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February 9, 2001

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Mr. Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102

RE: Case No. GS-2001-216

Dear Mr. Roberts:

Enclosed for filing in the above-captioned case are an original and eight (8) conformed copies of a **GAS INCIDENT REPORT**.

This filing has been mailed or hand-delivered this date to all counsel of record.

Thank you for your attention to this matter.

Sincerely yours,

Cliff E. Snodgrass
Senior Counsel
(573) 751-3966
(573) 751-9285 (Fax)

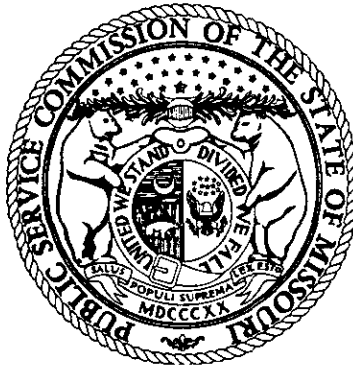
CES:sw
Enclosure
cc: Counsel of Record

**Service List for
Case No. GS-2001-216
Revised: February 9, 2001 (SW)**

**Office of the Public Counsel
P.O. Box 7800
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**Robert J. Hack
Missouri Gas Energy
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Missouri Public Service Commission



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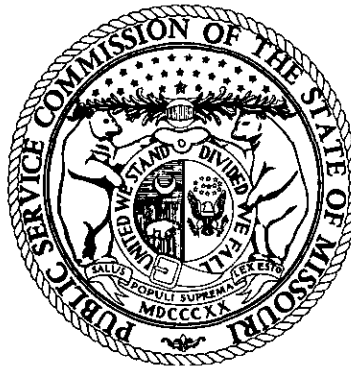
Gas Incident Report

**Missouri Gas Energy
Case No. GS-2001-216**

205 East Oak Street
Warrensburg, Missouri
July 24, 2000

Safety/Engineering Section ... Gas Department ... Utility Operations Division
February 2001 Jefferson City, Missouri

Missouri Public Service Commission



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SYNOPSIS

At approximately 2:40 p.m., Central Daylight Time (all times in this report are Central Daylight Time), on Monday, July 24, 2000, a natural gas flash fire occurred at 205 East Oak Street in Warrensburg, Missouri. The two-story, single-family residence sustained moderate damage as a result of the fire. One resident sustained burn injuries and was taken to the hospital for in-patient treatment.

Missouri Gas Energy, a division of Southern Union Company (MGE or Company) provides natural gas service to the City of Warrensburg. The natural gas system was operating at approximately 17 pounds per square inch gauge (psig) at the time of the incident.

The Missouri Public Service Commission's (MoPSC) Gas Department – Safety/Engineering Staff (Staff) has determined that the probable cause of the incident was the ignition of natural gas leaking from a hole that had been punctured in the 7/8-inch diameter, copper tubing size (CTS), polyethylene service line to 205 East Oak Street. Natural gas exited the service line and migrated to a nearby damaged sanitary sewer lateral serving 205 East Oak Street. Natural gas entered the laundry room of 205 East Oak Street, through the sanitary sewer cleanout, and was ignited. The source of ignition was not determined, however, the standing pilot on the natural gas clothes dryer was a likely source.

The damage to the natural gas service line was caused by a boring bit and rod from a boring machine operated by a third party, Installation Technologies Inc. (ITI). The boring bit came into contact with the natural gas service line, causing the hole. The boring bit and rod then continued on its path and came into contact with the sanitary sewer lateral, separating it at a transition between pipe materials. This created a direct path from the hole in the natural gas service line to the open ends of the sewer lateral.

ITI requested facility locates for the 200 block of East Oak Street through Missouri One Call Systems Inc. on July 12, 2000. MGE failed to mark the location of their facilities pursuant to the request. ITI did not directly contact MGE before beginning the boring process on July 24, 2000, even though the locations of MGE's facilities were not marked, and MGE had not communicated any information to ITI regarding natural gas facilities in the area.

The Staff has determined that sufficient evidence exists to conclude that MGE violated §319.030 (1) RSMo 2000, by failing to mark the location of their natural gas facilities on the

200 block of East Oak Street pursuant to the request made by ITI on July, 12, 2000. Three recommendations to MGE are being made as a result of the Staff's investigation.

FACTS

NOTE: Except for the information gathered during the on-site investigation and/or interviews, the information used to compile this portion of the report was obtained in record and/or statement form.

The Incident

At approximately 2:40 p.m., on Monday, July 24, 2000, a natural gas flash fire occurred in a single-family residence at 205 East Oak Street in Warrensburg, Missouri.

Personal Injuries

The incident resulted in a single injury. An occupant of the involved residence sustained burn injuries. The victim was transported to the Western Missouri Medical Center in Warrensburg, MO, and later to the University of Kansas Medical Center Burn Unit where he was treated for the burns and released at a later date.

Property Damage

The house at 205 East Oak Street sustained moderate fire, smoke, and water damage. The damage was initially estimated at \$40,000¹.

Site Description

The incident site is a single-family residence, located at 205 East Oak Street, in a residential area of Warrensburg, Missouri. 205 East Oak Street is a corner lot at the northeast corner of the intersection of College Street and East Oak Street. The structure is a two-story house constructed over a slab on grade. All other structures on the 200 block of East Oak Street are of similar design, with the exception of a bank building under construction at the northwest corner of East Oak Street and Maguire Street.

¹ Property damage estimate was made by the Warrensburg Fire Department, and provided to the Staff by MGE.

The 200 block of East Oak Street generally runs in a west/east direction between College Street to the west and Maguire Street to the east. For purposes of this report, all geographic locations will be referenced as if East Oak Street was oriented in a west/east direction. The house at 205 East Oak Street is located approximately 40 feet north of the north curb of East Oak Street (Appendix A-1, Figure 1).

Meteorological Data

The weather reporting station located at Whiteman Air Force Base, Missouri, approximately 10 miles southeast of 205 East Oak Street, recorded a high temperature of 80.6 degrees Fahrenheit (°F), a low of temperature of 59.0° F and a mean temperature of 70.9° F on July 24, 2000. There was no precipitation, and the average wind speed was 4.60 miles-per-hour.

Natural Gas System

MGE provides natural gas service in Warrensburg, Missouri. A 2-inch outside diameter bare steel, high pressure², natural gas main (main) serves the 200 block of East Oak Street. The main is located generally parallel to and approximately 3 feet south of the south curb line of East Oak Street. The main operates at approximately 17 pounds per square-inch gauge (psig), which is the maximum allowable operating pressure³.

Natural gas is supplied to 205 East Oak Street through a 7/8-inch diameter CTS, polyethylene natural gas service line (service line) installed with tracer wire. The natural gas service line extends north from the main and travels under the pavement and generally perpendicular to East Oak Street for approximately 44 feet, to a point approximately 15 inches north of the north curb, and approximately 3 feet, 9 inches west of the west edge of the driveway at 205 East Oak Street. The natural gas service line then turns to the east and travels for approximately 35 feet, parallel to East Oak Street and under the driveway. The

² Missouri Public Service Commission (MoPSC) Rule 4 CSR 240-40.030(1)(B)10., defines a high pressure distribution system as a distribution system in which the gas pressure in the main is higher than an equivalent of 14 inches water column (approximately ½ pound per square-inch gauge).

³ MoPSC Rule 4 CSR 240-40.030(1)(B)16., defines the maximum allowable operating pressure as the maximum pressure at which a pipeline or segment of a pipeline may be operated.

natural gas service line then turns to the north and travels parallel to the driveway, to the service riser approximately 57 feet north of the north curb (Appendix A-1, Figure 1).

Previous Company Actions

As part of their Damage Prevention Program⁴, and as required by §319.022 RSMo 2000, MGE is a member of the Missouri One Call System, Inc.⁵ (MOCS). MGE receives facility locate requests from excavators through MOCS when an excavation is planned. If MGE has facilities in the area of the proposed excavation site, then a field locator marks the location of the facilities at that site. MGE maintains records of the actions taken pursuant to facility locate requests. This documentation includes the original locate request, limited information regarding the specific facilities located and/or meetings with the excavator, and the date of MGE's response.⁶

On March 7, 2000, MGE received a facility location request through MOCS from ITI for 208-214 East Oak Street. The locate ticket indicated that ITI was already on site, and planned to install telephone cable at a depth of 26 to 34 inches. MGE marked the location of their facilities with paint, including 400 feet of natural gas main and six natural gas service lines, on March 7, 2000.

For the boring project related to this incident, MGE received a facility locate request for the 200 block of East Oak Street, from College Street to Maguire Street, on July 12, 2000. The request indicated that the type of work would be installation of phone line at a depth of 18 inches, beginning on July 14, 2000. MGE personnel did not locate their main and service

⁴ MoPSC Rule 4 CSR 240-40.030(12)(I)1., states that each operator of a buried pipeline shall carry out a written program to prevent damage to that pipeline by excavation activities. Excavation activities include excavation, blasting, boring, tunneling, backfilling, the removal of above ground structures by either explosive or mechanical means, or other earth moving operations.

⁵ The Missouri Underground Facility Safety and Damage Prevention Statute, §319.022 RSMo 2000, provides for a notification center to be used by participating utilities to receive locate requests. The Missouri One Call System, Inc. operates as a non-profit Missouri corporation and is the notification center providing a single-point of contact for notification to its members through a state wide toll-free telephone number.

⁶ MoPSC Rule 4 CSR 240-40.030(12)(I)2.E.(II), states that copies of notifications of planned excavation activities must be retained for 2 years. At a minimum, these records should include the date and the time the request was received, the actions taken pursuant to the request, and when the response actions were taken.

lines as requested. The only documentation on MGE's record for this facility locate request is: "No MGE", the date, and the serviceperson number.

MGE's records indicated that there were no active leaks on the 200 block of East Oak Street at the time of the incident. MGE conducted leakage surveys over the natural gas main and service lines on the 200 block of East Oak Street in July of 1998⁷. No leakage indications were detected during these surveys. Additionally, MGE did not receive any leak or odor calls from any residents of the 200 block of East Oak Street during the six months prior to the incident.

MGE's monthly odorant concentration tests conducted at a nearby test point, located near the intersection of Gay and College Streets, indicated that the natural gas was adequately odorized and readily detectable at a concentration of approximately 0.52% gas-in-air.⁸

Company Notification and Actions

At 2:43 p.m. on July 24, 2000, MGE received notification from the Warrensburg Fire Department of a house fire and hit natural gas service line at 205 East Oak Street. A serviceperson was immediately dispatched to the address and arrived at 2:51 p.m. MGE's Warrensburg area supervisor arrived at 2:57 p.m., and a crew arrived at 3:10 p.m.

When the MGE serviceperson arrived at the incident site, the house at 205 East Oak Street was on fire and there was a strong odor of natural gas in the air. An ITI construction crew had been horizontally boring and had apparently hit and punctured a natural gas service line at an unknown location. The Warrensburg Fire Department had shut off the natural gas at the service riser valve to 205 East Oak Street prior to the serviceperson's arrival. The serviceperson found 100% gas-in-air in the sanitary sewer manholes, and immediately began evacuating the buildings in the vicinity. The MGE crew arrived and removed the sewer manhole lids at 3:10 p.m. The MGE crew found 100% gas-in-air at the curb line at 207 East Oak Street and excavated to expose the natural gas service line to 207 East Oak Street. The

⁷ MoPSC Rule 4 CSR 240-40.030(13)(M)2.B., requires that an instrument leak detection survey must be conducted outside of business districts at intervals not exceeding 39 months but at least once each third calendar year.

⁸ MoPSC Rule 4 CSR 240-40.030(12)(P)1., requires the odorant in natural gas to be readily detectable at a concentration of less than 0.90% gas-in-air.

flow of natural gas through the service line to 207 East Oak Street was stopped at approximately 3:20 p.m.; the natural gas readings were not affected. A 100% gas-in-air reading was then obtained at the curb line near the east property line of 205 East Oak Street.

The MGE crew made an excavation in an attempt to vent the natural gas from the subsurface atmosphere at approximately 3:40 p.m. The MGE crew excavated to expose the natural gas service line to 205 East Oak Street on the west side of the driveway, where the service line crossed the street from the main, at approximately 4:00 p.m. The flow of natural gas through the service line to 205 East Oak Street was stopped at approximately 4:05 p.m. The natural gas readings began to dissipate immediately. The sanitary sewer manholes were clear of natural gas readings at 4:10 p.m. The subsurface atmosphere along the curb line in front of 205 East Oak Street had vented to 5% gas-in-air by 4:30 p.m., and was clear of natural gas at 5:51 p.m.

At 5:55 p.m. the MGE crew excavated the section of natural gas service line under the driveway of 205 East Oak Street. The excavation revealed that the boring rod from the ITI boring machine had been traveling parallel to and was in contact with the natural gas service line to 205 East Oak Street. The MGE crew removed the damaged area of the natural gas service line. The 7/8-inch CTS polyethylene service line had been dented and gouged by the bit of the boring rod, approximately 10 inches east of the west edge of the driveway, and 15 inches north of the north curb. The remaining undamaged service line was pressure tested at 20 psig for approximately 17 minutes from the cut made to remove the damaged segment to the service line valve; there was no leakage. The damaged segment of service line was replaced and the service line was pressure tested at 110 psig for approximately 18 minutes from the end of the replaced segment to the service valve; again there was no leakage⁹. A leakage survey was conducted over the service line from the point of disconnection to the natural gas main¹⁰. MGE reintroduced natural gas into the service line and performed a shut-in test on the house piping. The shut-in test indicated that there was no leakage on the customers piping downstream of MGE's natural gas meter.

⁹ MoPSC Rule 4 CSR 240-40.030(13)(N), requires the operator to pressure test a service line that has been temporarily disconnected from the main in the same manner as a new service from the point of disconnection to the service line valve. MGE policy is to pressure test new service lines to a minimum of 100 psig.

¹⁰ MoPSC Rule 4 CSR 240-40.030(13)(N)4., requires the operator to conduct a leakage survey over a service line that has been disconnected due to third party damage from the point of disconnection to the main.

MGE personnel spent the evening of July 24, 2000 investigating the incident and attempting to determine the migration pattern that the natural gas followed to the sanitary sewer and to the house at 205 East Oak Street. MGE believed that natural gas entered the laundry room area of 205 East Oak Street, probably through the sanitary sewer lateral, and ignited there. While an ignition source could not be positively identified, it was believed that the natural gas clothes dryer was the source of ignition. Also unknown at the time was how natural gas entered the sanitary sewer system. MGE suspended its investigation, at approximately 10:30 p.m., until the following morning, July 25, 2000.

At approximately 9:15 a.m. on July 25, 2000 the investigation resumed. ITI began to retract the boring rod, pulling it through the open excavation that had been made for the natural gas service line cut off and repair. While retracting the boring rod and bit, the sanitary sewer lateral was revealed. The boring bit and rod had passed through the sanitary sewer lateral, approximately 40 inches east of the west edge of the driveway, and 15 inches north of the back of curb. The sanitary sewer lateral was hit in an area where it transitioned from clay tile pipe to polyvinyl chloride (PVC) pipe. A rubber boot was used as a coupling to make the transition from clay tile to PVC pipe. The rubber boot had been dislodged from sanitary sewer lateral, leaving an open space between the clay tile pipe and the PVC pipe. The end of the clay tile pipe was fragmented, and the end of the PVC pipe was dented and torn. The sanitary sewer lateral had two open ends, creating a direct path for natural gas to follow to the laundry room of 205 East Oak Street, and to the sanitary sewer main under East Oak Street.

The Missouri Public Service Commission incident reporting requirements were completed is follows:

1. The initial telephonic notification of a possible natural gas incident was made to the Staff at approximately 3:15 p.m. on July 24, 2000.¹¹
2. United States Department of Transportation (US-D.O.T.) form RSPA F 7100.1 was completed and submitted to Staff.

¹¹ MoPSC Rule 4 CSR 240-40.020(4)(A), requires the operator to notify designated Commission personnel by telephone within two hours following discovery, unless efforts to protect life and property would be hindered, for each event where there is a suspicion by the operator that the event meets the natural gas incident reporting requirements of this section

MoPSC Staff Investigation

On-Site Investigation

At the direction of the Gas Department's Assistant Manager – Safety/Engineering, two members of the Commission's Safety/Engineering Staff (Staff) arrived at the incident site at 7:40 p.m. on July 24, 2000. The Staff approached the incident site as the Warrensburg Fire Department was completing their firefighting tasks. The Staff met with a representative of MGE who described the events that had occurred and actions taken to that point. The Staff was informed that there was one burn victim as a result of the incident and that he had been transported to the University of Kansas Medical Center Burn Unit by the LifeFlight Eagle helicopter.

MGE further explained that there had been 100% gas readings in the sanitary sewer manholes, that natural gas fumes could be seen escaping from an uncapped sanitary sewer lateral cleanout at 207 East Oak Street, and that these conditions ceased when the service line to 205 East Oak Street was cut off. MGE also stated that the first responding serviceperson evacuated the occupied buildings on East Oak Street from Maguire Street on the east to College Street on the west. The Warrensburg Fire Department had shut off the natural gas service valve at 205 East Oak Street prior to MGE's arrival, and the first responding serviceperson shut off the service valves to the rest of the services in the area.

The Staff observed the ITI boring machine situated on the northeast corner of East Oak Street and College Street, facing east with the boring rod extended into the ground approximately 3 feet, 6 inches north of the north curb line of East Oak Street and in a general easterly direction.

The Staff observed three excavations north of the north curb line of 205 East Oak Street. MGE personnel explained that the east excavation was made first to cut off the flow of natural gas to the service line serving 207 East Oak Street, as that location initially had the highest concentration of natural gas in the subsurface atmosphere. The second, middle, excavation was made to vent natural gas from the subsurface atmosphere in between 207 and 205 East Oak Street. The west excavation was made to cut off the flow of natural gas to the service line serving 205 East Oak Street. This excavation was later expanded to reveal and remove the damaged section of the service line (Appendix A-2, Figure 2).

In the excavation made over the natural gas service line to 205 East Oak Street, the Staff could clearly see the repair made to the service line, consisting of approximately 17 feet of 7/8-inch CTS polyethylene pipe and two Lyco® fittings (couplings) for connecting into the existing service line, and the boring rod (Appendix B-1, Photograph 2). MGE personnel told the Staff that the approximate location of damage to the natural gas service line was 10 inches east of the west edge of the driveway and 15 inches north of the north curb line of East Oak Street. The damaged segment of the natural gas service line had been retained by MGE and taken to their Lee's Summit office. The Staff was able to view and photograph the service line at a later date (Appendix B-2, Photograph 3).

The Staff moved its investigation to inside of 205 East Oak Street to ascertain evidence of the flash fire, possible entry points for natural gas, and possible ignition sources. There was moderate fire, smoke, and water damage throughout the house. The Staff examined the laundry room. Initial reports from the Warrensburg Fire Department indicated that this was where the flash fire had occurred and firefighters noticed that fire was coming from the floor. Moderate to heavy burning was evident throughout the laundry room, and there was evidence of extreme heat. Fire Department personnel removed a small area of wooden flooring near the area where they had seen the fire. This action exposed a utility corridor beneath the slab with several different pipes entering the house, including the sanitary sewer lateral. It was noted that the sanitary sewer cleanout was capped, but the cap was loose fitting, the threads were not engaged, and it did not make a seal (Appendix B-2, Photograph 4). A possible source of ignition in the laundry room was the standing pilot for the natural gas clothes dryer. The migration path of the natural gas from the damaged service line to the sanitary sewer system was still unknown. The Staff suspended its investigation, at approximately 10:30 p.m., until the following morning, July 25, 2000.

The Staff returned to the incident site at 8:00 a.m. on July 25, 2000 to continue its investigation. When all parties arrived, the ITI crew began to retract the boring rod through the open excavation at 205 East Oak Street. This action revealed that the boring rod bit had also damaged the sanitary sewer lateral to 205 East Oak Street. The boring rod passed through the bottom of the sanitary sewer lateral, denting and tearing the PVC pipe, fragmenting the clay tile pipe in the area of transition, and dislodged the rubber boot used to connect the PVC and clay tile pipes (Appendix B-3, Photograph 5). The ends of the PVC and clay tile pipes were open. The open sewer lateral was observed to be within 30 inches of the damage to the natural gas service line.

MOCS Notifications and Facility Locates by MGE

The Staff asked MGE if a facility locate request had been made by ITI for the 200 block of East Oak Street. MGE told the Staff that one facility locate request had been received on July 12, 2000, indicating a "Start Time" of 10:30 a.m. on July 14, 2000. MGE personnel indicated to the Staff that the MGE serviceperson in Warrensburg was unable to respond to the location until the afternoon of July 14, 2000. Upon arrival, the serviceperson thought that ITI had already completed their work. Therefore, the serviceperson did not mark the location of the natural gas facilities at the site of the proposed excavation and wrote "No MGE" on an internal copy of the locate request. MGE did not communicate any information to ITI regarding the presence of natural gas facilities in the area of the proposed excavation.

ANALYSIS

Service Line Damage

The hole in the natural gas service line was apparently the result of stresses imposed by the boring rod bit hitting and pulling the polyethylene pipe. The force exerted on the outside wall of the service line by the boring rod bit exceeded the strength of the polyethylene pipe, creating a tear in the pipe wall

Natural Gas Migration

After tearing a hole in the polyethylene natural gas service line, the boring rod continued on its path and hit the sanitary sewer lateral to 205 East Oak Street approximately 30 inches east of the natural gas service line damage. Natural gas escaping at a pressure of approximately 17 psig from the service line would have had a direct path through loose soil along the boring rod, from the damaged natural gas service line to the damaged sanitary sewer lateral. Natural gas could have entered the sanitary sewer lateral, and then traveled through the sewer lateral to the laundry room of 205 East Oak Street and the sanitary sewer main under East Oak Street. Natural gas, being lighter than air, also migrated upward through the soil, and being confined by the concrete slab driveway, followed the least resistive paths to vent to atmosphere, as evidenced by the 100% gas-in-air indications found by MGE along the curb line between 205 and 207 East Oak Street.

Natural Gas Accumulation and Ignition

Natural gas from the sewer lateral could have accumulated in the laundry room of 205 East Oak Street, possibly entering through the loose-fitting sanitary sewer lateral cleanout lid located below the slab level. While the source of ignition could not be positively identified, a likely source was the standing pilot on the natural gas clothes dryer.

Facility Locates and Third Party Damage

In anticipation of installing a new underground telephone line on East Oak Street, ITI followed the Missouri Law (§319.025 RSMo 2000) by calling MOCS on July 12, 2000 for underground facility locates in the vicinity of the proposed installation. MGE failed to mark the location of the natural gas facilities in the area of the locate request as required by Missouri Law¹², MoPSC Rule¹³, and MGE's own operations and maintenance manual¹⁴. Had the location of the natural gas service line to 205 East Oak Street been marked, then ITI would have had an opportunity to take the necessary measures to avoid hitting the service line.

MGE has no record of being contacted directly by ITI after MGE failed to respond to ITI's facility locate request. From previous work in the area, ITI was aware that MGE had natural gas facilities in the 200 block of East Oak Street. Because there were no natural gas facilities marked in response to the July 12, 2000 request, and ITI did not receive any other information from MGE, ITI should have called MGE directly, as required by Missouri

¹² The Missouri Underground Facility Safety and Damage Prevention Statute, §319.030 (1) RSMo 2000, requires underground facility operators to mark the approximate location of underground facilities within two working days of a notice of intent to excavate.

¹³ MoPSC Rule 4 CSR 240-40.030(12)(I)2.G requires the operator to provide temporary marking of buried pipelines in the area of a planned excavation.

¹⁴ MGE O&M Standard for the Damage Prevention Program section 5.2 requires on-site locating not in excess of two working days from the receipt of notice of intent to excavate.

Law¹⁵. Had ITI contacted MGE directly, then MGE would have had an opportunity to correct their error and ensure that the location of the natural gas facilities were marked.

¹⁵ The Missouri Underground Facility Safety and Damage Prevention Statute, §319.030 (3) RSMo 2000, requires the excavator to directly contact underground facility owners, in the event that a facility owner fails to respond to a notice of intent to excavate, to obtain location information.

CONCLUSIONS

1. At approximately 2:40 p.m., Central Daylight Time, on Monday, July 24, 2000, a natural gas flash fire occurred in a single family residence at 205 East Oak Street in Warrensburg, Missouri.
2. One occupant of 205 East Oak Street sustained burns and was hospitalized as a result of the flash fire.
3. The house at 205 East Oak Street sustained moderate fire, smoke, and water damage as a result of the fire. The Warrensburg Fire Department initially estimated damages at \$40,000.
4. The probable cause of the flash fire was the accumulation of natural gas in the laundry room of 205 East Oak Street that was ignited by an undetermined source, possibly the standing pilot on the natural gas clothes dryer. Natural gas escaped, at a pressure of approximately 17 psig, from a hole torn in the 7/8-inch CTS polyethylene service line serving 205 East Oak Street. Natural gas migrated through the damaged sanitary sewer lateral serving 205 East Oak Street and entered the laundry room through a loose fitting cleanout lid.
5. Third party damage caused the damage to the natural gas service line and to the sanitary sewer lateral. The damage occurred when a horizontal boring bit came into direct contact with the natural gas service line, tearing a hole in it. The boring bit continued on to hit and separate the sanitary sewer lateral approximately 30 inches from the damage to the natural gas service line.
6. The location of the natural gas service line had not been marked before the boring operation began on July 24, 2000. ITI requested that underground facilities in the area be located through Missouri One Call System, Inc. on July 12, 2000. MGE failed to mark the location of their facilities. ITI began the boring operation without the location of the service line to 205 East Oak Street being marked, and did not contact MGE directly to obtain that information. ITI was aware that MGE had natural gas facilities on the 200 block of East Oak Street. If the location of the service line had been identified, then ITI would have had the opportunity to take the necessary measures to avoid hitting the service line.

7. MGE's emergency response to the incident was adequate.
8. The Staff believes that MGE's failure to mark the location of their natural gas facilities, pursuant to ITI's request for facility locate, is a violation of §319.030 (1) RSMo 2000.

RECOMMENDATIONS

1. MGE conducted an incident review training session with Warrensburg personnel on August 10, 2000. The MGE serviceperson who was responsible for marking the location of the facilities on the 200 block of East Oak Street received additional instruction, and disciplinary action was taken. The Staff recommends that MGE continue to emphasize to all Company personnel the importance of properly responding to all facility locate requests, and use the circumstances of this incident as an example for training.
2. The Staff recommends that MGE be directed to file a response regarding the recommendation contained in this Case within 30 days of the filing of this report.
3. The Staff recommends that the Office of General Counsel cause a complaint to be filed with the Commission regarding the violation noted in this Gas Incident Report.

APPENDIX A
(Figures)

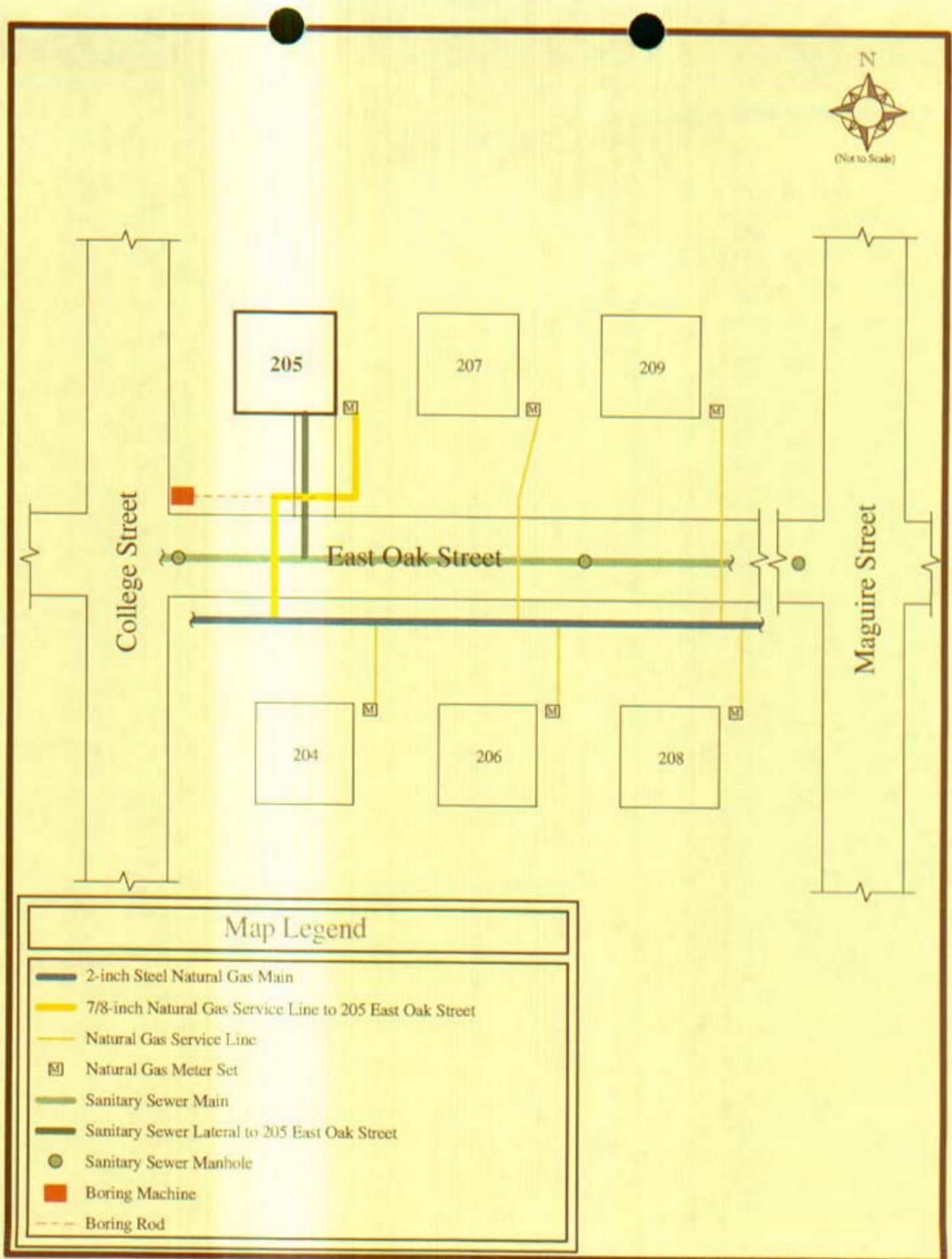


Figure 1
Plan View of the 200 Block of East Oak Street
Appendix A-1

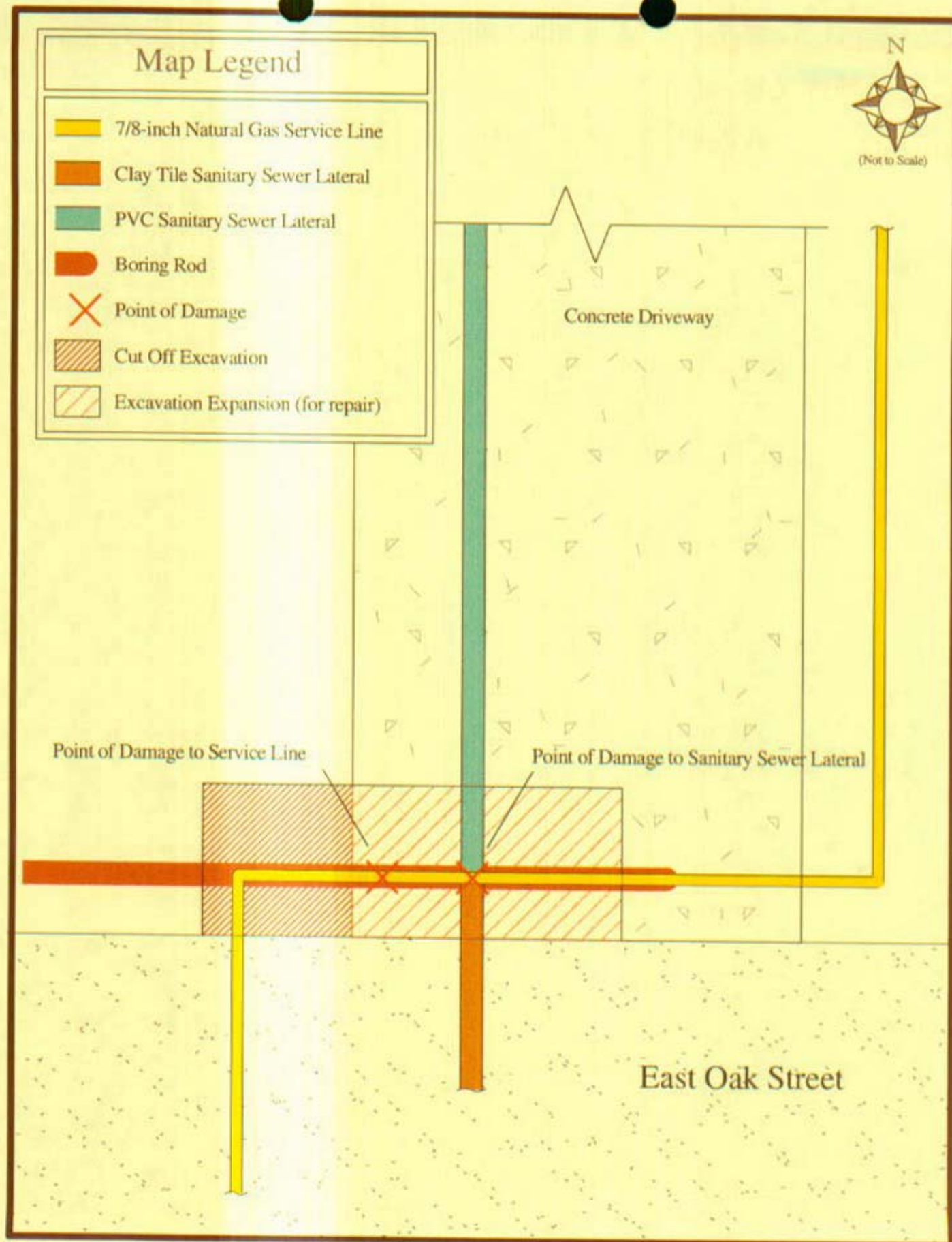
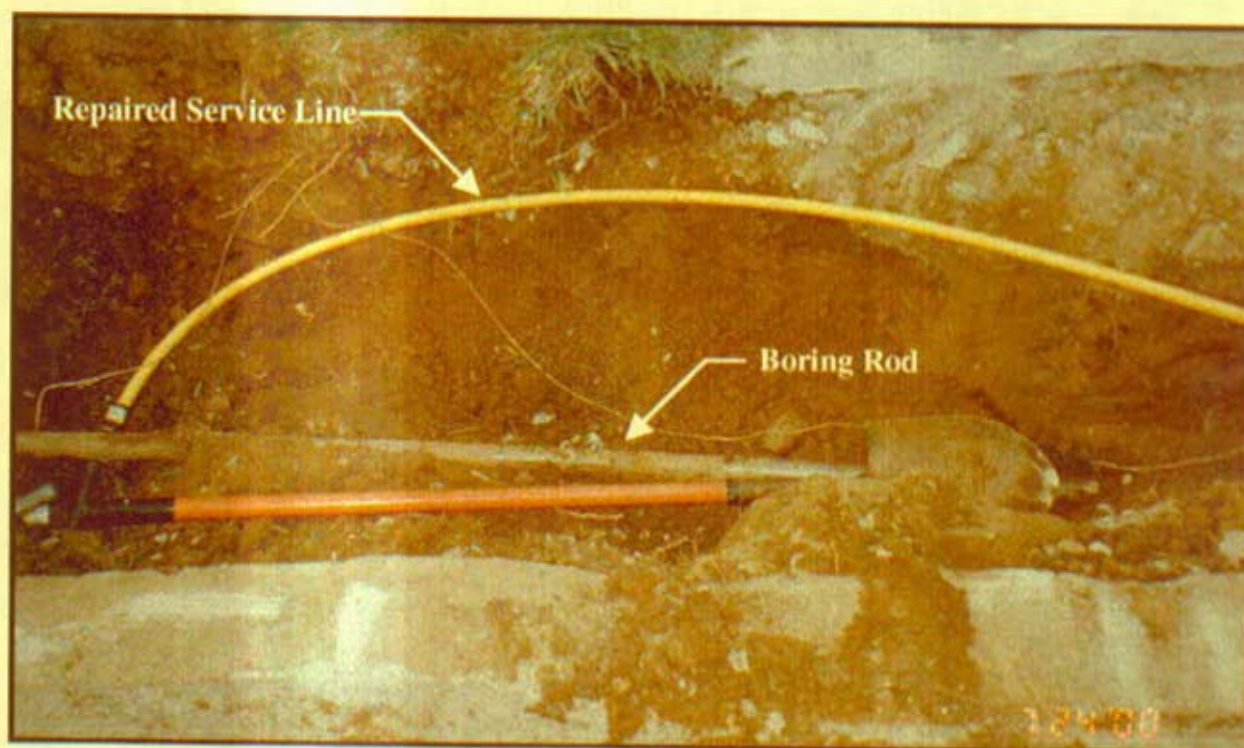


Figure 2
Plan View of the Excavation at 205 East Oak Street
Appendix A-2

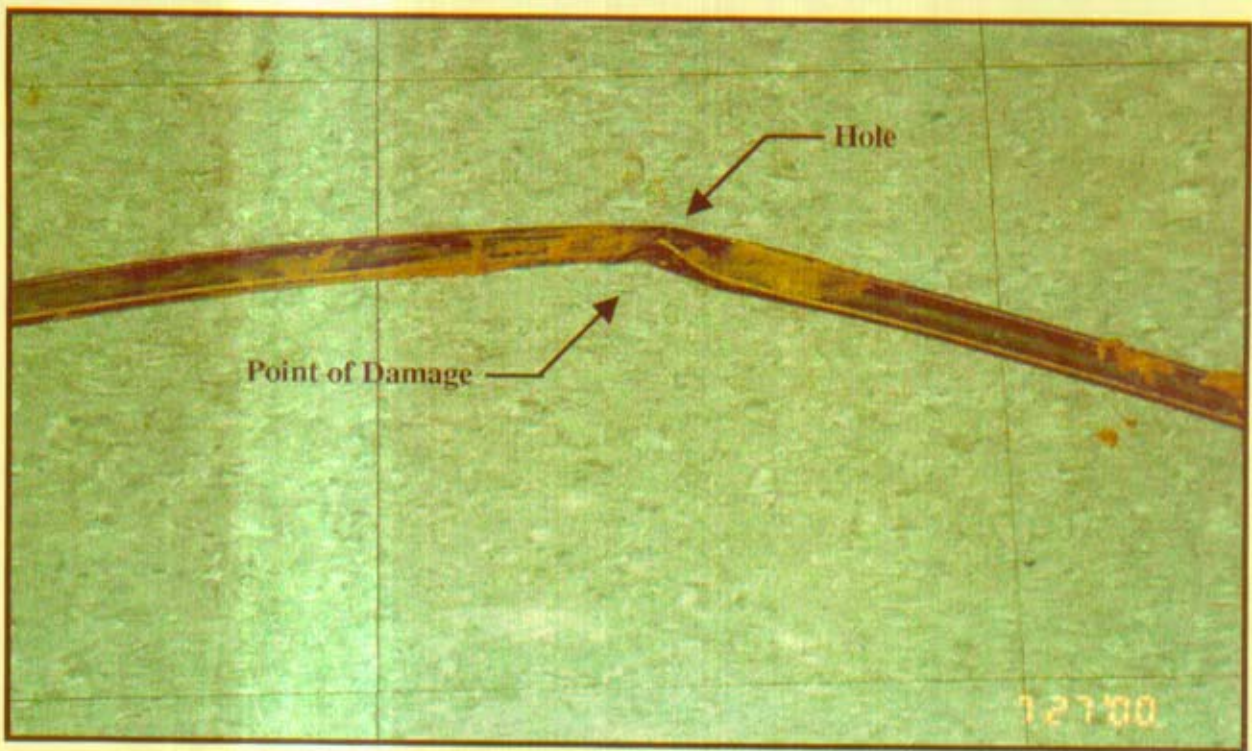
APPENDIX B
(Photographs)



Photograph 1: 205 East Oak Street, incident site. Excavation in center of photograph was made to expose and repair the natural gas service line to 205 East Oak Street.



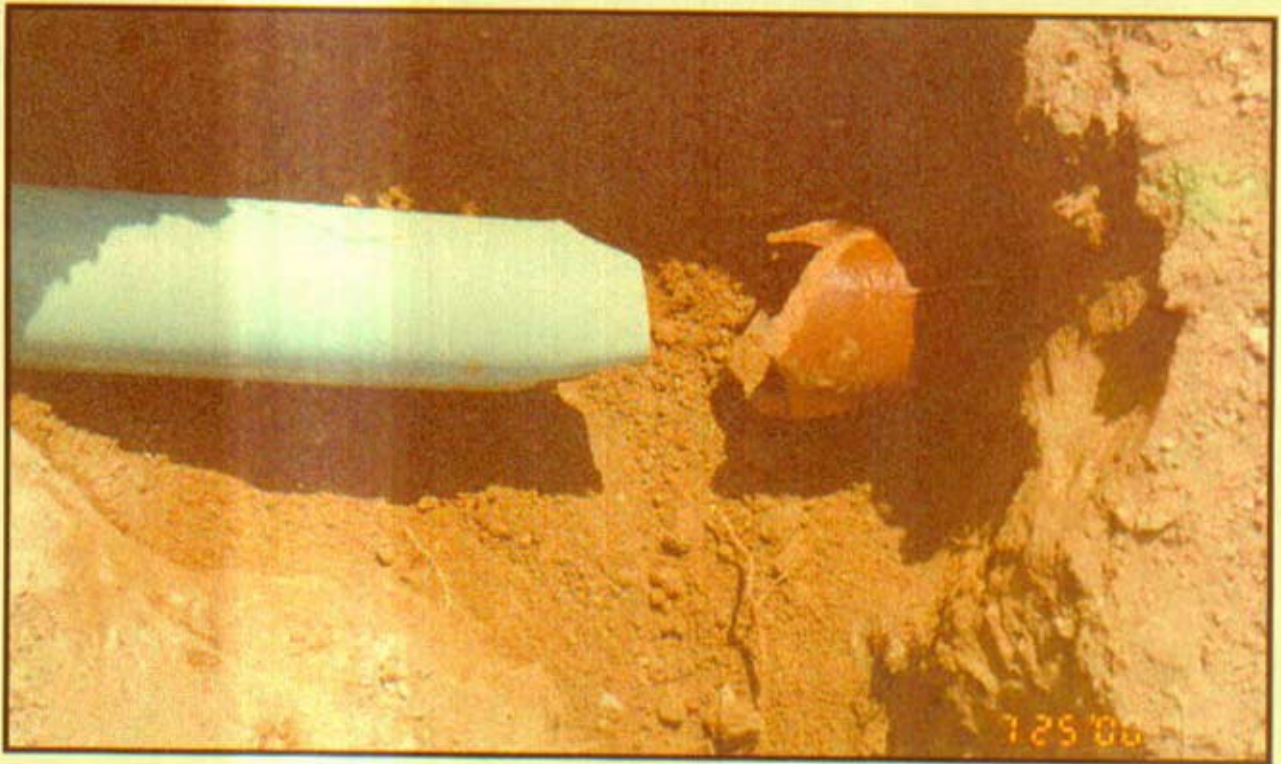
Photograph 2: View from the south, looking down at the repair excavation in front of 205 East Oak Street. This is the excavation identified in Photograph 1.



Photograph 3: Area of damage to the 7/8-inch diameter CTS polyethylene natural gas service line to 205 East Oak Street.



Photograph 4: View of the utility corridor beneath the floor of the laundry room of 205 East Oak Street.



Photograph 5: View of the damaged sanitary sewer lateral to 205 East Oak Street (the rubber boot had been removed).