

Carolinas Public Gas Association

Career Development Plan

**Plan Revision Date:
September 2023**



CPGA

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Revision Change Log

Date: _____ Summary: _____

Date: _____ Summary: _____

Career Development Committee Members

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General Manager of Engineering
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Executive Director, CPGA

Carolinas Public Gas Association Career Development Plan

Plan Mission Statement

To implement a career development model for natural gas employees through standardized training operator qualifications and a shared goal of creating opportunities for advancement and professional development, as well as, emphasize investing in the future of our employees and enhancing mutual aid throughout the Southeast.

Plan Objectives

The objectives of this plan are as follows:

- Continual review of the Distribution Company’s organizational structure to ensure we are meeting the needs of employees and customers.
- Provide an appropriate structure to communicate job training requirements, advancement requirements, and compensation adjustments.
- Provide documentation of training that each employee receives and maintains.

Plan Structure

The Carolina Public Gas Association (CPGA) currently recognizes four (4) job classifications for the Gas Technician positions of a Natural Gas Distribution Company. Each job classification should be reviewed periodically to ensure that it represents the current knowledge, skills, and abilities required for that particular grade classification.

In addition, the CPGA performs annual salary surveys, in 2023 the four Gas Technician roles were included in the survey. The following data is a result of the 2023 salary survey.

POSITION TITLE	Average CPGA Minimum Salary	Average CPGA Maximum Salary	Average CPGA Annual Salary
Gas Technician I	\$30,000.00	\$52,000.00	\$47,652.00
Gas Technician II	\$40,500.00	\$60,500.00	\$51,771.00
Gas Technician III	\$50,500.00	\$70,500.00	\$57,845.00
Gas Technician IV	\$60,500.00	\$80,000.00	\$65,500.00

Career Advancement / Employment Requirements

Each job position in a Natural Gas Distribution Company requires that the employee maintains their minimum Operator Qualifications. Operator Qualifications shall be maintained per the requirements of 49 CFR Part 192.

This career development plan details the required qualifications for each gas technician job classification. Additionally, it details the requirements for advancement between job classifications. Every Natural Gas Technician has the opportunity to become a Gas Technician IV. An employee working for promotion must demonstrate their knowledge and skills for the next job classification level. CPGA and Third-party training can complement or supplement On-the-Job training. The employee's immediate supervisor and/or Manager must provide a written recommendation for the employee's promotion.

During the consideration process for advancement, the employee supervisor and/or the manager should evaluate factors such as:

- Time served in the position
- Experience and skill level growth in the current job position
- Skill level of the new job tasks
- Quality of documentation
- Communication skills with other employees and customer
- Overall work ethic.

See Appendix B for an example memorandum with supporting justification for promoting employees from one level to the next.

The following criteria will be used to evaluate each position:

<i>Gas Technician II</i>
18 months Minimum Experience as a Gas Technician I
8 Hours of CPGA Recognized or CPGA Certified Training
8 Hours of CPGA Certified Training
Completion of OQ Requirements for Gas Technician II
Crew Leader Signature and Recommendation
Compliance Engineer or Manager Signature
Gas System Manager Signature and Recommendation
<i>Gas Technician III</i>
18 Months Minimum Experience as a Gas Technician II
16 Hours of CPGA Recognized or CPGA Certified Training
8 Hours of CPGA Certified Training
Completion of OQ Requirements for Gas Technician III
Crew Leader Signature and Recommendation
Compliance Engineer or Manager Signature
Gas System Manager Signature and Recommendation
<i>Gas Technician IV</i>
18 Months Minimum Experience as a Gas Technician III
24 Hours of CPGA Recognized or CPGA Certified Training
8 Hours of CPGA Certified Training
Completion of OQ Requirements for Gas Technician IV
Crew Leader Signature and Recommendation
Compliance Engineer or Manager Signature
Gas System Manager Signature and Recommendation

The Gas System Manager will complete evaluations for these positions. For Gas Technicians II-IV, specific circumstances may allow the Gas System Manager to waive the timeframe requirement.

Each technician is responsible for their Career Development Plan. Each employee is responsible for maintaining their Operator Qualifications for their respective natural gas system. Additional third-party training can also be recorded in this plan by the employee.

Plan Amendments

This plan is an evolving document and must be reviewed regularly. As needed, revisions will be completed and shared to CPGA Member systems. Modifications will be tracked in the Revision Change Log.

CPGA Certified Training Hours

Each position requires that the employee maintains the minimum Operator Qualification. CPGA Certified Training hours allow the employee to further their career development and obtain more than minimal skills, abilities, and responsibilities. All employees are given an opportunity within their job position, as long as, they meet the minimum prescribed requirements. A technician is required to obtain certified training hours for career advancement, as listed above in The Career Advancement / Career Requirements Section.

Purposes for CPGA Certified Training Hours:

- Ensures technician's competence in their field
- Provides accountability of technician's integrity
- Promotes development of technician's knowledge, skills, and abilities
- Recognition of technician's achievement

CPGA Recognized Training Programs

The following training programs or providers are recognized by the CPGA Career Development plan and are encouraged to be used for developmental training as indicated in the Career Advancement / Employment Requirements Section.

- American Public Gas Association (APGA) – Related Training
- Gas Training Institute (GTI)– Training
- Southern Gas Association (SGA) – Related Training
- American Gas Association (AGA) – Related Training
- Northeast Gas Association (NGA) – Related Training
- Association for Materials Protection and Performance (AMPP) – Corrosion Training (Formerly NACE)
- Appalachian Underground Corrosion Short Course (AUCSC) – Annual Training
- Appalachian Gas Measurement Short Course (AGMSC) – Annual Training
- Emerson – Meter/Instrumentation Training
- Southern Cross Corporation (SCC) – Leak Survey Training
- Leak City Training – Athens, Alabama
- Mid-west Energy Association (MEA) – Related Training

*Future consideration will be given for additional CPGA Recognized Training programs.

Appendix A: Cross Reference of CPGA Titles

Based on a survey conducted by the CPGA, the following is a cross-reference table to other CPGA member system employee titles.

CPGA Career Titles	Cross Reference Member System Titles
Gas Technician I	Underground Installation Technician
	Laborer I, or Laborer
	Construction Crewman, or Crewman
	Gas Worker I
	Leak Survey Technician
	Field Operations Technician
	Service Technician C
Gas Technician II	Construction Laborer II
	Gas Service Tech I
	Operator I
	Service Technician B
Gas Technician III	Senior Construction Field Assistants
	Gas Worker II
	Gas Service Specialist I
	Corrosion Technician
	Gas Systems Operator I
	Operator II
	Senior Gas Technician
	Service Technician A
	Welders Apprentice
Gas Technician IV	Operator III
	Natural Gas Technician IV
	Pressure Control Foreman, or Foreman
	Gas Service Specialist II
	Gas Systems Operator II
	Corrosion Foreman
	Lead Gas Technician
	Welder

Appendix B: Example CPGA Promotion Memorandum

Gas Division

Internal Memorandum

TO: *Gas Manager*
FROM: *Gas Crew Leader*
DATE: *Date*
SUBJECT: Recommendation for Promotion - *Employee*

Employee has been employed with the *City* Natural Gas Division since *Date* as a Gas Technician I. During this time *Employee* has participated as a team member of the Construction crew assisting with the installation of $\frac{3}{4}$ " and 1" polyethylene (PE) natural gas services and small footage 2" PE main extensions. *Employee* has developed an intermediate knowledge and understanding of natural gas construction activities consisting of a variety of procedures: utility locating, excavating, pipe and tracer wire installation, PE butt fusion, PE electrofusion, air testing, tapping, purging, and backfilling. *Employee* performs his tasks without hesitation and repeated instruction. *Employee* meets all expectations as a member of the Construction crew, but *Employee* has a strong desire to further his skill and knowledge development within the Natural Gas Division.

Employee is eager to learn and performs new tasks that are assigned to him. *Employee* has assisted with electric, natural gas distribution, and natural gas transmission pipeline locating tasks. *Employee* has assisted with Maintenance crew activities such as annual leak surveys, atmospheric corrosion surveys, cathodic protection surveys, and will soon be assisting with critical valve inspections. *Employee* attended the Carolinas Public Gas Association (CPGA) Valve Maintenance and Repair Workshop in *Date*, Outside and Inside Leak Investigation at the Southern Gas Association (SGA) Spring Gas Conference and Expo in *Date*, and CPGA Cathodic Protection Training in *Date*. Due to *Employee's* work ethics and ability to learn new procedures, his career progression is advancing as a Gas Technician.

Employee has completed training as outlined in the Carolinas Public Gas Associations (CPGA) *Career Development Program* for a Gas Technician II position. In addition, *Employee* has completed the Operator Qualification computer-based training (CBT) and skill evaluations required for a promotion to the Gas Technician II position. *Employee* has demonstrated his ability to perform on his own while fulfilling standby duties. *Employee* has a willingness to learn and wants to further develop his skills and knowledge within the *City*.

It is my recommendation to promote *Employee* to a Gas Technician II position.

Appendix C: Example CPGA Job Descriptions/Development Plans for Natural Gas Technician I/II/II/IV

Natural Gas Technician I Career Development Plan

Hire Date	Radio Number	Employee Name

CPGA Purpose Statement

The purpose of this Association is to enhance the performance, safety, competitiveness, and public awareness of its member public (i.e. not investor-owned) natural gas distribution systems by promoting the coordination of effort and the sharing of information related to the management and operations of such systems, to compliance with associated regulatory obligations, and to providing the highest quality of reliable service to their customers.

Natural Gas Technician I – Career Path Statement of Duties

For a Natural Gas Technician I to successfully complete the six-month probationary period, the employee must show consistent conformity with the outlined job description, comply with the *Special Requirements* section of the Job Description, and complete the outlined Operator Qualification CBTs and Skill Evaluations for the Gas Technician I job position.

Date	Employee Signature Indicating Full understanding	Supervisor Signature

Natural Gas Technician I – Job Description

GENERAL DEFINITION OF WORK:

Performs semiskilled work assisting in the construction of gas utility lines and appurtenances; does related work as required. Work is performed under the moderate supervision of a Gas Crew Leader.

ESSENTIAL FUNCTIONS/TYPICAL TASKS:

1. Assists with the construction of natural gas service lines and short main extensions; connects natural gas pipe to components using a variety of fusion techniques; performs pipe leakage tests and assists with purging of facilities; assists in backfilling operations.
2. Assists with repairs and remedial action identified in surveys and inspections (i.e., identifying and repairing leaks, atmospheric corrosion; locating and maintenance of service valves, etc.).
3. Performs Damage prevention duties such as temporarily mark underground pipelines; using hand tools to identify underground utilities; installing temporary and permanent markers; obtains measurements for records.
4. Assists with installation of new residential and small commercial meter sets, meter reconnections, and residential regulator pressure checks; meter checks for billing; makes necessary meter repairs or replacements.
5. Operates construction equipment such as dump trucks, loaders, tampers, trenchers, air compression driven equipment, and other related light and medium equipment; operates backhoes; performs preventive maintenance and minor repairs to equipment.
6. Participates in setting up protective cones and signs and flagging traffic around construction sites.
7. Performs on-the-job training, Operator Qualification (OQ) modules, and OQ skill evaluations to prepare for standby duties.
8. Performs Damage prevention duties such as temporarily mark underground pipelines and installing pipeline markers.
9. May be required to work outside normal hours in emergencies and perform on-call duties.
10. Performs related tasks as required.

KNOWLEDGE, SKILLS AND ABILITIES:

Basic knowledge of the maintenance, repair and manual tasks of gas utility work; basic knowledge of the use of common hand and specialized power tools required in the work; general knowledge of the safe use and operation of equipment required in the work; skill in the use of equipment to which assigned; ability to understand oral and written instructions; ability to establish and maintain effective working relationships with other employees and the general public.

EDUCATION AND EXPERIENCE:

Any combination of education and experience equivalent to graduation from high school and minimal experience in the maintenance, repair, and/or construction of gas lines and facilities.

SPECIAL REQUIREMENTS:

Possession of or ability to obtain a Class A commercial driver's license valid in the State of North Carolina within six (6) months of employment.

Possession of or ability to obtain CPR and basic first aid certification within one year of employment.

Ability to obtain Technician I Operator Qualifications and gas line fusion certifications within one year of employment.

Natural Gas Technician I Achievement Record

_____ has completed the required Natural Gas Technician I Operator Qualification (OQ) Computer Based Training, OQ Skill Evaluations, and possesses a Class A CDL required for a successful completion of the six-month probationary period. This employee is now recommended for consideration to be a permanent Gas Technician I employee of the Natural Gas Division.

Date	Title	Signature
	Compliance Engineer or Manager	
	Gas Crew Leader	
	Gas System Manager	

Natural Gas Technician II Career Development Path

Hire Date	Radio Number	Employee Name

CPGA Purpose Statement

The purpose of this Association is to enhance the performance, safety, competitiveness, and public awareness of its member public (i.e. not investor-owned) natural gas distribution systems by promoting the coordination of effort and the sharing of information related to the management and operations of such systems, to compliance with associated regulatory obligations, and to providing the highest quality of reliable service to their customers.

Natural Gas Technician II – Career Path Statement of Duties

For a Natural Gas Technician I to become eligible for promotion to a Natural Gas Technician II, the employee must show consistent conformity with the outlined job description of a Natural Gas Technician I; comply with the *Special Requirements* section of the Job Description; complete the outlined Operator Qualification CBTs and Skill Evaluations for a Gas Technician II; receive Supervisor sign-offs needed to complete Gas Technician I requirements; and competently fulfill Gas Standby duties.

Date	Employee Signature Indicating Full understanding	Supervisor Signature

Natural Gas Technician II– Job Description

GENERAL DEFINITION OF WORK:

Performs technical work assisting in the construction, maintenance, and operation of gas utility lines and appurtenances; does related work as required. Work is performed under the moderate supervision of a Gas Crew Leader.

ESSENTIAL FUNCTIONS/TYPICAL TASKS:

1. Assisting with the construction of natural gas service lines, components, and facilities in a safe manner; performing gas pipeline maintenance; operating and maintaining equipment.
2. Assists with the construction and installation of natural gas service lines and short main extensions; ref natural gas pipe to components using a variety of fusion techniques; performs leakage tests and assists with purging facilities; assists in backfilling operations; updates maps with correct measurements and drawings.
3. Assists in main and service relocations and abandonments.
4. Performs a variety of surveys, inspections and test (such as leak survey, Cathodic protection surveys, odorization surveys, pressure test, etc.); completes appropriate documentation.
5. Performs repairs and takes remedial action identified in surveys; identifies and repairs leaks and atmospheric corrosion; locates and repairs buried valves; performs preventative and restorative maintenance on valves.
6. Performs Damage prevention duties such as temporarily mark underground pipelines; using hand tools to identify underground utilities; installing temporary and permanent markers; obtains measurements for records.
7. Installation of new residential and small commercial meter sets including the pressure regulator and relief valve, performs meter reconnections, and residential regulator pressure checks; meter checks for billing; makes necessary meter repairs or replacements.
8. Responds to emergency calls; investigates and takes necessary actions to ensure safety; remediates damage to restore service; lights pilots for furnaces.
9. Operates construction equipment such as dump trucks, loaders, tampers, trenchers, air compression driven equipment and other related light and medium equipment; operates backhoes in locations or tasks requiring less skill; performs preventive maintenance and minor repairs to equipment;
10. Participates in setting up protective cones and signs and flagging traffic around construction sites.
11. May be required to work outside normal hours in emergencies and perform on-call duties.
12. Performs related tasks as required.

KNOWLEDGE, SKILLS AND ABILITIES:

General knowledge of a variety of maintenance and manual methods and tasks involved in the installation, maintenance, repair, location, and replacement of gas lines and appurtenances; general knowledge of the tools, materials, and equipment used in installation, replacement, maintenance, and repair of natural gas utility lines; thorough knowledge of the hazards associated

with working around heavy equipment, in trenches, natural gas, and other associated work hazards and the associated safety precautions; general knowledge of the engineering standards and specifications related to gas system installation methods and materials; general knowledge of the municipal gas service policies and procedures; ability to establish and maintain effective working relationships with other employees and the general public; ability to read utility maps, operation, and service manuals and to understand and follow oral and written instructions.

EDUCATION AND EXPERIENCE:

Any combination of education and experience equivalent to graduation from high school and some experience in the maintenance, repair, and/or construction of gas lines and facilities.

SPECIAL REQUIREMENTS:

Possession of or ability to obtain an appropriate commercial driver's license valid in the State of North Carolina within six months of employment.

Possession of or ability to obtain CPR and basic first aid certification within one year of employment.

Ability to obtain Technician II Operator Qualifications and gas line fusion certifications within one year of employment.

Natural Gas Technician II Promotion Recognition

_____ has completed the required Natural Gas Technician II Operator Qualification (OQ) Computer Based Training, OQ Skills Evaluations, and Supervisor sign-offs needed to complete Gas Technician I requirements. This employee is now being recognized for promotion to a Gas Technician II.

Date	Title	Signature
	Compliance Engineer or Manager	
	Gas Crew Leader	
	Gas System Manager	

Natural Gas Technician III – Career Development Path

Hire Date	Radio Number	Employee Name

CPGA Purpose Statement

The purpose of this Association is to enhance the performance, safety, competitiveness, and public awareness of its member public (i.e. not investor-owned) natural gas distribution systems by promoting the coordination of effort and the sharing of information related to the management and operations of such systems, to compliance with associated regulatory obligations, and to providing the highest quality of reliable service to their customers.

Career Path Statement of Duties

For a Natural Gas Technician II to become eligible for promotion to a Natural Gas Technician III, the employee must show consistent conformity with the outlined job description of a Natural Gas Technician II; comply with the *Special Requirements* section of the Job Description; complete the outlined Operator Qualification CBTs and Skill Evaluations for a Gas Technician III; receive Supervisor sign-offs needed to complete Gas Technician II requirements; and competently fulfill Gas Standby duties.

Date	Employee Signature Indicating Full understanding	Supervisor Signature

Natural Gas Technician III– Job Description

GENERAL DEFINITION OF WORK:

Performs intermediate technical work in the installation, replacement, repair, and maintenance of natural gas lines and appurtenances; does related work as required. Work is performed under the moderate supervision of a Gas Crew Leader.

ESSENTIAL FUNCTIONS/TYPICAL TASKS:

1. Assisting with the construction of natural gas service line facilities in a safe manner; performing gas pipeline maintenance; operating and maintaining equipment.
2. Assists with the construction, installation and or replacement of natural gas service lines and short main extensions; connects natural gas pipe to components using a variety of fusion techniques; performs leakage tests and assists with purging facilities; assists in backfilling operations; updates maps with correct measurements and drawings.
3. Performs tapping and stopping operations on natural gas mains.
4. Oversees gas meter testing; installs, services, and tests gas meters; locates and repairs gas meter, service line, and main line leaks; completes work orders.
5. Connects gas service; re-lights pilot lights or re-starts furnaces.
6. Responds to customer requests regarding odors or high consumption; connects and disconnects customer service.
7. Builds, paints and installs residential commercial and industrial gas meters.
8. Inspects contractor installations of gas pipes and fusion joints for adherence to trade standards; completes records of work and inspection activities.
9. Performs Corrosion control duties such as measuring corrosion, measuring soil resistivity and inspecting cathodic protection bonds.
10. Maintains and inspect Rectifiers, Installs cathodic protection sacrificial anodes and ground beds; wires and tests stations.
11. Conducts cathodic protection surveys; analyzes results and makes repairs.
12. Locates and repairs gas valves; performs preventative and corrective maintenance on valves. Inspects emergency valves.
13. Reads and records charts at meter stations; monitors regulator pressures; adjusts relief valves and regulators; installs, maintains and inspects regulator stations.
14. Performs Damage prevention duties such as temporarily mark underground pipelines; using hand tools to identify underground utilities; installing temporary and permanent markers; obtains measurements for records.
15. Completes all required paperwork and maintains files and records.

16. Operates construction equipment such as dump trucks, loaders, tampers, trenchers, air compression driven equipment and other related light and medium equipment; operates backhoes in locations or tasks requiring less skill; performs preventive maintenance and minor repairs to equipment. Keeps trucks stocked with materials and tools.
17. Participates in setting up protective cones and signs and flagging traffic around construction sites.
18. May be required to work outside normal hours in emergencies and perform on-call duties.

19. Responds to emergency calls; investigates and takes necessary actions to ensure safety; remediates damage to restore service. lights pilots for furnaces.
20. Performs related tasks as required.

KNOWLEDGE, SKILLS AND ABILITIES:

Thorough knowledge of a variety of maintenance and manual methods and tasks involved in the installation, maintenance, repair, location, and replacement of gas lines and appurtenances; thorough knowledge of the tools, materials, and equipment used in installation, replacement, maintenance, and repair of natural gas utility lines; thorough knowledge of the hazards associated with working around heavy equipment, in trenches, natural gas, and other associated work hazards and the associated safety precautions; general knowledge of the City engineering standards and specifications related to gas system installation methods and materials; general knowledge of the municipal gas service policies and procedures; ability to establish and maintain effective working relationships with associates and the general public; ability to read utility maps, operation, and service manuals and to understand and follow oral and written.

EDUCATION AND EXPERIENCE:

Any combination of education and experience equivalent to graduation from high school and moderate training and experience in skilled gas utility work.

SPECIAL REQUIREMENTS:

Possession of or ability to obtain an appropriate commercial driver's license valid in the State of North Carolina within six months of employment.

Possession of or ability to obtain CPR and basic first aid certification within one year of employment.

Ability to obtain Technician III Operator Qualifications and fusion certifications within one year of employment.

Natural Gas Technician III Promotion Recognition

_____ has completed the required Natural Gas Technician III – Cathodic Protection Operator Qualification (OQ) Computer Based Training, OQ Skills Evaluations, and Supervisor sign-offs needed to complete Gas Technician II requirements. This employee is now being recognized for promotion to a Gas Technician III specializing in Cathodic Protection.

Date	Title	Signature
	Compliance Engineer or Manager	
	Gas Crew Leader	
	Gas System Manager	

Natural Gas Technician IV – Career Development Path

Hire Date	Radio Number	Employee Name

CPGA Purpose Statement

The purpose of this Association is to enhance the performance, safety, competitiveness, and public awareness of its member public (i.e. not investor-owned) natural gas distribution systems by promoting the coordination of effort and the sharing of information related to the management and operations of such systems, to compliance with associated regulatory obligations, and to providing the highest quality of reliable service to their customers.

Career Path Statement of Duties

For a Natural Gas Technician III to become eligible for promotion to a Natural Gas Technician IV, the employee must show consistent conformity with the outlined job description of a Natural Gas Technician III; comply with the *Special Requirements* section of the Job Description; complete the outlined Operator Qualification CBTs and Skill Evaluations for a Gas Technician IV; receive Supervisor sign-offs needed to complete Gas Technician III requirements; and competently fulfill Gas Standby duties.

Date	Employee Signature Indicating Full understanding	Supervisor Signature

Natural Gas Technician IV– Job Description

GENERAL DEFINITION OF WORK:

Performs intermediate technical work in the installation, replacement, repair, and maintenance of natural gas lines and appurtenances; does related work as required. Work is performed under the limited supervision of a Gas Crew Leader.

ESSENTIAL FUNCTIONS/TYPICAL TASKS:

1. Assisting with the construction of natural gas service lines facilities in a safe manner; performing gas pipeline maintenance; operating and maintaining equipment.
2. Assists with the construction, installation and or replacement of natural gas service lines and short main extensions; connects natural gas pipe to components using a variety of fusion techniques; performs leakage tests and assists with purging facilities; assists in backfilling operations; updates maps with correct measurements and drawings.
3. Performs tapping and stopping operations on natural gas mains.
4. May perform welding operations.
5. Oversees gas meter testing; installs, services, and tests gas meters; locates and repairs gas meter, service line, and main line leaks; completes work orders by preparing and maintaining all required paperwork, records and files.
6. Connects gas service; re-lights pilot lights or re-starts furnaces.
7. Responds to customer requests regarding odors or high consumption; connects and disconnects customer service.
8. Builds, paints and installs residential commercial and industrial gas meters.

9. Inspects contractor installations of gas pipes and fusion joints for adherence to trade standards; completes records of work and inspection activities.
10. Performs corrosion control duties such as measuring corrosion, measuring soil resistivity and inspecting cathodic protection bonds.
11. Maintains and inspect Rectifiers, Installs cathodic protection sacrificial anodes and ground beds; wires and tests stations.
12. Conducts cathodic protection surveys; analyzes results and makes repairs.
13. Assist with integrity management task such in line inspection tool launching and receiving; preparing and maintaining all required paperwork, records and files.
14. Locates gas facilities for contractors, utility crews, and property owners.
15. Locates and repairs gas valves; performs preventative and corrective maintenance on valves. Inspects emergency valves. Exercises, greases, and inspects gas valves; makes drawings of valve and other system appurtenance locations.
16. Programs electronic connectors for industrial meters and other metering stations.
17. Reads and records charts at meter stations; monitors regulator pressures; adjusts relief valves and regulators; performs inspections and test of pneumatic and controller type pressure regulators, relief valves and/or actuators; installs, maintains and inspects regulator stations.
18. Performs odorizer inspection, testing and maintenance.
19. Performs damage prevention duties such as temporarily mark underground pipelines; using hand tools to identify underground utilities; installing temporary and permanent markers; obtains measurements for records.
20. Operates construction equipment such as dump trucks, loaders, tampers, trenchers, air compression driven equipment and other related light and medium equipment; operates backhoes in locations or tasks requiring less skill; performs preventive maintenance and minor repairs to equipment. Keeps trucks stocked with materials and tools.
21. Participates in setting up protective cones and signs and flagging traffic around construction sites.
22. May be required to work outside normal hours in emergencies and perform on-call duties.
23. Responds to emergency calls; investigates and takes necessary actions to ensure safety; remediates damage to restore service. lights pilots for furnaces.
24. Completes all required paperwork and maintains files and records.
25. Serves in the absence of crew leaders; participates in the work of crews.
26. Administers operator qualification program.
27. Performs related tasks as required.

KNOWLEDGE, SKILLS AND ABILITIES:

Thorough knowledge of a variety of maintenance and manual methods and tasks involved in the installation, maintenance, repair, location, and replacement of gas lines and appurtenances; thorough knowledge of the tools, materials, and equipment used in installation, replacement, maintenance, and repair of natural gas utility lines; thorough knowledge of the hazards associated with working around heavy equipment, in trenches, natural gas, and other associated work hazards and the associated safety precautions; general knowledge of the City engineering standards and specifications related to gas system installation methods and materials; general knowledge of the municipal gas service policies and procedures; ability to establish and maintain

effective working relationships with associates and the general public; ability to read utility maps and operation and service manuals and to understand and follow oral and written instructions.

EDUCATION AND EXPERIENCE:

Any combination of education and experience equivalent to graduation from high school and moderate training and experience in skilled gas utility work.

SPECIAL REQUIREMENTS:

Possession of an appropriate commercial driver's license valid in the State of North Carolina.

CPR and basic first aid certification required.

Ability to obtain Technician IV Operator Qualifications and fusion certifications within one year of hire.

Natural Gas Technician III Promotion Recognition

_____ has completed the required Natural Gas Technician IV Operator Qualification (OQ) Computer Based Training, OQ Skills Evaluations, and Supervisor sign-offs needed to complete Gas Technician III requirements. This employee is now being recognized for promotion to a Gas Technician IV.

Date	Title	Signature
	Compliance Engineer or Manager	
	Gas Crew Leader	
	Gas System Manager	

Appendix D: Future Enhances of the CPGA Career Development Program

- Include Utility Locators/Damage Prevention Technicians
- Consider adding an apprentice level
- Consider adding a Crew Leader career path (leadership/management training) – Leadership aspect
 - o MEA offers training for leadership positions specific to Natural Gas Industry
- Consider adding Engineering/Admin career path (training/education)
- Expand roles and responsibilities for different aspects (section/functional groups)
 - o I.e. Underground vs. Measurement/Regulation vs. Cathodic Protection
- Specific Task Analysis and Comparison between various OQ Providers

	Gas Technician I (49 OQ Tasks)	Gas Technician II (84 OQ Tasks)	Gas Technician III (116 OQ Tasks)	Gas Technician IV (126 OQ Tasks)
Intro/Basics	Natural Gas 101			
	Ignition Sources			
	Recognize and React To Abnormal Operating Conditions			
Plastic Pipe Install/Repair	Backfilling	Abandon/deactivate Mains		
	Install Excess Flow Valves	Abandon/deactivate Service Lines		
	Install Plastic Service Lines	Temporary Isolation of Service Lines and Service Discontinuance		
	Install Service Line Valves Upstream of Customer Meter	Move In-Service Pipeline		
	Install Tracer Wire	Restore Service		
	Installation of Plastic Pipe by Plowing/Planting	Installation of Plastic Pipe in a Bore		
	Installation of Plastic Pipe in a Ditch	Visual Inspection of Installed Pipe and Components for Mechanical Damage		
Visual Inspection of Buried Pipe and Components When Exposed	Measure and Characterize Mechanical Damage on Installed Pipe and Components			
Visually Inspect Pipe and Components Prior to Installation				
Steel Pipe Install/Repair	Install Steel Service Lines	Install Composite Sleeves	Repair of Steel Pipe by Grinding	Fit-Up of Weld Type Repair Sleeve
	Installation of Steel Pipe in a Ditch	Install Mechanical Clamps or Sleeves: Bolted		Visual Inspection of Welding and Welds
	Installation and Maintenance of Casing Spacers, Vents and Seals	Field Bending of Steel Pipe		Welding
		Installation of Steel Pipe in a Bore		
Joining of Pipe	Joining of Pipe: Compression Couplings			
	Joining of Plastic Pipe - Butt Heat Fusion: Hydraulic			
	Joining of Plastic Pipe - Butt Heat Fusion: Manual			
	Joining of Plastic Pipe - Socket Heat Fusion			
	Joining of Plastic Pipe: Electrofusion			
	Joining of Plastic Pipe: Stab Fittings			
	Visually Inspect Butt Fused Polyethylene Pipe			
Visually Inspect Electrofusion Fittings on Polyethylene Pipe				
Visually Inspect Mechanical Fittings on Polyethylene Pipe				
Pressure Test		Leak Test at Operating Pressure	Operate Within an Established MAOP	
		Pressure Test: Nonliquid Medium – MAOP Greater Than or Equal to 100 psi		
		Pressure Test: Nonliquid Medium – MAOP Less Than 100 psi		
Squeeze Off Pipe		Squeeze Off Plastic Pipe		
		Squeeze Off Steel Pipe		
Tapping and Stopping		Tapping a Plastic Pipeline (Tap Diameter 2 in. and Less).	Tapping a Pipeline (Tap Diameter Greater Than 2 Inch)	
		Tapping a Pipeline With a Built-In Cutter.	Tapping a Plastic Pipeline (Tap Diameter Greater Than 2 in.).	
			Mueller Tapping and Stopping Equipment Training	
Purging		Stopper (Stoppie) Pipe		
Leak Investigation/Survey	Purge-Flammable or Inert Gas			
	Classifying Leaks	Mobile Gas Leakage Survey: Optical Methane		
	Inside Gas Leak Investigation			
	Outside Gas Leak Investigation			
	Mobile Gas Leakage Survey: Flame Ionization			
Walking Gas Leakage Survey				
Meter Installation	Check for Irregularities in the Condition of Meter Installations	Installation of Pipe Above Ground		
	Joining of Pipe: Threaded Joints	Joining of Pipe: Flange Assembly		
	Installation of Customer Meters and Regulators: Residential and Small Commercial	Installing Customer Meters: Large Commercial and Industrial		
		Above-Ground Supports and Anchors: Inspection, Preventive, and Corrective Maintenance		
Pipe Coating Repair	Pipe Surface Preparation for Coating Application			
	Coating Application and Repair: Brushed or Rolled			
	Coating Application and Repair: Sprayed			
	External Coating Application and Repair: Wrapped			
Inspect Pipeline Coating Using Holiday Detection				
Excavation Inspection	Damage Prevention During Excavation Activities by or on Behalf of the Operator			
	Damage Prevention Inspection During Third-Party Excavation or Encroachment Activities as Determined Necessary by the Operator			
	Provide or Ensure Adequate Pipeline Support During Operator-Initiated Excavation Activities			
Damage Prevention	Install and Maintain Pipeline Markers	Inspect Pipeline Surface Conditions: Patrol Right of Way or Easement		
	Locate Underground Pipelines			
	Temporarily Mark Underground Pipeline Facilities			
	Verify the Correct Marking of Permanently Marked Underground Pipeline Facilities			
Verify the Correct Marking of Temporarily Marked Underground Pipeline Facilities				
Valves	Maintenance of Services Valves Upstream of Customer Meter	Valve – Visual Inspection and Partial Operation	Adjust and Monitor Flow or Pressure-Manual Valve Operation	
	Manually Opening and Closing Valves	Valve - Preventive Maintenance	Inspect Emergency Valves	
			Valve Corrective Maintenance	
Corrosion Control	Measure Structure-to-Electrolyte Potential	Inspect or Test Cathodic Protection Electrical Isolation Devices	Installation of Exothermic Electrical Connections	Direct Examination Techniques
	Visual Inspection For Atmospheric Corrosion	Install Cathodic Protection Electrical Isolation Devices	Installation And Maintenance of Mechanical Electrical Connections	Indirect Inspection Techniques
			Inspect or Test Cathodic Protection Bonds	
			Measure Soil Resistivity	
			Install Sacrificial Anodes	
			Inspect and Monitor Galvanic Ground Beds/Anodes	
			Inspect Rectifier And Obtain Readings	
			Maintain Rectifiers	
			Troubleshoot in-service cathodic protection systems	
			Conduct Close Interval Survey	
			Measure Atmospheric Corrosion	
		Measure External Corrosion		
		Measure Internal Corrosion		
		Visual Inspection for Internal Corrosion		

	Gas Technician I	Gas Technician II	Gas Technician III	Gas Technician IV
Regulation and Control		Installing and Maintaining Customer Pressure-Regulating, Pressure-Limiting, and Relief Devices: Large Commercial and Industrial	Tubing and Fitting Installation: Instrument, Control, and Sampling	Controller-Type, Pressure-Regulating Device-Inspection, Testing, Preventive and Corrective Maintenance
			Inspect, Test, and Maintain Sensing Devices	Pneumatic Actuator/Operator Inspection and Testing, Preventive and Corrective Maintenance
			Pilot-Operated, Pressure-Limiting, and Relief Device-Inspection, Testing, Preventive and Corrective Maintenance	Pneumatic-Loaded, Pressure-Limiting, and Relief Device-Inspection, Testing, Preventive and Corrective Maintenance
			Pilot-Operated, Pressure-Regulating Device-Inspection, Testing, Preventive and Corrective Maintenance	
			Pipeline Heater - Inspection and Preventive Maintenance	
			Spring-Loaded, Pressure-Limiting, and Relief Device-Inspection, Testing, Preventive and Corrective Maintenance	
		Spring-Loaded, Pressure-Regulating Device - Inspection and Testing, Preventive and Corrective Maintenance		
Odorization		Odorization: Periodic Sampling		Odorizer Inspection, Testing, Preventive and Corrective Maintenance
Pressure Chart			Interpret Pressure Recording Charts and Electrical Devices	
Pigging				Launching and/or Receiving Internal Devices (Pigs) Using Traps
Additional Requirements for Technician Career Development				
Supplemental Training	Class A CDL	Class A CDL	Class A CDL	Class A CDL
	Electrofusion/Butt Fusing	Valve Maintenance Training	Regulator/Pressure Control Training	
	Work Zone Safety		Mueller Tapping and Stopping Equipment Training	
	Leak Detection Training		TDW Tapping and Stopping Equipment Training	
	Flagger Training			
	Forklift Training			
	Backhoe Training			
	Trenching and Shoring/Competent Person			
Confined Space Monitoring				
Recommended School	Carolinas Public Gas Association / SC & NC Locations	Carolinas Public Gas Association / SC & NC Locations	Carolinas Public Gas Association / SC & NC Locations	
	Southern Gas Association / SC & NC Locations	Southern Gas Association / SC & NC Locations	Southern Gas Association / SC & NC Locations	
		Appalachian Gas Measurement Short Course / PA		
		Appalachian Underground Corrosion Short Course / WV		
Time Requirements	18 Months	18 Months	18 Months	
Required Sign-Off	Employee Agreement	Employee Agreement	Employee Agreement	
	Direct Supervisor Approval	Direct Supervisor Approval	Direct Supervisor Approval	
	Engineer Approval	Engineer Approval	Engineer Approval	
	Gas System Manager Approval	Gas System Manager Approval	Gas System Manager Approval	