BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the General Investigation Into the Operations of Kansas Gas Service, Inc., A Division of One Gas, Regarding the Natural Gas Incident that Occurred at 918 West 5th Street, Newton, Kansas.	)))))	Docket No. 17-KGSG-069-GIP

NOTICE OF FILING OF STAFF'S
REPORT AND RECOMMENDATION

COMES NOW, the Staff of the State Corporation Commission of the State of Kansas ("Staff" and "Commission," respectively), and files its Report and Recommendation (R&R) dated October 27, 2017, attached hereto and made a part hereof by reference. Staff recommends the Commission find Kansas Gas Service, A Division of One Gas (KGS), in violation of:

A) the reporting requirements in 49 CFR Part 191.5 and CFR Part 191.9(a) as adopted by K.A.R. 82-11-3;

B) 49 CFR Part 192.605(a), 49 CFR Part 192.627, and 49 CFR Part 192.805(h) as adopted by K.A.R. 82-11-4; and

C) assess a civil penalty of $53,950 to KGS.

In addition, Staff recommends the Commission require KGS to:

1) Provide fire extinguisher training for all KGS and contractor personnel assigned the task of providing a fire watch for workers performing work in a hazardous atmosphere.

2) Establish written maintenance procedures for all fresh air breathing equipment and keep at least one spare fresh air apparatus available in each operating area to substitute for inoperable equipment.

3) Develop written hot-tapping procedures regarding the replacement of bolt-on service tees in blowing gas conditions.

4) Develop a formal methodology for evaluating a worker's knowledge, skill, and ability to perform tasks in blowing gas conditions while wearing appropriate PPE.

WHEREFORE, Staff submits it's Report and Recommendation for Commission review and consideration, and for such other relief as the Commission deems just and proper.

Respectfully submitted,

/s/ Jason K. Fisher
Jason K. Fisher, S. Ct. #19908
Litigation Counsel
Kansas Corporation Commission
1500 S.W. Arrowhead Road
Topeka, Kansas 66604
Phone: (785) 271-3186
Fax: (785) 271-3167
E-Mail: j.fisher@kcc.ks.gov

Attorney for Commission Staff

Utilities Division
1500 SW Arrowhead Road
Topeka, KS 66604-4027

Kansas
Corporation Commission

Phone: 785-271-3220
Fax: 785-271-3357
http://kcc.ks.gov/

Pat Apple, Chairman
Shari Feist Albrecht, Commissioner
Jay Scott Emler, Commissioner

Sam Brownback, Governor

REPORT AND RECOMMENDATION
UTILITIES DIVISION

TO: Chairman Pat Apple
Commissioner Shari Feist Albrecht
Commissioner Jay Scott Emler

FROM: Leo M. Haynos, Chief Engineer
Jeff McClanahan, Director of Utilities

DATE: October 27, 2017

SUBJECT: Docket No. 17-KGSG-069-GIP: In the Matter of the General Investigation Into the Operations of Kansas Gas Service, Inc., A Division of One Gas, Regarding the Natural Gas Incident that Occurred at 918 West 5th Street, Newton, Kansas

EXECUTIVE SUMMARY

On June 2, 2016, a natural gas fire occurred at the above captioned address. The fire injured an employee for NPL Construction Company (NPL) that was performing natural gas service line replacements for Kansas Gas Service, Inc., A Division of One Gas (KGS). Kansas Corporation Commission Staff (Staff) was notified of this incident by the United States Occupational, Safety, and Health Administration (OSHA) personnel on July 27, 2016. After learning of the incident, Staff contacted KGS management, informed KGS management of the incident, and requested KGS file an incident report.

Upon completing its investigation, Staff has determined the natural gas fire was the result of a controlled release of natural gas that was initiated by the NPL employee as part of the service line replacement process. Because the NPL employee's injuries required him to be hospitalized, this event is considered to be a natural gas incident as defined in 49 C.F.R Part 191.3 and adopted by K.A.R. 82-11-3. As the operator of the natural gas pipeline and the employer of NPL, KGS is considered the party responsible for this incident.

Staff's investigation has determined this incident was caused by a combination of factors that are attributable to KGS or its contract employee, NPL. As a result of this investigation, Staff issued six Notices of Probable Noncompliance (PNC) with pipeline safety regulations and two Notices of Amendment (NOA) with the regulations. Exhibit 1 provides a synopsis of the PNCs and NOAs along with KGS's answers and Staff's response/rebuttal. Two of the PNCs relate to the administrative failure of KGS to file notice of an incident and an

accident report as prescribed in Kansas pipeline safety regulations. Two additional PNCs are related to the NPL contractors that failed to follow established KGS procedures. Failure to follow existing procedures contributed to the severity of the injuries to the contract employee. In Staff's opinion, the root cause of this incident is the failure of KGS to enforce its existing procedures, and its failure to develop procedures and training for its employees performing pipeline maintenance tasks while working in a potentially hazardous atmosphere. The remaining PNCs and NOAs relate to this determination.

After taking into account all of the facts gathered in this investigation, the nature of the violations, the consequences of the violations, and KGS's responses to the PNCs, Staff is recommending the Commission assess a civil penalty to KGS in the amount of $53,950. Staff's rationale in determining this penalty amount is provided in Exhibits 2 and 3.

In its response to Staff's Notices of Probable Noncompliance issued to KGS regarding this incident, KGS has agreed to the following course of action:

- Review incident notification requirements with KGS management and supervisors; and
- Enhance the KGS Standards for the replacement of bolt-on service tees. Once this enhancement is completed and approved, Field Employees will be trained in the new procedure.

For all of the remaining PNCs and NOAs, KGS disagreed with Staff's findings.

In addition to the above recommended penalty, Staff recommends the Commission order KGS to perform the following:

1. Provide fire extinguisher training for all KGS and contractor personnel assigned the task of providing a fire watch for workers performing work in a hazardous atmosphere;
2. Establish written maintenance procedures for all fresh air breathing equipment and keep at least one spare fresh air apparatus available in each operating area to substitute for inoperable equipment;
3. Develop written hot-tapping procedures regarding the replacement of bolt-on service tees in blowing gas conditions; and
4. Develop a formal methodology for evaluating a worker's knowledge, skill, and ability to perform tasks in blowing gas conditions while wearing appropriate personal protective equipment (PPE).

BACKGROUND:

Construction of Gas Facilities and Description of Location

The pipeline facilities in question are designed to connect gas service to single family residential homes. This portion of the distribution system in Newton, Kansas, was installed in 1932, and it is constructed of bare steel. The subject incident occurred while KGS was conducting a routine replacement of a bare steel service line. As part of the agreement in Docket 14-KGSG-100-MIS, KGS has agreed to replace an average of 10,000 bare steel service lines per year with modern polyethylene (PE) piping in order to minimize the threat

of external corrosion causing gas leaks adjacent to houses. Given the volume of work to be done each year, KGS relies on piping contractors such as NPL to perform the replacement activity.

In order to reduce excavation and landscape restoration costs, KGS will often use the bare steel service line as a conduit for the new service line by inserting smaller diameter PE piping through the original line. In order to reduce the number of penetrations on the gas main and minimize time and expense of abandoning the old tap and welding on a new tap, KGS and/or NPL will often attempt to use the same service tee connection from the main to the service line. If the original service tee connection is considered obsolete or unusable, it is the practice of KGS to remove the original fitting, clean the service tee opening in the main, and install a new fitting over the original hole in the top of main.

In the interest of saving time and minimizing loss of service to its customers, KGS elects to perform the above tasks while the gas distribution system is pressurized. In this case, the portion of the Newton, Kansas distribution system was pressurized to 12 psi. In order to perform a service line replacement on a pressurized gas system, the replacement process requires KGS personnel to open the gas system to the atmosphere for a short time until the blowing gas can be stopped by installing a temporary plug. The service line replacement components are then prepared, and the gas system is once again opened to the atmosphere by removing the temporary plugs while the new service line connections are installed and a gas-tight seal is once again established.

Because this process creates a hazardous work environment for the personnel creating the gas leak and performing the service tee replacement, KGS requires all personnel in the hazardous environment to wear fire resistant clothing and to use a respirator that supplies fresh air.[1] KGS also requires a person to be assigned as a "fire watch" and equipped with a fire extinguisher to react to any fires that may initiate while the hazardous atmosphere is present.

Reconstruction of Events Leading up to the Fire

On the day the subject incident occurred, NPL was in the process of replacing all bare steel service lines in a residential neighborhood of Newton, Kansas. NPL had assigned two crews to the task with each crew working at separate addresses on the same block. Because the fresh air supply necessary for working in a hazardous atmosphere was not working on one of the crew trucks, NPL states the two crews had been working as a team when fresh air was required and using the truck with an operating fresh air supply.[2] The crew truck assigned to replace the service line to the residence at 918 W. 5th Street, the location of the incident, was the truck with the inoperable fresh air supply.[3] NPL and KGS assert the crew assigned to this truck had completed three service line replacements in the morning of June 2, 2016, and had used the proper fire resistant clothing and a fresh air supply as required.

The service line replacement at 918 W. 5th Street was initiated at approximately 1:00 p.m. After uncovering the service line tap, KGS instructed the NPL crew to replace the service

[1] Page 6, KGS Standard 1185, Installation and Renewal of Mains.
[2] July 21, 2017 meeting with NPL, KGS, and Staff.
[3] ibid.

tee connection. To accomplish this task, NPL began to follow the following sequence of steps:

1. Excavate around the service tee connection and clean dirt and corrosion products from the section of line and service tee to be removed;
2. Cut out a section of the service line, creating a blowing gas condition;
3. Install a plug or stoppel inside the cut service line to serve as a temporary plug to shut off the escaping gas;
4. Loosen the bolts sealing the service tee to the main, creating a blowing gas condition;
5. Remove the service tee from the main exposing the original hole in the top of the main;
6. Installing a wooden plug in the hole in the main to serve as a temporary plug to shut off the escaping gas;
7. Clean the area around the hole in the top of the main;
8. Prepare new service tee connection for installation and remove wooden plug creating a blowing gas condition;
9. Slide the new service tee over the hole in the top of the main and tighten bolts to create a gas tight seal.

The NPL crew reached step 4 of the above sequence when the escaping gas from the loosened service tee connection ignited and the NPL worker was burned at approximately 2:25p.m. Because of the inoperable fresh air supply, NPL states that it had instructed the crew at this site to clean up the pipe to be cut and wait for assistance from the crew working nearby.[4] While the crew was preparing the pipe for replacement, the NPL foreman assigned to the crew left the work site to evaluate work sites for the next day's scheduled replacements.[5]

Staff has created the description of the above scenario based on interviews with KGS and NPL personnel that were at the site before and after the incident occurred. Staff also has used a series of Data Requests to assist in preparing this description. Staff also interviewed the victim burned in the fire. Staff has been unable to locate or interview the remaining NPL employee at the scene when the incident occurred. Neither of the two personnel at the scene when the fire occurred currently work for NPL. It is important to note, the person burned by the fire disagrees with Staff's reconstruction of events leading up to the fire. This person alleges all service line replacements performed by the crew involved in the incident on June 2, 2016, had been accomplished without the use of fresh air supply or any of the workers wearing the KGS required fire resistant clothing. He also states the fresh air supply on both of the crew trucks was not working on the day of the incident. He disagrees with the NPL management's statement that the crew had been instructed to prepare the piping for

[4] ibid.
[5] ibid.

replacement but not initiate a gas release until the other crew was available to assist them.[6] On the contrary, the burned victim asserts NPL pressured the crew to "just get it done".[7]

Because KGS did not notify the Commission of the incident in a timely manner, Staff was not able to interview the victim or his coworker immediately after the incident occurred. The coworker's written statement[8] taken on the day of the incident disagrees with the statement of the victim provided to Staff more than one year after the incident occurred. Because the coworker's written statement taken the day of the incident was closely aligned with the statements from the two NPL supervisors and the KGS construction inspector providing oversight to the crews in question, Staff relied on the coworker's written statement and statements from the construction supervisors. Their recollection of events is the basis for Staff's reconstruction of events leading up to the fire.

Post-Accident Analysis

According to the NPL employee that was burned, after the flash fire occurred, he rolled out of the service tee excavation and used the fire extinguisher to put out the fire and to extinguish/cool the burns to his legs. He then instructed his helper to call the foreman and inform them of the accident. After the fire was reported to NPL, the NPL foremen immediately returned to the scene of the accident and transported the victim to the hospital, where he was admitted.[9] In his written statement, the victim's coworker states the coworker put out the fire after the incident. The coworker then re-entered the excavation in the blowing gas atmosphere, refitted the service tee connection over the hole and re-tightened the bolts to effect a gas tight seal. He performed this task without the use of fire protective clothing or a fresh air supply *after* the foremen arrived on the scene and transported the victim to the hospital.[10] Immediately upon learning of the flash fire, NPL notified its internal safety personnel and KGS management that an accident had occurred. KGS personnel were on the scene of the accident within one hour after it occurred and conducted an incident investigation.[11] Exhibit 5 to this Report provides photographs taken by KGS and NPL during their respective accident investigations.[12]

Staff was notified of this incident by OSHA personnel on July 27, 2016, -55 days after the incident. Upon learning of the incident, Staff immediately called KGS's Director of Engineering to request more information regarding the incident and to remind KGS of the requirement to notify the National Response Center (NRC) of an incident at the earliest practical moment following discovery.[13] Staff also provided KGS with a copy of the OSHA report into the matter. For unknown reasons, KGS continued to delay notification of the NRC until August 19, 2016, at which time the notification was made to the NRC and an incident report was filed with PHMSA.

---

[6] August 31, 2017, Staff and KGS interview with former NPL employee.
[7] Page 24, Informal Settlement Agreement between OSHA and NPL.
[8] Response to Staff Data Request 32, Attachment B-8.
[9] Response to Staff Data Request 32.
[10] Response to Staff Data Request 32, Attachment B-8.
[11] Response to Staff Data Request 32, Attachment C-1.
[12] Response to Staff Data Request 32.
[13] Pipeline and Hazardous Material Safety Administration's (PHMSA) regulatory requirement 49 CFR part 191.5.

ANALYSIS:

As noted above, Staff issued six PNCs and two NOAs to KGS as a result of Staff's investigation into this incident. Notices of Probable noncompliance (PNC) are the means by which Staff provides a pipeline operator notice of Staff's allegation that the operator is in violation of a pipeline safety regulatory requirement.[14] On the other hand, a Notice of Amendment (NOA) is a notification from Staff to the pipeline operator requesting the operator modify a procedure that Staff deems to be inadequate but not necessarily a violation of pipeline safety regulations. In all cases, Staff requires the pipeline operator to provide a response for each notice. A citation of the regulatory requirement, a description of Staff's findings regarding the PNCs and NOAs, KGS's response to the requirements, and Staff's evaluation and recommendation to the Commission regarding each notice are attached to this Report as Exhibit 1.

In general, Staff's allegations of KGS's noncompliance with pipeline safety regulations fall into five categories:

1. The failure of KGS management to meet the required filing of incident notification and reports;
2. The failure of KGS personnel to follow its written operations and maintenance procedures;
3. The failure of KGS management and its contractors to require compliance with written procedures;
4. The failure of KGS and its contractors to recognize that requiring maintenance tasks to be performed in a hazardous natural gas atmosphere requires specific training and equipment for those tasks to be performed safely; and
5. The failure of KGS's contractor to maintain equipment necessary to safely perform a task in a hazardous atmosphere.

The following paragraphs address each of these categories.

1. The failure of KGS management to meet the required filing of incident notification and reports:

As described in Exhibit 1, PNC Nos. 1 and 2, KGS failed to notify the USDOT National Response Center (NRC) and KCC staff as required by regulation. This failure resulted in Staff being unable to participate in a timely investigation of the events that led to the incident. As noted earlier in this Report, there are conflicting statements regarding the required use of personal protective equipment (PPE) and the working condition of the supplied air respirators used by the personnel replacing service lines on the day of the incident. The lack of a timely notice has hindered Staff in developing its investigation into this incident. While Staff has been able to develop a reasonable reconstruction of the incident through data requests, we were required to rely completely on statements, data, and memories that may have been impacted by the passage of time. After *Staff* alerted KGS management to the fact that an incident had occurred, KGS continued to delay its response

[14] See K.A.R. 82-11-6: Procedures to Insure Compliance with Minimum Safety Standards.

to filing the required notice and reports by an additional 23 days. For failure to file timely notices, Staff recommends the Commission assess KGS a penalty for $4000. Staff's penalty calculations for these violations are attached as Exhibit 2.

2. The failure of KGS personnel to follow its written operations and maintenance procedures:

As described in Exhibit 1, PNC Nos. 3 and 5, pipeline safety regulations require KGS to prepare and follow a manual of procedures for conducting operations and maintenance activities on its pipeline. In the subject case, Staff determined three instances in which KGS personnel failed to follow KGS written procedures while working in a hazardous atmosphere. Cathodic protection rectifiers were not shut off to remove a potential source of ignition[15], fire resistant clothing was not worn by personnel working in a hazardous atmosphere[16], and no fire watch was posted on the site while work was being performed in a hazardous atmosphere. It appears the procedure regarding turning off rectifiers was being ignored – by KGS and NPL- throughout the neighborhood where the service lines were being replaced. This incident was caused by the two NPL workers at the site knowingly not following prescribed procedures. As the operator of the gas distribution system, however, the ultimate responsibility for the failure to follow procedures lies with KGS. Staff recommends the Commission assess a penalty to KGS for the failure to follow procedures that led to the incident. Staff's penalty calculations for these violations are attached as Exhibit 3.

3. The failure of KGS management and its contractors to require compliance with written procedures:

In determining the factors that resulted in this regulatory violation, Staff examined the interaction of the various parties that contributed to the failure to follow procedures. Staff believes the majority of the direct responsibility for failure to follow the procedures lies with the two NPL contract employees that were at the work site at the time of the incident. In post-incident interviews conducted by OSHA, both employees confirm they knew what procedures were required of them for the work being performed.[17] Staff contends, however, a portion of the responsibility for failure to follow procedures lies with KGS and NPL supervision because of their failure to know and enforce the procedures in the KGS operations and maintenance (O&M) manual. For example, KGS procedures require a steel piping system with rectified cathodic protection to have the rectifiers shut off while work is being done on the pipeline in order to avoid accidental ignition. In this case, the rectifier was not shut off for this job or any of the other service line replacements that occurred in the area.[18]

There are conflicting claims between NPL and the person that was burned as to whether PPE had been used by the two NPL crews working together to replace service lines in Newton on the day of the incident.[19] The burn victim alleges no one had used PPE for any of the service lines replaced that day while NPL states all procedures regarding PPE had

[15] Page 4, KGS Standard 1185.
[16] Page 6, KGS Standard 1185
[17] Page 24-25, OSHA Report on Incident, October 26, 2016.
[18] Response to Staff Data Request 11.
[19] July 21, 2017 meeting with NPL, KGS, and Staff.

been followed earlier in the day. Regardless of which rendition of events is correct, Staff contends two experienced workers stating they felt it was worth the risk to not use PPE that day points to previous failures of management to enforce the PPE policy. The statement of the NPL worker on the scene that he re-entered the excavation without PPE to tighten the loosened clamp after NPL supervisors had returned to the site of the accident also indicates the PPE policy was not strictly enforced.

Failure of individuals to follow procedures can be better described as failure of management's commitment to instruct its employees on the procedures and demand obedience to the procedure. On several occasions, Staff has observed KGS personnel adopting a casual attitude to working in blowing gas conditions without the required PPE. Sometimes the person in the ditch will be properly equipped, but the person leaning over the ditch in the gas cloud is not protected should a gas fire occur. Examples of KGS employees' incorrect use of PPE in the Wichita area are provided in Exhibit 4. Also, we note a similar incident[20] occurred two years prior to this incident where failure of KGS personnel to follow procedures resulted in an employee getting burned. Fourteen months after the subject incident, a third incident[21] occurred which involved a controlled release of gas resulting in an employee not wearing PPE being burned. This most recent incident also appears to have been caused from a failure to follow procedures.

4. The failure of KGS and its contractors to recognize that requiring maintenance tasks to be performed in a hazardous natural gas atmosphere requires specific training and equipment for those tasks to be performed safely:

KGS regularly requires its field personnel to work in blowing gas conditions. In order to prepare its workers for this situation, KGS trains the worker on performing the task and trains the worker on the proper way to wear PPE and fresh air breathing apparatus. However, Staff's investigation determined KGS does not provide training to personnel that included performing a task such as replacing a service tee *while wearing* PPE including fresh air breathing apparatus. Staff contends the use of cumbersome PPE adds a level of complexity to completing a given task. For example, the breathing mask reduces the field of vision of the wearer, restricts the wearer's hearing because of the inrushing air, and reduces the wearer's mobility by being tethered to an air supply hose. In response to Staff's inquiries, KGS states that it provides on-the-job training (OJT) to personnel by assigning an experienced person to work with an individual performing a given task for the first time in blowing gas conditions.[22] Staff notes pipeline safety regulations require an operator to train and evaluate the knowledge, skill, and ability of personnel performing maintenance tasks on a pipeline. In this case, Staff contends splitting training into two discrete operations of: 1. replacing the tee; and 2. wearing fresh air breathing apparatus, does not provide proper qualifications of personnel performing tasks under blowing gas conditions. While providing OJT may be appropriate, KGS has no formal process of evaluating how the trainee (or the trainer for that matter) performed in completing a task in a blowing gas condition. Staff also

[20] See Docket 14-KGSG-566-GIP.
[21] See Docket 18-KGSG-126-GIP.
[22] See Exhibit 1, KGS response to PNC 6.

contends OJT in a hazardous atmosphere provides little room for error or corrective action should ignition occur.

When a hazardous atmosphere working condition is present, KGS procedures require one person to be assigned to a fire extinguisher in order to react should a fire occur. For the subject incident, there was no designated fire watch when the fire occurred. The burn victim alleges he rolled out of the ditch and used the fire extinguisher himself to put out the gas fire and the fire on his legs. The written statement from the other worker on site at the time of the fire states the worker outside of the excavation put the fire out.[23] Although the fire was successfully extinguished, interviews with NPL indicate that KGS does not provide training to personnel on how to use fire extinguishers. In other words, even if a worker had been assigned the task to watch the work activity and use the fire extinguisher if necessary, he had never been trained on how to properly use the extinguisher. Staff views this fact as further evidence that KGS management are not correctly prioritizing safety for workers in hazardous atmospheres. Pipeline safety regulations require an operator's personnel to be trained to react to "abnormal operating conditions" (AOCs). Because of the inherent danger associated with natural gas systems, Staff contends all field personnel (KGS and NPL) should be trained in the use of fire extinguishers. KGS's election to perform work under blowing gas conditions makes the probability of a flash fire AOC more likely and increases the need for training and qualification on the use of fire extinguishers.

5. Failure to maintain equipment necessary to safely perform a task in a hazardous atmosphere:

Although there is disagreement over the use of PPE on the day of the incident, the parties do not dispute the fact that the fresh air supply on at least one of the crew trucks was inoperable on the day of the incident.[24] NPL also informed Staff that the type of fresh air supply equipment installed on the trucks requires a significant amount of maintenance to keep it operating properly.[25] Staff contends that a lax attitude toward enforcing safety procedures and providing reliable equipment for PPE serves to encourage personnel to take "shortcuts" regarding safety by using the equipment on hand to complete the assignment. Staff's criticism of KGS's failure to maintain fresh air supply equipment may be better directed toward its contractor, NPL. Staff notes, however, KGS construction inspectors monitor the daily activity of contract crews and ultimately represent KGS as the operator of the gas system. Staff contends it is the responsibility of the KGS inspector to not only inspect the workmanship of the construction project, but also to inspect the general safety conditions of the jobsite.

CONCLUSION

The subject incident was the result of a combination of factors. The primary cause of the incident was KGS personnel not following established procedures for working in a hazardous environment. Inadequate procedures, a lack of training, poorly maintained equipment, and a systemic lack of enforcement of safety procedures by KGS management

[23] Response to Staff Data Request 32, Attachment B-8.
[24] July 21, 2017 meeting with Staff, KGS, and NPL.
[25] ibid.

are all considered to be contributing factors to the incident. If the requirement to use PPE had been rigorously enforced, the chances of this incident occurring, even with the inadequate procedures and training, would have been minimized. Staff also concludes KGS was tardy in meeting regulatory reporting requirements regarding this incident. In response to Staff's Notices of Probable Noncompliance, KGS has agreed to modify its procedures to consider replacement of bolt-on service tees under blowing gas conditions to be a hot-tapping activity.

RECOMMENDATION

As a result of the investigation, Staff asserts actions not taken by KGS employees leading up to this incident resulted in violations of Kansas Pipeline Safety Regulations. Furthermore, KGS's methods for training and evaluating its employees' qualifications for performing covered tasks while working in a blowing gas environment is inadequate. KGS also failed to provide timely notice and reports of the pipeline incident. In summary, the above described facts result in Staff's recommendation that the Commission find KGS in violation of the reporting requirements in 49 CFR Part 191.5 and CFR Part 191.9(a) as adopted by K.A.R. 82-11-3. Staff further recommends the Commission find KGS in violation of 49 CFR Part 192.605(a), 49 CFR Part 192.627, and 49 CFR Part 192.805(h) as adopted by K.A.R. 82-11-4. Staff also recommends the Commission assess a civil penalty of $53,950 to KGS.

In addition, Staff recommends the Commission require KGS to:

1. Provide fire extinguisher training for all KGS and contractor personnel assigned the task of providing a fire watch for workers performing work in a hazardous atmosphere.
2. Establish written maintenance procedures for all fresh air breathing equipment and keep at least one spare fresh air apparatus available in each operating area to substitute for inoperable equipment.
3. Develop written hot-tapping procedures regarding the replacement of bolt-on service tees in blowing gas conditions.
4. Develop a formal methodology for evaluating a worker's knowledge, skill, and ability to perform tasks in blowing gas conditions while wearing appropriate PPE.

EXHIBIT 1

Notices of Probable Noncompliance and Notices of Amendment

PNC 1:

49 CFR Part 191.5(a) as adopted by K.A.R. 82-11-3: At the earliest practicable moment following discovery, each operator shall give notice in accordance with paragraph (b) of this section of each incident as defined in subsection 191.3.

Staff Description of PNC: On June 2, 2016, at 14:25, a contract employee of Kansas Gas Service (KGS) was injured when natural gas was released from a distribution service line and ignited. The injuries to the contract employee required hospitalization. KGS supervisory staff, as well as the contractor supervisory staff, were aware the injuries required hospitalization. On August 19, 2016, KGS filed a notification with the National Response Center advising that an incident had occurred on August 19, 2016. The filed notification was 78 days after the incident had occurred. The reported date of the incident was also incorrect.

KGS Response to PNC: KGS confirms that the Company placed the Telephonic Notice of the injury incident on August 19, 2016. Upon recognizing that a report had not been properly made, KGS made the notification and followed up with a review of the 49 C.F.R 191.5 requirement with its managers and supervisors.

Staff Response/Rebuttal: The regulation requires KGS to provide notice to the NRC at the earliest practicable time after the incident occurs. KGS acknowledges that its management failed to provide timely notice. Staff notes, however, that after Staff informed KGS management of the incident and reminded them of the reporting requirement, KGS still failed to notify the NRC for an additional 23 days.

PNC 2:

191.9 (a) Distribution system: Incident report as adopted by K.A.R. 82-11-3: (a) Except as provided in paragraph (c) of this section, each operator of a distribution pipeline system shall submit U.S. department of transportation form PHMSA F 7100.1 to the commission as soon as practicable but not more than 30 calendar days after detection of an incident required to be reported under 49CFR Part 191.5

Staff Description of PNC: On June 2, 2016, at 14:25, a contract employee of Kansas Gas Service received injuries requiring hospitalization while working on a natural gas distribution service line. On June 27, 2016, the U.S. Occupational Safety and Health Administration (OSHA) informed Commission Staff of the natural gas incident. In turn, on June 27, 2016, Commission Staff alerted KGS management to the fact that an incident had occurred on June 2, 2016, which involved injuries requiring hospitalization. On August 19, 2016, KGS filed an incident report with KCC Staff and PHMSA. The filed report was 53 days after KCC staff had notified KGS management of the incident and 78 days after the incident had occurred.

KGS Response to PNC: Kansas Gas Service concurs that on August 19, 2016, it filed its written report after recognizing the obligation and spending time gathering information and conferring with legal counsel.

Staff Response/Rebuttal: Similar to the violation of 191.5, KGS acknowledges its failure to timely report this incident to PHMSA and Staff. An additional 20 day delay in filing the report demonstrates a lack of promptness in resolving this regulatory violation. Although Staff recognizes conferring with legal counsel as a legitimate consideration when preparing a response to a regulatory noncompliance issue, it does not warrant a delay in correcting the violation.

PNC 3:

192.605 (a) Procedural manual for operations, maintenance, and emergencies as adopted by K.A.R. 82-11-4: Each operator shall include the following in its operating and maintenance plan: (a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.

Staff Description of PNC: KGS did not follow its procedure regarding prevention of accidental ignition as required by 192.751 and its procedure found in Standard 1185. The deficiencies in complying with the requirements in Standard 1185 of the KGS Operations and Maintenance Manual are as follows: Standard 1185 requires removal of potential sources of ignition by minimizing the possibility for electric arcing by using a bonding wire when cutting or separating steel pipe and by turning off rectifiers. KGS did not bond across the service line being cut and KGS did not turn off the rectifiers supplying power to this section of the system. Standard 1185 of the KGS Operations and Maintenance Manual requires the operator to take precautionary steps when performing work in an area where the potential for accidental ignition exists. The following precautionary steps found in the Operations and Maintenance manual were not taken: The use of proper personal protective equipment and fresh-air breathing equipment as necessary. Placement of a fire extinguisher at the job site and assigning personnel to operate the fire extinguisher, as necessary.

KGS Response to PNC: Despite having been trained and properly certified, KGS agrees there is evidence that the two individuals involved in the June 2, 2016, incident failed to comply with KGS procedures. As discussed during the Interview hosted by Staff on July 21, 2017, the two individuals involved in the incident were not wearing their personal protective equipment (PPE) at the time of the injury, despite having been properly dressed in their PPEs during each of the prior service replacements they attended earlier that day. KGS disagrees with the allegation that a fire extinguisher was not available at the site at the time of the injury. Instead, as provided in KGS Response to KCC DR-07, page 2 (also as evidenced on pages 1, 8, 10, 11, 12 & 14 of the same response), a fire extinguisher was available and used to extinguish the flame at the time of injury. Additionally, because the individuals involved in the injury incident were not authorized to conduct any work beyond exposing the facility and laying out the tools necessary to complete the replacement, KGS asserts that it was reasonable that its contractor did not have a third person present to man the fire extinguisher at the actual time of the injury.

Staff Response/Rebuttal: In its response, KGS did not address Staff's allegations regarding its personnel failing to follow KGS procedures to shut off cathodic protection rectifiers when performing work on a rectified system. The fact that KGS contract employees also failed to follow procedures related to working in a hazardous environment indicates a systemic failure of KGS supervision to know and enforce the procedures in its operations and maintenance manual. The failure to have a person assigned to use the fire extinguisher is another example of a lack of regard for established procedures. According to the employee that was burned in the incident, he rolled out of the work zone, took the fire extinguisher from his helper, put out the fire on the pipeline, and put out or cooled the burns on his legs with the fire extinguisher. Staff contends that even if the second person on the scene could have been considered to be the "fire watch", he did not have sufficient training to perform his assigned duties.

PNC 4:

49CFR Part 192.617 Investigation of failures as adopted by K.A.R. 82-11-4: Each operator shall establish procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of a recurrence.

Staff Description of PNC: KGS did not investigate this accident to determine the steps taken by the crew that resulted in the accident. KGS did not determine how the gas escaped from the pipeline nor investigate the source of ignition of the gas that resulted in the injury of the person removing the service tee.

KGS Response to PNC: Kansas Gas Service disagrees with the allegation that it did not investigate the accident in an effort to determine the facts surrounding the accident and the source of ignition. As discussed with KCC Staff, KGS personal responded to the accident scene immediately upon notification of the accident and began the process of gathering information from its contractor. This included speaking with available NPL personnel and the collection of the pipe and facilities involved in the accident, which had been photographed and properly stored for future inspection. Additionally, within the days and weeks following the accident, KGS personnel held face-to-face meetings with NPL's staff for the purpose of gathering additional information. Because the only two individuals present at the time of the injury were not available to be interviewed immediately following the accident and soon after left the employment of the Contractor, the information available to KGS was the evidence gathered at the scene. KGS's investigation into this matter remains open and final response is pending.

Staff Response/Rebuttal: After conducting additional discovery, Staff accepts KGS's response to this PNC. However, Staff recommends the PNC remain open until KGS completes its investigation into this matter.

PNC 5:

49CFR Part 192.627 Tapping pipelines under pressure as adopted by K.A.R. 82-11-4: Each tap made on a pipeline under pressure must be performed by a crew qualified to make hot taps.

Staff Description of PNC: The process used by KGS to remove and replace bolt-on service tees meets the definition of Hot Tapping in KGS Standard OGsops1.1122R. KGS has not recognized this process as a specific task or provided training for the task.

KGS Response to PNC: KGS disagrees with Staff's allegation that KGS has not recognized the process of removing and replacing bolt-on service tees as "a specific task or providing training for the task". As provided in response to KCC Data Request No. 26, KGS 's classroom Lesson Plans used by KGS to train personnel on the replacement of steel service lines and bolt on service tees on pressurized steel gas mains, include sections on "The Fundamentals Associated with Repair Fittings"; "The Fundamentals Associated with Main Fittings"; and "The fundamentals Associated with Service Fittings". A copy of the relevant sections of the Lesson Plan is attached hereto as "Exhibit A". Also, at Staff's request, KGS is in the process of enhancing its Standards for the replacement of bolt-on service tees. Once this enhancement is completed and approved, it will be distributed and training on the standard will take place with Field Employees. KGS anticipates the Standard to be approved and implemented early 2018.

Staff Response/Rebuttal: In its response to the PNC, KGS supplied a classroom lesson plan titled, DQ 50, that provided an outline of how to select fittings for various applications in distribution gas systems. Pages 2 and 4 of the DQ 50 standard address general preparation and selection of various types of fittings. However, there is no discussion that specifically addresses installing fittings on energized mains. KGS Standard OGsops1.1122R describes precautions to be taken when working on energized gas mains, but it provides no discussion regarding removal and replacement of bolt-on service tees on live gas mains.

PNC 6:

49CFR Part 192.805 (h) Qualification program as adopted by K.A.R. 82-11-4: Each operator shall have and follow a written qualification program. The program shall include provisions to:... (h) After December 16, 2004, provide training, as appropriate, to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities;

Staff Description of PNC: KGS recognizes that working in a controlled release of natural gas(i.e. a scenario where the operating personnel initiate a release of gas and continue to work in a potential live-gas work area) is a construction activity(Appendix I of SAF 1-013). However, the lesson plan used to train personnel on the replacement of steel service lines and bolt-on service tees on pressurized steel gas mains does not address performing this work in a controlled release atmosphere.

KGS Response to PNC: KGS disagrees with Staff's position that KGS does not provide training of the replacement of steel service lines and bolt on service tees on pressurized steel gas mains in a controlled release atmosphere. As explained to Staff during its interview of KGS and NPL personnel and provided in responses to Data Requests, in addition to class

room training, all new field technicians are paired with experienced personnel and provided extensive observation time and hands-on opportunities as the individual trainee progresses. The Forman assigned to each crew observes the new trainee and expands and/or restricts the trainee's responsibilities in accordance with the trainee's progress. Again, as discussed above, in response to Staff's request, KGS is in the process of enhancing its Standards for the replacement of bolt-on service tees. Once the enhancements are approved, training on the standard will take place with Field Employees. KGS anticipates the Standard to be approved and implemented early 2018.

Staff Response/Rebuttal: KGS's response appears to agree with Staff's assertion that its training does not evaluate the knowledge and skills of its personnel to safely perform the task of performing maintenance work in a controlled gas release atmosphere. Based on its response, it appears that KGS may provide adequate "on the job" training by assigning a foreman to observe the new trainee and modify the trainee's tasks according to his progress. However, this ad hoc method of providing training does not establish a standard means of evaluating the trainee because the acceptance of the trainee's progress is based on the subjective evaluation of the crew foreman. Given there is no procedure developed by KGS to address how maintenance work in a hazardous atmosphere should be conducted in the first place, it is possible to have as many different successful evaluations of trainees as there are foremen doing the evaluations. Because there is no documented evaluation of a trainee's performance under full personal protective equipment and fresh air breathing apparatus, Staff contends KGS failed to provide the training required by Part 192.805(h).

NOA 1:

49CFR Part 192.605(b)(1) as adopted by K.A.R. 82-11-4: (b): Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations: (1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and subpart M of this part.

Staff Description of NOA: The procedure used by KGS to replace bolt-on service tees while under pressure meets the definition of a hot tapping procedure found in in Standard OGsops1.1122R. The relevant definitions are as follows: 2.1. Tapping: The practice of opening a hole in the wall of a pipeline. 2.2. Hot Tapping: Tapping while the pipeline is in operation. Standard 1.1122R does not address or describe the removal/replacement of bolt-on service tees on a pressurized line as a plugging and stopping activity.

KGS Response to NOA:

KGS is in the process of enhancing its Standards as requested. Once the enhancements are approved, training on the standard will take place with Field Employees. KGS anticipates the Standards to be approved and implemented early 2018.

NOA 2:

49 CFR Part 192.805(a) as adopted by K.A.R. 82-11-4: Each operator shall have and follow a written qualification program. The program shall include provisions to: (a) Identify covered tasks.

Staff Description of NOA: Operator qualification regarding the removal and replacement of bolt-on service tees is consolidated with other tasks for replacing service lines. The difficulty and infrequent performance of initiating a blowing gas environment while removing and replacing a bolt-on service tee should be considered as a separate task.

KGS Response to NOA:

KGS is in the process of enhancing its Standards as requested. Once the enhancements are approved, training on the standard will take place with Field Employees. KGS anticipates the Standards to be approved and implemented early 2018.

Staff Response/ Rebuttal: Staff considers KGS's response to both NOAs to be acceptable at this time. The NOAs will remain open until the revised procedures are in place and Staff has had the opportunity to review the training and qualification materials associated with the tasks.

EXHIBIT 2

Kansas Corporation Commision Pipeline Safety Penalty Calculator

Penalty Categories

	Base penalty	Yes/No	Calculated Base Penalty	Explanation (if applicable)
Failure to implement/perform requirement	$500.00	yes	$1,000.00	191.5 Requires filining notice of incident as soon as practicable;
Failure to implement/perform requirement	$500.00	yes	$1,000.00	191.9 requires filing incident report within 30 days of date of incident.
			$2,000.00	**Total Base Penalty**

Aggravating Circumstances

Description	Multiplier	Yes/No	Calculated Multiplier	Explanation (if applicable)
Select ONLY the most serious of the three circumstances below				
Violation caused a reportable incident	5		1	
Violation caused injury	6		1	
Violation caused fatality	10		1	
Property damage > $500,000	5		1	
Violation occurred in class 3 location	2		1	
Violation occurred in class 4 location	3		1	
Affected a facility where customers have limited mobility (difficult to evacuate)	4		1	
Repeat violation within past 5 years	2		1	
PIR greater than 20 feet OR pressure greater than 100 psi	2		1	
Economic benefit gained from the violation	3		1	
No response to PNC	2		1	
Violation caused disruption of service	2		1	
Violation caused mass service outage (>100 customers)	3		1	
Violation not promptly corrected	2	yes	2	
No measures taken to prevent recurrence	2		1	
Operator uncooperative in resolution of the violation	5		1	
Gross negligence/willful or wanton conduct	10		1	
			2	**Aggravating Multiplier**
			$4,000.00	**Total Aggravated Penalty**
			$4,000.00	**Final Recommended Penalty Amount**

			EXHIBIT 3				
Kansas Corporation Commision Staff Pipeline Safety Penalty Calculator							
Penalty Categories							
	Base penalty	**Yes/No**	**Calculated Base Penalty**	**Explanation (if applicable)**			
Procedure was inadequate	$100.00	yes	$100.00	192.627 KGS does not have a procedure that for its workers performing the removal and replacement of bolt on service tees in a controlled gas release environment.			
Failure to implement/perform requirement	$500.00	yes	$500.00	192.605(a)failed to implement requirement in O&M Standards 1185 to remove sources of ignition by shutting off rectifiers and using as bonding wire when cutting steel pipe.			
Failure to implement/perform requirement	$500.00	yes	$500.00	192.605(a)failed to implement requirement in O&M Standards 1185 by wearing personal protective equipment when working in a hazardous atmosphere.			
Failure to implement/perform requirement	$500.00	yes	$500.00	192.605(a)failed to implement requirement in O&M Standards 1185 by assigning personnel to operate a fire extinguisher as necessary when crew is working in a hazardous atmosphere.			
Failure to be properly qualified to perform requirement	$250.00	yes	$250.00	192.805(h) KGS does not provide sufficient training to its workers performing the removal and replacement of bolt on service tees in a controlled gas release environment.			
			$1,850.00	**Total Base Penalty**			
Aggravating Circumstances							
Description	**Multiplier**	**Yes/No**	**Calculated Multiplier**	**Explanation (if applicable)**			
Select ONLY the most serious of the three circumstances below							
Violation caused a reportable incident	5		1				
Violation caused injury	6	Yes	6	Pipe fitter was injured and hospitalized for burns.			
Violation caused fatality	10		1				
Property damage > $500,000	5		1				
Violation occurred in class 3 location	1.5	yes	1.5				
Violation occurred in class 4 location	3		1				
Affected a facility where customers have limited mobility (difficult to evacuate)	4		1				
Repeat violation within past 5 years	3	yes	3	See docket 14-KGSG-566-GIP			
PIR greater than 20 feet OR pressure greater than 100 psi	2		1				
Economic benefit gained from the violation	3		1				
No response to PNC	2		1				
Violation caused disruption of service	2		1				
Violation caused mass service outage (>100 customers)	3		1				
Violation not promptly corrected	2		1				
No measures taken to prevent recurrence	2		1				
Operator uncooperative in resolution of the violation	5		1				
Gross negligence/willful or wanton conduct	10		1				
			27	**Aggravating Multiplier**			
			$49,950.00	**Total Aggravated Penalty**			
			$49,950.00	**Final Recommended Penalty Amount**			


KGS personnel repairing gas leak. No protective hood


KGS personnel repairing gas leak. No protective hood

Repairing Steel main. Crew assistants with no fire protective hoods or air supply in potentially hazardous atmosphere

Repairing 8" main. Crew assistants with no fire protective hoods or air supply in potentially hazardous atmosphere

EXHIBIT 5
918 W 5TH STREET NEWTON KS
Photographs of Incident Scene

EXHIBIT 5
918 W 5TH STREET NEWTON KS
Photographs of Incident Scene

EXHIBIT 5
918 W 5TH STREET NEWTON KS
Photographs of Incident Scene

Looking
North

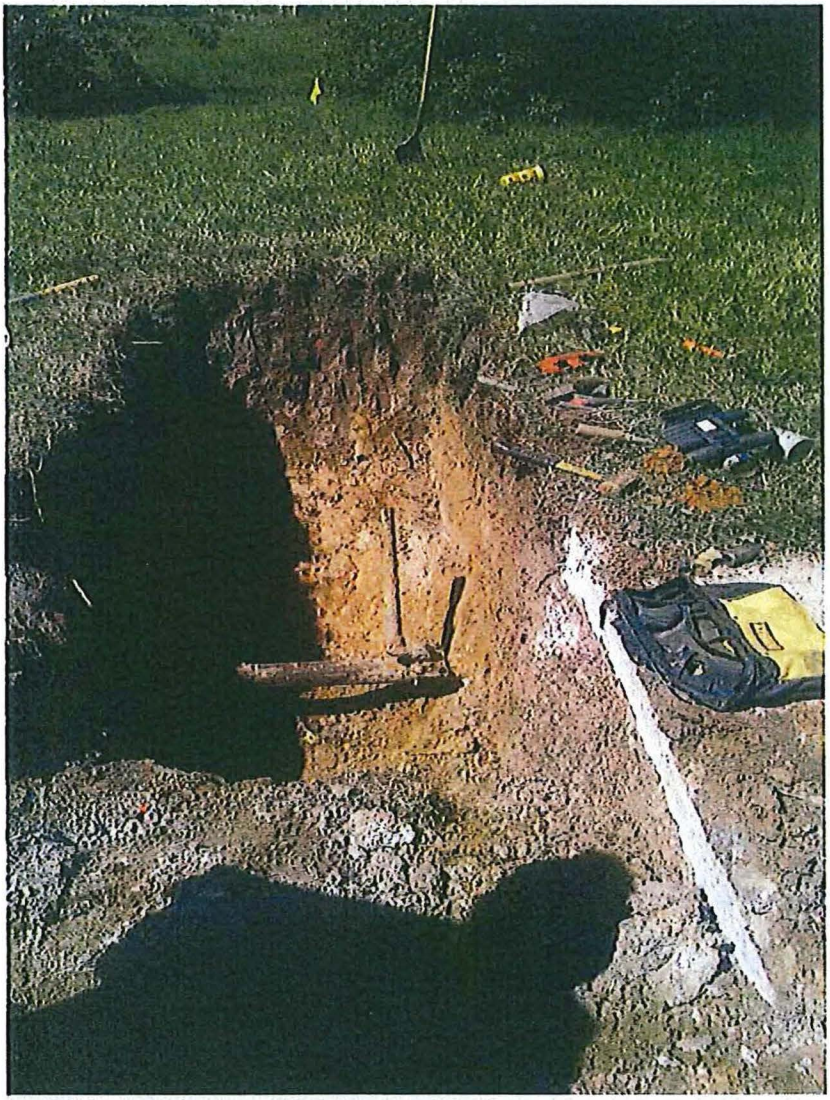


EXHIBIT 5
918 W 5TH STREET NEWTON KS
Photographs of Incident Scene

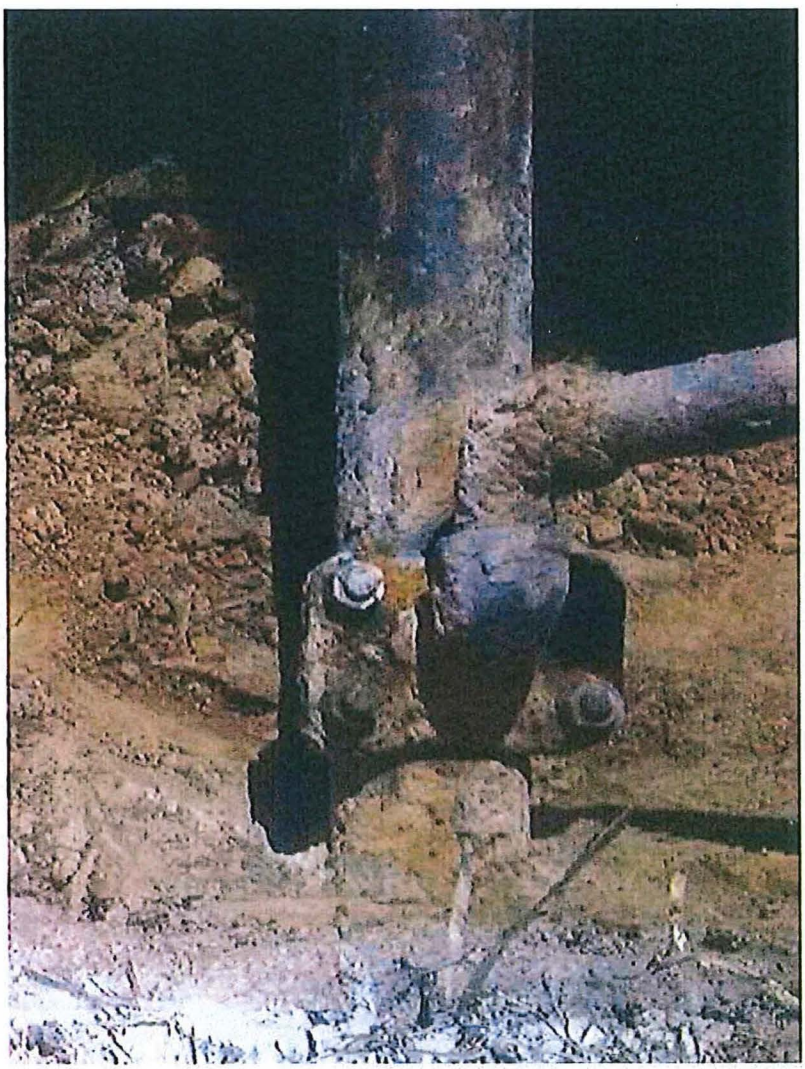
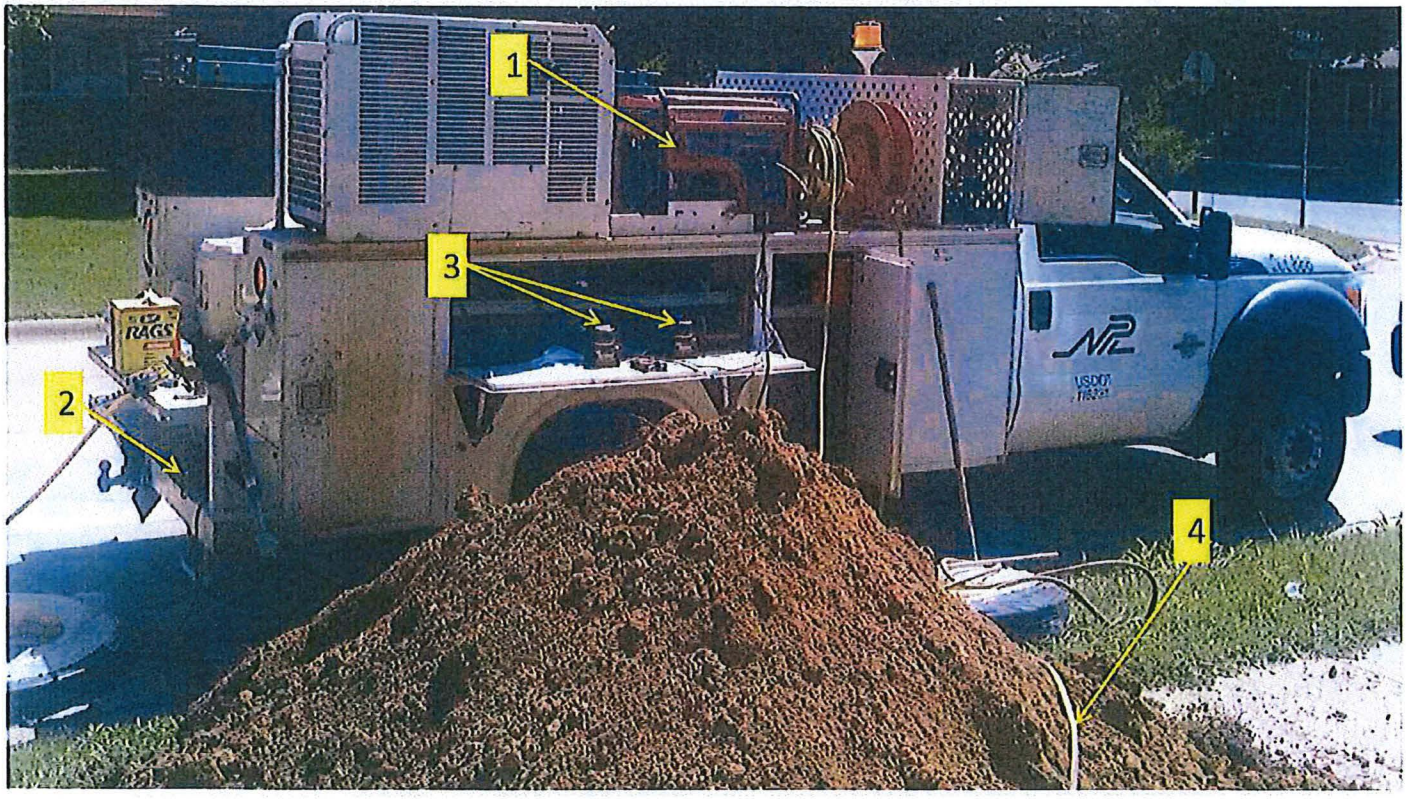


EXHIBIT 5
918 W 5TH STREET NEWTON KS
Photographs of Incident Scene

Wind blowing towards the crew truck. Generator was running, several points of ignition during time of incident. 1.Generator 2.Mini-mac 3.Recharagable batteries 4. Extension cord present



CERTIFICATE OF SERVICE

17-KGSG-069-GIP

I, the undersigned, certify that a true and correct copy of the above and foregoing Notice of Filing of Staff's Report and Recommendation was served by electronic service on this 9th day of November, 2017, to the following:

JAKE FISHER, LITIGATION COUNSEL
KANSAS CORPORATION COMMISSION
1500 SW ARROWHEAD RD
TOPEKA, KS 66604-4027
Fax: 785-271-3354
j.fisher@kcc.ks.gov

JANET BUCHANAN, MANAGER OF RATES & ANALYSIS
KANSAS GAS SERVICE, A DIVISION OF ONE GAS, INC.
7421 W 129TH ST
OVERLAND PARK, KS 66213-2713
Fax: 913-319-8622
janet.buchanan@onegas.com

JUDY JENKINS, MANAGING ATTORNEY
KANSAS GAS SERVICE, A DIVISION OF ONE GAS, INC.
7421 W 129TH ST
OVERLAND PARK, KS 66213-2713
Fax: 913-319-8622
judy.jenkins@onegas.com

RANDALL D. SPECTOR, DIRECTOR OF ENGINEERING & REGULATORY COMPLIANCE
KANSAS GAS SERVICE, A DIVISION OF ONE GAS, INC.
11401 W 89TH ST
OVERLAND PARK, KS 66214
Fax: 913-319-8622
randy.spector@onegas.com

Pamela Griffeth
Administrative Specialist