meters in an AMR area will either be relocated to an outside location or an atmospheric corrosion inspection under 49 CFR 192.723 must be performed by a qualified employee. Both surveys will be scheduled at the same time on intervals not to exceed three years.

The Commission FINDS that:

- a. Jurisdiction is pursuant to 1909 PA 300, as amended, MCL 462.2 et seq.; 1919 PA 419, as amended, MCL 460.51 et seq.; 1929 PA 9 as amended, MCL 483.101 et seq.; 1939 PA 3, as amended, MCL 460.1 et seq.; 1969 PA 165, as amended, MCL 483.151 et seq.; 1969 PA 306, as amended, MCL 24.201 et seq.; and the Commission's Rules of Practice and Procedure, as amended, 1992 AACS, R 460.17101 et seq.
- b. Granting Consumers' request for a partial waiver of the requirements concerning leakage surveys and atmospheric corrosion control monitoring on inside service lines is not inconsistent with gas pipeline
- c. The settlement agreement is reasonable and in the public interest, and should be approved.

THEREFORE, IT IS ORDERED that:

- A. The settlement agreement, attached as Exhibit A, is approved.
- B. Consumers Energy Company's request for a partial waiver of Rule 606(2)(b) of the Michigan Gas Safety Standards, as it relates to leakage surveys and atmospheric corrosion control monitoring on inside service lines, is granted.
- C. The Commission Staff shall promptly notify the United States Department of Transportation's Office of Pipeline Safety of the issuance of this order.

The Commission reserves jurisdiction and may issue further orders as necessary.

Any party desiring to appeal this order must do so in the appropriate court within 30 days after issuance and notice of this order, pursuant to MCL 462.26.

MICHIGAN PUBLIC SERVICE COMMISSION

Laura Chappelle, Commissioner

David A. Svanda, Commissioner

Robert B. Nelson, Commissioner

By its action of September 16, 2002

Dorothy Wideman

Its Executive Secretary

State of Michigan
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)
CONSUMERS ENERGY COMPANY)
for a partial waiver of leakage survey and)
atmospheric corrosion control monitoring) Case No. U-13156
under Rule 606(2)(b) of the Michigan)
Gas Safety Standards)
_____)

APPLICATION OF CONSUMERS ENERGY COMPANY

Consumers Energy Company ("Consumers Energy" or the "Company") respectfully requests that the Michigan Public Service Commission ("Commission") or ("MPSC") grant a waiver of atmospheric corrosion reevaluation method, leak survey detection method, and leak survey frequency on residential inside service lines currently found in Rule 606(2)(b) ("Rule 606") [R 460.20606], of the Michigan Gas Safety Standards. In support, Consumers Energy states as follows:

1. Consumers Energy is a public utility engaged in, among other things, the transportation, distribution and sale of natural gas to over 1.6 million customers in the lower peninsula of the State of Michigan. Consumers Energy's gas system is fully integrated and interconnected, and is operated as a single system.

2. Consumers Energy's retail gas sales business and its retail gas transportation business are subject to the jurisdiction of the Commission pursuant to various provisions of 1909 PA 300, as amended, MCLA 462.2 et seq, MSA 22.21 et seq; 1919 PA 419, as amended, MCLA 460.54 et seq, MSA 22.4 et seq; 1939 PA 3 (MCLA 460.1 et seq; MSA 22.13(1) et seq, and 1929 PA 9, as amended, MCLA 483.101 et seq.; MSA 22.1332(1) et seq; 1969 PA 165, as amended, MCLA 483.151 et seq, MSA 22.1332(1) et seq; and 1969 PA 306, as amended, MCLA 24.201 et seq, MSA 3.560(101) et seq.

3. Pursuant to the Natural Gas Pipeline Safety Act of 1968, as amended, 49 USCA § 60102, Consumers Energy is also subject to the jurisdiction of the United States Department of Transportation for the regulation of safety standards for pipeline facilities and for pipeline transportation of gas.

4. The State of Michigan, through this Commission as its state agency, is certified under the Natural Gas Pipeline Safety Act of 1968, as amended, 49 USCA § 60105, to prescribe natural gas safety standards and to enforce compliance with those standards for the transportation of natural gas through intrastate pipelines and intrastate pipeline facilities.

5. Pursuant to the Natural Gas Pipeline Safety Act of 1968, as amended 49 USCA § 60118(d), a state agency with a presently effective annual certification from the Secretary of Transportation may waive compliance with a safety standard under that Act if the state agency determines that the waiver of compliance is not inconsistent with the gas pipeline safety. 49 USC § 60118(d) further provides that any waiver granted by the state agency is subject to review by the Secretary of Transportation and that the state agency must give the Secretary of Transportation written notice of the waiver at least 60 days prior to the effective date of the waiver. The Michigan Public Service Commission has a presently effective annual certification from the Secretary of Transportation.

6. Pursuant to § 3 of 1969• PA 165, as amended, MCL 483.153; MSA 22.1333, Consumers Energy's

natural gas system must comply with the requirements of any standard prescribed by this Commission. By Order dated August 31, 1999 in Case No. U-11750, the Commission approved new Michigan Gas Safety Standards (the "Michigan Gas Safety Standards"), R 460.20101, et seq, as set forth in the Order.

7. Pursuant to § 2(2) of 1969 PA 165, as amended, MCL 483.152(2); MSA 22.1332(2), this Commission may waive compliance with any standard established if the waiver is not inconsistent with gas pipeline safety.

8. The federal gas pipeline safety regulations administered by the Research and Special Programs Administration ("A" of the Department of Transportation include 49 CFR 192.723 [Distribution systems: Leakage surveys] and 49 CFR 192.481 [Atmospheric corrosion control; Monitoring], which are adopted by reference in Rule 606(2)(b), [R 460.20606] of the new Michigan Gas Safety Standards.

9. CFR 192.723 requires, in part, that "each operator shall conduct . . . a leakage survey with leak detector equipment . . . outside business districts as frequently as necessary, but at intervals not exceeding five years." An operator's distribution system includes the entire service line beginning at the connection to the main and ending at the customer meter or connection to the customer piping, whichever is farther downstream. Therefore, the periodic leak survey required must include the meter assembly; even for inside meters. Applicant seeks a waiver regarding inside service lines to recognize meter readers' sense of smell to detect the odor of odorized gas.

10. CFR 192.481 requires, in part, that "each operator shall, at intervals not exceeding three years for onshore pipelines, . . . reevaluate each pipeline that is exposed to the atmosphere and take remedial action whenever necessary to maintain protection against atmospheric corrosion." Applicant seeks a waiver of atmospheric corrosion reevaluation method regarding inside service lines to allow its meter readers to detect the odor of odorized gas.

11. Applicant states that there is no evidence of corrosive atmosphere for the portion of service lines between the inside wall of a residence and the meter location. Further, Applicant regularly has meter readers inside these residential buildings in the vicinity of such inside service lines to read inside meters on a regular basis throughout the year. They are capable of detecting and reporting the odor of odorized gas at low concentration levels before public safety is jeopardized.

12. Applicant asserts that atmospheric corrosion inside a residence is a very slow process that may result in microscopic leaks that allow gas to escape into residential buildings at a very slow rate. Customers, meter readers or the public can detect the odor of odorized gas before it reaches levels affecting public safety. Applicant will screen its meter readers' ability to recognize the odor of odorized gas at a level that exceeds the code requirements for leak detection equipment (and provide a monitor for those who cannot detect the odor of odorized gas at such levels). Since residential inside meter reading occurs more frequently than any survey intervals required under CFR 192.481 or CFR 192.723, Applicant believes the requested waiver is consistent with gas pipeline safety. The Testimony of David Montague filed with this Application addresses Applicant's current and past evaluations of atmospheric corrosion control on inside service lines. He concludes that atmospheric corrosion is not an issue of public safety for inside service lines. The Testimony of Gerald Richards filed with this Application describes the certifying of its meter readers' ability to detect the odor of odorized gas and the plan to furnish monitors for those whose ability to detect the odor of odorized gas is below the requirements to insure public safety. He concludes that the current and past evaluations of leak surveys of residential inside service lines have established with reasonable assurance that the proposed waiver will provide a level of safety at least equivalent to that required by the Michigan Gas Safety Standards without requiring a leakage survey with leak detector equipment under CFR 192.723. The granting of the requested waiver is not inconsistent with gas pipeline safety.

13. Applicant has instituted a 10-year plan to move all current inside residential medium-pressure meters to an outside location. Applicant's program to move all residential medium-pressure system gas meters from inside to outside demonstrates Consumers Energy's commitment to improving the gas system piping by reducing the amount of inside service lines on our system.

WHEREFORE, Applicant requests that:

A. The Commission determine that the requested waiver is not inconsistent with gas pipeline safety and will serve the public interest;

B. The Commission grant Applicant a waiver of compliance with the requirements of CFR 192.723 incorporated in Rule 606(2)(b) [R 460.20606] of the Michigan Gas Safety Standards to use its meter readers to detect and report gas leaks inside residences instead of periodic leakage surveys with leak detection equipment;

B. The Commission grant Applicant a waiver of compliance with the requirements of CFR 192.481 incorporated in Rule 606(2)(b) [R 460.20606] of the Michigan Gas Safety Standards for the reevaluation of atmospheric corrosion control at intervals of not more than three years for all jurisdictional portions of pipelines inside residences;

C. The Commission provide United States Department of Transportation's Office of Pipeline Safety Regulations written notice of the waiver of compliance with the requirements of Rule 481 of the Michigan Gas Safety Standards, and provide that the effective date of this waiver shall be 60 days after the date that office is notified of this action or earlier if so approved by that Office.

D. The Commission grant this Application without the time and expense of a public hearing; and

E. The Commission grant Applicant such other or additional relief as the Commission deems appropriate.

Respectfully submitted,
CONSUMERS ENERGY COMPANY
Dated October 19, 2001
Kenneth L. Elenbaas
Manager of Gas Operations
Technical Support

Raymond E. McQuillan (P24100)
212 West Michigan Avenue
Jackson, Michigan 49201

State of Michigan
Before the Michigan Public Service Commission

In the matter of the application of)
CONSUMERS ENERGY COMPANY)
for a partial waiver of the interval for)
atmospheric corrosion control monitoring) Case No. U-13156
currently contained in Section 192.481)
under Rule 606(2)(b) of the Michigan)
Gas Safety Standards)
_____)

VERIFICATION

STATE OF MICHIGAN)
) SS
COUNTY OF JACKSON)

Kenneth L. Elenbaas, being first duly sworn, deposes and says that he is the Manager of Gas Operations - Technical Support representing Consumers Energy Company; that he has read the foregoing Application by him subscribed for and on behalf of said Applicant; that he knows the contents thereof to be true except to matters of information and belief which he believes to be true; and he is authorized to subscribe to said Application on behalf of Consumers Energy Company.

Kenneth L. Elenbaas
Manager of Gas Operations-Technical Support

Subscribed and sworn to before me this 18th day of October, 2001.

Stephanie L. Heyden
Notary Public, Jackson County, Michigan
My Commission Expires: March 8, 2005

State of Michigan
Before the Michigan Public Service Commission

In the matter of the application of)
CONSUMERS ENERGY COMPANY)
for a partial waiver of the leakage survey for)
inside jurisdictional gas piping under) Case No. U-13156
Rule 606(2)(b) of the Michigan)
Gas Safety Standards)
_____)

**DIRECT TESTIMONY
OF
GERALD W. RICHARDS
ON BEHALF OF
CONSUMERS ENERGY COMPANY**

GERALD W. RICHARDS
TESTIMONY

Q Please state your name and business address.

A Gerald W. Richards, 1955 W Pamall Road, Jackson, Michigan.

Q By whom are you employed?

A Consumers Energy Company (hereinafter, "the Company" or "Consumers Energy").

Q What is your position with the Company?

A I am currently a Gas Service and Materials Team Leader in the Gas Operations Technical Support Department of the Gas Strategic Business Unit ("SBU").

Q Please describe your educational background.

A I graduated from Michigan Technological University 1965 with a Bachelor of Science Degree in Civil Engineering. In addition, I am a registered Professional Engineer in the State of Michigan since 1974 and presently serve on the State Board of Mechanical Rules.

Q What is your business experience?

A I began working for the Company in 1965 as an engineer at our Saginaw field office. While there, I supervised corrosion, regulation and odorization activities. From October of 1969 to January of 1971 I worked in our General Office in Jackson developing new methods. From January of 1971 to July 1976, I worked in our Battle Creek office as Superintendent of Gas Engineering, Maintenance, Construction and Gas Service. Part of my duties included overseeing cathodic protection surveys and repairs, leak surveys, gas odorization and leak repairs on the gas system and leak investigations on the customer's gas fuel line and appliances. From July 1976 to March 1984, I worked in our Lansing office as Superintendent of Gas Operations and Maintenance. My duties included overseeing the cathodic protection surveys and repairs, leak surveys, gas odorization and leak repairs on the gas system. From March 1984 until today, I work in our Jackson office as a Team Leader of Gas Service Department standards, material selection and investigation of material failures. My present job title is Senior Engineer.

Q What are your responsibilities as Team Leader?

A My primary responsibilities are to work closely with the field in developing workable standards that meet or exceed the Michigan Gas Safety Standards, work with Purchasing to select dependable materials for field use, work with the field when material failures occur and work with the field to insure that large meter installations are properly inspected.

Q Have you previously appeared before this commission?

A No.

Q What is the purpose of your testimony?

A The purpose of my testimony is to support the Application of Consumers Energy for a partial waiver of the method of leak survey used on inside residential service line piping.

Q Are you familiar with CFR 192.723(b)(2) of the Michigan Gas Safety Standards?

A Yes. CFR 192.723(b)(2) of the Michigan Gas Safety Standards requires that "Leakage survey with leak detector equipment must be conducted outside business districts as frequently as necessary, but at intervals not exceeding 5 years".

Q What does the rule require?

A The rule requires that all gas piping outside business districts be leak surveyed with leak detector equipment as needed, but not to exceed five years. The term gas piping includes buried and aboveground piping and inside gas piping up to the point that the utility connects to the customer's piping (fuel line).

Q What is an inside service line?

A Inside service line is all of the gas piping, the pipe fittings, the gas regulator (if needed) and the gas meter(s) within the building. The Company originally put all gas meters inside the customer's building; therefore, the inside service line. Starting in the mid 1950's, most meters have been installed outside, and the Company has moved a number of the original inside meters to the outside and eliminated the inside gas line. The Company still has approximately 142,000 customers with inside gas service lines among it's over 1.6 million customers.

Q What is a leak survey with leak detection equipment?

A Leak survey is the systematic monitoring of the gas system by walking or driving over the gas system while using a leak detector to find any gas leakage. To leak survey buried 12 piping, a sophisticated leak detector, such as a flame ionization detector or an Optical Methane detector is used to detect minute quantities of gas escaping into the air. On buried piping, a gas leak may be capped by a hard surface and only a small amount of gas may escape into the air.

On aboveground piping, leaking gas diffuses into the air, and a simple combustible gas detector can be used for detection. The customer reports many aboveground leaks before the pipe is leak surveyed.

Q What are typical leaks on an inside residential service line?

A An inside service line is composed of pipe, pipefittings, house regulator (if needed) and gas meter(s) that are connected by threads or flanges. Occasionally, a small leak may occur at a thread, flange, pipe fitting wall, meter casing or on the pipe itself. These leaks are rare, very small and present no immediate danger to the public.

Q Currently, how are leaks, other than leak survey leaks, on inside service line piping reported?

A When a leak occurs, the customer notices a gas smell and reports a leak. Also, our Company meter readers report gas odors while reading the gas meters. Since these leaks are on inside locations with little air movement around the piping, a small gas leak is very noticeable and does not dissipate easily.

Q When would an inside gas leak become a danger to the public?

A Inside gas leaks found on a leak survey are very small. That's because larger leaks are notice by the customer, and reported to the Company. A gas leak becomes dangerous to the public when the gas-in-air mixture exceeds the Lower Explosive Limit (LEL) of that gas. Natural Gas has a lower explosive limit

of approximately 4% gas-in-air mixture. Also, before ignition of the gas occurs, an ignition source must also be present.

Q Is the use of leak detector equipment the only way to detect a gas leak before it becomes a public safety danger?

A No. The Company adds odorant to our gas to make the a gas leak readily detectible. CFR 192.625 requires that our gas must contain a natural odorant or be odorized so that at a concentration in air of one-fifth (20%) of the lower explosive limit (LEL), the gas is readily detectible by a person with a normal sense of smell. Customers have been educated to report any gas odor immediately, and the Company responded to approximately 111,000 gas odor (leak) calls from customers in the year 2000. All of these calls occurred because somebody smelled a gas odor and reported it for investigation. On approximately 54% of these calls, a gas leak is found. Our testing of employees has shown that most people can smell gas at a gas-in-air mixture below 5% of the LEL of natural gas.

Q How does the Company know that most people will smell a gas leak before it becomes a public safety danger?

A We constantly maintain an adequate odorant level throughout our system and monitor the gas level through the use of daily sniff tests on service calls, weekly odorant usage checks and quarterly odorometer testing at remote points in our system. A review of past odorometer checks at our remote test points in our distribution system indicate the average detectible level of a gas-in-air concentration is below the 5% LEL level.

Q What is an Odorometer?

A An Odorometer is an instrument that mixes air with our natural gas and determines at what % of gas-in-air mixture is noticeable (gas odor).

Q Are Meter Readers trained to report gas leaks?

A Yes. All meter readers are trained to immediately report any gas odor discovered, and a leak investigation order is created. Our average response time to any suspected leak is less than 30 minutes.

Q Have meter readers reported gas leaks?

A Yes. A review of records for a 2-1/2 month period indicated that meter readers reported 85 gas leak calls. Of the 85 calls, 10 were on inside piping.

Q What is the Company's proposal?

A The leak survey of an inside residential service line will be performed by our meter readers relying on their ability to smell a gas odor when they read the gas meter(s). The Company attempts to gain entry to read all inside gas meters on a monthly basis.

Q Does the Company suggest that they will not do a leakage survey on inside residential service line piping?

A No. Our proposal is to complete the leakage survey using our meter readers. Our proposal includes

certifying once a year that each meter reader can detect odorized gas at a concentration level that protects the public. Those meter readers that cannot detect odorized gas at a concentration level of 5% LEL would be equipped with a personal gas monitor set to alarm at the 5% LEL level.

- Q Does the Company have any documentation on the meter reader's ability to smell gas before the leak becomes a public safety danger?
- A Testing of our meter reader' ability to smell a gas odor would be done at the beginning of the leak survey program to certify that the meter reader can smell a gas odor at a gas-in-air concentration level below 5% LEL, well below the 20% of LEL level required by the Michigan Gas Safety Standards.
- Q What if the meter reader loses their ability to detect a gas odor?
- A We recognize that an employee may have a temporary loss of the ability to detect gas odors due to a cold, sinus infection or other reasons. Since we will be attempting to enter each building monthly, a temporary loss only means that the particular buildings entered may not get leak surveyed that month. During a three-year period, the number of leak surveys on each inside gas service line will far exceeds a scheduled visit once every 3 years. Any meter reader that develops a permanent loss of ability to smell a gas odor will be equipped with a gas monitor set to alarm at 5% LEL.
- Q How does using a meter reader to smell for leaks satisfy the requirements of CFR 192.723?
- A The use of meter readers to perform the leak survey and report gas leaks is an effective way to find gas leaks and to protect the public. Most meter readers can smell gas at a very low LEL level, and inside meters get read nearly every month. Those meter readers that cannot smell a gas odor will be equipped with a gas monitor set at 5% LEL. We will make multiple entries into most building during a three-year period as opposed to one entry during that time period. While most meter readers will not be carrying leak detector equipment, the frequency of the visits, and the ability of the meter reader to detect a gas odor on inside gas service lines meets the intent of the rule and protects the safety of the public.
- Q Under your proposal how would you verify that all inside residential service lines have been leak surveyed in the three year time frame?
- A We will use an actual meter read during the three-year period as evidence that the leak survey has been completed. Our proposal includes a review of all accounts at the end of three years to determine if any accounts have not been read (leak surveyed), and work orders would be issued to move these meters outside. We have already begun a ten year program to eliminate many of the inside service lines by moving 100,000 meters to the outside.
- Q What if the Company goes to an Automated Meter Reading system?
- A Automated meter reading uses a device mounted on the meter dial to transmit meter reading information to the outside of the building. Meter reading data is then collected by a walking meter reader or by a vehicle traveling down the street. At the end of three years, the Company will get into the house either with a trained meter reader or another employee to complete the leak survey.
- Q Why are you using three years for a review cycle?
- A Another part of the waiver request is to use the leak survey results to satisfy the required atmospheric

corrosion reevaluation indicated in CFR 192.481. Since Rule 481 is on a three-year cycle, we set our leak survey on a three-year cycle.

Q Do you have any additional information that would support this waiver application?

A Yes. I made a review of approximately 57,000 completed inside gas leak investigations reported by the customer to determine if corrosion is occurring on our inside service lines. The repairs made did not refer to corrosion as a leak cause.

Q Would you please summarize your proposal?

A The Company will use meter readers to leak survey the inside portion of the gas line during their routine meter reading. The company will certify that the individual meter reader can smell gas at a safe level and will equip meter readers that cannot smell gas at a safe level with a gas monitor set to alarm at 5% LEL. The Company will review all inside meter accounts at the end of three years and move those meters outside to eliminate that inside gas service line. The Company has already begun a 10-year program to move 100,000 meters outside.

I believe that the granting of the requested waiver is not inconsistent with gas pipeline safety.

Q Does this complete your testimony?

A Yes, it does.

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)
CONSUMERS ENERGY COMPANY)
for a partial waiver of the interval for)
atmospheric corrosion control monitoring)
under Rule 606(2)(b) of the Michigan)
Gas Safety Standards)
_____)

Case No. U-13156

**DIRECT TESTIMONY
OF
DAVID M. MONTAGUE
ON BEHALF OF
CONSUMERS ENERGY COMPANY**

Q Please state your name and business address.

A David M Montague, 212 West Michigan Avenue, Jackson, Michigan.

Q By whom are you employed?

A Consumers Energy Company (hereinafter, "the Company" or "Consumers Energy").

Q What is your position with the Company?

A I am currently a Corrosion Control Team Leader in the Gas Operations Technical Support Department of the Gas Strategic Business Unit ("SBU").

Q Please describe your educational background.

A I was graduated from John Brown University in 1972 with a Bachelor of Science Degree in Electrical Engineering. In addition, I have completed several continuing education courses in the areas of human relations, maintenance planning, resource planning, and statistics.

Q What is your business experience?

A I began working for the Company in 1973 as an engineer at the Kam-Weadock generating complex. While there, I performed various design and coordination functions for operation and maintenance of the generating units. From January to July of 1975 I worked in the Saginaw region office as an assistant to the Region Mechanical and Electrical Engineers. During this time I helped coordinate contractor activities and received training on maintenance of the transmission system.

In July of 1975 I transferred to the General Office in Jackson. For several months I coordinated plant operations engineering projects for the generating plants on the west side of the state. When this function was decentralized I was transferred to the Production Planning Department as a Senior Engineer (still in the general office) where I was responsible for generating unit maintenance outage planning. I developed outage planning and tracking procedures which aided in the establishment of maintenance outage schedules for future years.

In April of 1980 I was transferred to the J H Campbell generating complex and was made responsible for the J H Campbell Unit 3 fuel handling system construction completion. In 1981 I was promoted to Fuel Handling Superintendent and became responsible for all coal unloading, storage and fueling of Campbell Units 1, 2 and 3. In 1986 I returned to the Campbell Unit 3 engineering group, where I performed various design and contract coordination functions.

Wholesale Power Transaction and Planning Department, During my four years in this area I was responsible for expansion planning studies and Integrated Resource Plan development. My focus was on use of the electric forecast and other inputs, such as DSM programs, in computer models for the development and analysis of future resource plans.

In October of 1992 I was transferred to a forecasting position in the electric SBU. While there, I performed various tasks associated with the forecasting of electric sales and peak demand and, was responsible for preparing the Company's official electric sales forecasts. In March, 1997 I was transferred to the gas SBU. I was responsible for preparing the Company's official gas sales forecasts. In April 2000 I was transferred to my present position where I am responsible for pipeline corrosion

control.

Q What are your responsibilities as Corrosion Control Team Lead?

A My primary responsibilities are to provide the overall direction and support for Consumers Energy's Corrosion Control Program in the gas division. This includes monitoring compliance of the corrosion control program with Consumers Energy's work standards as well as the Michigan Gas Safety Standards.

Q Have you previously appeared before this commission?

A Yes, I testified in cases U-10335, U-10445, U-10710, U-10800, U-10973, and U-11800 on the topics of electric sales and peak demand.

Q What is the purpose of your testimony?

A The purpose of my testimony is to support the Application of Consumers Energy for a waiver of the atmospheric corrosion reevaluation method on residential inside service lines from conventional methods to leakage survey.

Q Are you familiar with CFR 192.481 of the Michigan Gas Safety Standards?

A Yes. CFR 192.481 of the Michigan Gas Safety Standards requires that "...each operator shall, at intervals not exceeding 3 years for onshore pipeline, reevaluate each pipeline that is exposed to the atmosphere and take remedial action whenever necessary to maintain protection against atmospheric corrosion."

Q What does this rule require of Consumers Energy?

A Consumers Energy must protect the public from gas leakage that may result from atmospheric corrosion.

Q What is atmospheric corrosion?

A Corrosion, as defined in the Michigan Gas Safety Standards, is the "destruction or deterioration of a material, usually a metal, by an electrochemical process, due to a reaction with the material's environment." The environment for atmospheric corrosion is the atmosphere: This is saying that metal exposed to the air that will try to return to its natural state as a metal oxide. In simple terms, corrosion is observed as rust on the metal and moisture is the primary accelerator of the rusting process.

Q Is Consumers Energy's experience with atmospheric corrosion consistent with the requirements of the rule?

A Yes. The atmosphere we exist in, is not usually very corrosive. Atmospheric corrosion leaks are not likely to occur in areas where the atmosphere is not corrosive, as is the case for the atmosphere inside a residence. It is Consumers Energy's experience that it is very rare to find leaks due to atmospheric corrosion inside a residence. If there are leaks as a result of atmospheric corrosion, these leaks usually start weeping at microscopic pipe wall openings and are detectable at low enough levels to avoid risk to the public.

Q How quickly does atmospheric corrosion cause a pipe to deteriorate?

A Atmospheric corrosion rate is measured by the amount of metal loss over a period of time and is affected by moisture, dust, impurities in the air, and temperature. Industrial and marine atmospheres are the most aggressive because of sulfur dioxides, nitrogen oxides and chlorides produced from industrial processes, and naturally occurring chlorides in marine atmospheric exposures and, therefore, the atmospheric corrosion rate is high.

Residential atmosphere is the least aggressive because of temperature, dust, and sometimes humidity control that occurs with habitation of the residence and, therefore, the atmospheric corrosion rate is very low or non-existent.

Q Can the atmospheric corrosion rate be stabilized?

A When uncoated metallic surfaces are exposed to the atmosphere, corrosion rates stabilize within three to five years. A patina, or rust, is formed as a protective layer which ranges in color from a dark brown to violet. This patina does not stop corrosion; however, it does substantially reduce the corrosion rate. The atmospheric corrosion rate for steel gas piping could be as much as 0.0002 inches per year of metal loss in the wall thickness of the residential inside service line. Wall thickness on a standard $3/4$ inch steel service pipe is 0.154 inches which allows for atmospheric corrosion to occur without safety risk.

Q How is the existence and severity of atmospheric corrosion determined?

A Four methods are currently available to determine the existence and severity of atmospheric corrosion. One practical method for determining the existence of atmospheric corrosion is visual inspection. If atmospheric corrosion is discovered by visual inspection, then one of the next two methods would be used to determine the extent of corrosion. In the case of residential inside service lines, it is difficult to visually inspect the entire line and appurtenances when the customer has enclosed the service line as part of finish construction to prepare the area as a living space.

A second method uses a pit depth gauge to determine the loss of wall thickness which is then subtracted from the manufactured wall thickness to find the amount of remaining wall. However, when atmospheric corrosion exists it is typically uniformly distributed across the exposed surface and such pits are normally not found.

The third method, measurement of remaining wall thickness, is best accomplished through coupon testing or ultrasonic testing. Measurement by coupon testing, which requires cutting a sample out of the pipe to mechanically measure thickness, is not practical because it requires turning off the gas supply and removing the pipe from service.

Measurement by ultrasonic testing, which measures thickness of metal electronically, is not always practical because of the proximity of the pipe to its supporting structures and enclosures, which again may require removing pipe from service or demolition of customer property.

Therefore, determining the existence and severity of corrosion by conventional methods is not the solution and the fourth method, gas leakage survey, becomes the proof that there is not a safety hazard due to atmospheric corrosion.

Q How does Consumers Energy accomplish the gas leakage survey?

A The gas leakage survey for residential inside service lines is performed by meter readers as described in the testimony of Gerald W. Richards, which is also filed with this application.

Q How is remedial action assured for gas leakage due to atmospheric corrosion?

A If a meter reader discovers the odor of odorized gas while reading a residential inside service line meter, a call is placed to report the leak. This call initiates the proper activity to diagnose and repair as required.

Q What are your conclusions?

A In summary, the presence of atmospheric corrosion on a residential inside service line is likely to be minimal or non-existent. If atmospheric corrosion is present, the rate of wall thinning because of atmospheric corrosion is very slow and is not likely to result in a leak. If an atmospheric corrosion leak should occur, it will usually start weeping at a microscopic pipe wall opening which is detectable by the odor of odorized gas before it becomes a safety hazard. Therefore, it is my opinion that residential inside service line leakage survey meets the reevaluation requirement of rule CFR 192.481 for atmospheric corrosion control and the granting of the requested waiver is not inconsistent with gas pipeline safety.

Q Does this complete your testimony?

A Yes, it does.

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)	
CONSUMERS ENERGY COMPANY)	
for a partial waiver of leakage survey and)	
atmospheric corrosion control monitoring)	Case No. U-13156
under Rule 606(2)(b) of the Michigan)	
Gas Safety Standards)	
_____)	

SETTLEMENT AGREEMENT

On October 19, 2001 Consumers Energy Company (Consumers Energy) filed an application requesting a partial waiver of Rule 606(2)(b) of the Michigan Gas Safety Standards for requirements of leakage survey and atmospheric corrosion control monitoring on inside service lines.

Pursuant to due notice, interested persons were invited to submit comments or petition to intervene no later than November 29, 2001. No comments or petitions to intervene were filed. A prehearing conference was held on December 6, 2001. The Michigan Public Service Commission Staff (Staff) participated.

Consumers Energy and Staff hereby agree and stipulate to the following facts:

1. Consumers Energy is a public utility engaged in, among other things, the transportation, distribution and sale of natural gas to over 1.5 million customers in the lower peninsula of the State of Michigan. Consumers Energy's gas system is fully integrated and interconnected, and is operated as a single system.

2. Consumers Energy's retail gas sales business and its retail gas transportation business are subject to the jurisdiction of the Commission pursuant to various provisions of 1909 PA 300, as amended, MCLA 462.2 et seq, MSA 22.21 et seq; 1919 PA 419, as amended, MCLA 460.54 et seq, MSA 22.4 et seq; 1939 PA 3 (MCLA 460.1 et seq; MSA 22.13(1) et seq, and 1929 PA 9, as amended, MCLA 483.101 et seq.; MSA 22.1332(1) et seq; 1969 PA 165, as amended, MCLA 483.151 et seq, MSA 22.1332(1) et seq; and 1969 PA 306, as amended, MCLA 24.201 et seq, MSA 3.560(101) et seq.

3. Pursuant to the Natural Gas Pipeline Safety Act of 1968, as amended, 49 USCA § 60102, Consumers Energy is also subject to the jurisdiction of the United States Department of Transportation for the regulation of safety standards for pipeline facilities and for pipeline transportation of gas.

4. The State of Michigan, through this Commission as its state agency, is certified under the Natural Gas Pipeline Safety Act of 1968, as amended, 49 USCA § 60105, to prescribe natural gas safety standards and to enforce compliance with those standards for the transportation of natural gas through intrastate pipelines and intrastate pipeline facilities.

5. Pursuant to the Natural Gas Pipeline Safety Act of 1968, as amended 49 USCA § 60118(d), a state agency with a presently effective annual certification from the Secretary of Transportation may waive compliance with a safety standard under that Act if the state agency determines that the waiver of

compliance is not inconsistent with the gas pipeline safety. 49 USC § 60118(d) further provides that any waiver granted by the state agency is subject to review by the Secretary of Transportation and that the state agency must give the Secretary of Transportation written notice of the waiver at least 60 days prior to the effective date of the waiver. The Michigan Public Service Commission has a presently effective annual certification from the Secretary of Transportation.

6. Pursuant to § 3 of 1969 PA 165, as amended, MCL 483.153; MSA 22.1333, Consumers Energy's natural gas system must comply with the requirements of any standard prescribed by this Commission. By Order dated August 31, 1999 in Case No. U-11750, the Commission approved administrative rules that rescind the current Michigan Gas Safety Code and replace it with new Michigan Gas Safety Standards (the "Michigan Gas Safety Standards"), R 460.20101, et seq, as set forth in the Order.

7. Pursuant to § 2(2) of 1969 PA 165, as amended, MCL 483.152(2); MSA 22.1332(2), this Commission may waive compliance with any standard established if the waiver is not inconsistent with gas pipeline safety.

8. The federal gas pipeline safety regulations administered by the Research and Special Programs Administration ("RSPA") of the Department of Transportation include 49 CFR 192.723 [Distribution systems: Leakage surveys] and 49 CFR 192.481 [Atmospheric corrosion control; Monitoring], which are adopted by reference in Rule 606(2)(b), [R 460.20606] of the new Michigan Gas Safety Standards.

9. CFR 192.723 requires, in part, that "each operator of a distribution system shall conduct . . . a leakage survey with leak detector equipment . . . outside business districts as frequently as necessary, but at intervals not exceeding five years." An operator's distribution system includes the entire service line beginning at the connection to the main and ending at the customer meter or connection to the customer piping, whichever is farther downstream. Therefore, the periodic leak survey with leak detector equipment required by CFR 192.723 must include the meter assembly; even for inside meters. Consumers Energy seeks a partial waiver of this requirement. Consumers Energy proposes to leak survey inside residential service lines and meter assemblies utilizing the meter readers' sense of smell to detect the odor of the odorized gas when it leaks.

10. CFR 192.481 requires, in part, that "each operator shall, at intervals not exceeding three years for onshore pipelines, . . . reevaluate each pipeline that is exposed to the atmosphere and take remedial action whenever necessary to maintain protection against atmospheric corrosion." The industry standard has been to detect the presence of atmospheric corrosion through visual inspection. Consumers Energy seeks a waiver of this atmospheric corrosion reevaluation method. Consumers Energy proposes to reevaluate inside service lines and meter set assemblies for atmospheric corrosion utilizing meter readers' sense of smell to detect the odor of odorized gas when leaks occur due to corrosion.

11. In support of its application, Consumers Energy supplied the testimony of David M. Montague, its Corrosion Control Team Leader in the Gas Operations Technical Support Department of the Gas Strategic Business Unit. He stated that atmospheric corrosion leaks are not likely to occur where the atmosphere is not corrosive, as is generally the case for the atmosphere inside a residence. It is very rare to find leaks due to atmospheric corrosion inside a residence. If there are leaks as a result of atmospheric corrosion, these leaks usually start at microscopic pipe wall openings and are detectable at low enough levels to avoid risk to the public. The atmospheric corrosion rate is very low or non-existent for the portion of service lines between the inside wall of a residence and the meter location. Further, Consumers Energy has meter readers inside these residential buildings in the vicinity of such inside service lines to read inside meters on a regular basis throughout the year. They are capable of detecting and reporting the odor of odorized gas at low concentration levels before public safety is jeopardized. If a meter reader discovers the odor of odorized gas

while reading a residential inside service line meter, a call is placed to report the leak. This call initiates the proper activity to diagnose and repair as required.

12. Also in support of its application, Consumers Energy supplied the testimony of Gerald Richards, Gas Service and Materials Team Leader in the Gas Operations Technical Support Department of the Gas Strategic Business Unit. He testified that leaks on inside service lines are rare, very small and present no immediate danger to the public as these microscopic leaks allow gas to escape into residential buildings at a very slow rate. Customers, meter readers and the public can detect the odor of odorized gas before it reaches levels affecting public safety. Consumers Energy adds odorant to its gas to make a gas leak readily detectable. CFR 192.625. A combustible gas in a distribution system must contain a natural odorant or be odorized so that at a concentration in air of one-fifth of the lower explosive limit (LEL), the gas is readily detectable by a person with a normal sense of smell. CFR 192.625. This detectable level is known as 20% LEL within the gas industry. The average detectable level of gas-in-air concentration using a person's sense of smell as proposed in this waiver is generally below one-twentieth (5%) of the lower explosive limit. Consumers Energy will annually certify its meter readers' ability to detect the odor of odorized gas, and will furnish monitors set to alarm at 5% LEL for those whose ability to detect the odor of odorized gas is below the requirements to insure public safety. Mr. Richards concludes that the current and past evaluations of leak surveys of residential inside service lines have established with reasonable assurance that the proposed waiver will provide a level of safety at least equivalent to that required by the Michigan Gas Safety Standards without requiring a leakage survey with leak detector equipment under CFR 192.723. The granting of the requested waiver is not inconsistent with gas pipeline safety. Since residential inside meter reading occurs more frequently than the three-year survey intervals required under CFR 192.481 or the five-year survey interval required under CFR 192.723, the requested waiver is consistent with gas pipeline safety.

13. In further support of the partial waiver requested, Consumers Energy has instituted a 10-year plan to move 100,000 current inside residential medium-pressure meters to an outside location. Consumers Energy's program to move all residential medium-pressure system gas meters from inside to outside demonstrates Consumers Energy's commitment to improving the gas system piping by reducing the amount of inside service lines on its system.

14. The proposed waiver does not apply to any inside service lines and meter set assemblies that are read by automatic/remote meter reading apparatus. In the event that Consumers Energy implements an automatic/remote meter reading system (AMR), inside medium pressure residential meters in an AMR area will either be relocated to an outside location, or an atmospheric corrosion inspection under 49 CFR 192.481 and a leak survey utilizing a leak detector device to comply with 49 CFR 192.723 will be performed by a qualified employee. Both surveys will be scheduled at the same time on intervals not to exceed three years.

15. The proposed waiver will serve the public interest and granting of the requested waiver is not inconsistent with gas pipeline safety or the principles of risk management.

16. Staff has reviewed the application, and the testimony attached to the application. Based on its review of this information, Staff agrees that the partial waiver of compliance is not inconsistent with gas pipeline safety and that public safety should not be adversely affected if the partial waiver of compliance is approved.

17. This Settlement Agreement has been made for the sole and express purpose of reaching a compromise and an accommodation among the parties. This settlement agreement is intended for final disposition of the issues in this proceeding and the parties hereto join in respectfully requesting the Commission to grant its prompt approval. It is the opinion of the signatories hereto that this settlement agreement will aid the expeditious conclusion of this case and minimize the expenditures of resources which

would otherwise have to be devoted to this matter by the Commission and the parties.

18. Section 81 of the Administrative Procedures Act of 1969 is waived by the signatories.

CONSUMERS ENERGY COMPANY

Dated: August 1, 2002

Raymond E. McQuillan (P24100)
Attorney for Consumers Energy Company
212 W. Michigan Avenue
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MICHIGAN PUBLIC SERVICE COMMISSION STAFF

Dated: August, 2002

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