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OAHU GAS SERVICE
An AmeriGas Company

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March 17, 2011

Mr. Chris Hoidal
Director, Western Region
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
12300 W. Dakota Avenue, Suite 110
Lakewood, Co 80228

Re: CPF 5-2010-005 and CPF 5-2010-006M

Dear Mr. Hoidal:

Pursuant to the Notice of Probable Violation and Proposed Compliance Order and Notice of Amendment, AmeriGas dba Oahu Gas Service respectfully submits this response with attachments.

In reference to CPF 5-2010-005, Proposed Compliance Order, AmeriGas is not contesting the Compliance Order and have taken the steps in the Compliance Order as follows:

1. In regard to Item Number 1 of the Notice pertinent to the buried pipe at the Ewa Complex and Maile Center, AmeriGas must provide adequate cathodic protection in accordance with Section 192.463 (a) - External corrosion controls: Cathodic Protection.

    - Action Taken: Ewa Complex and Maile Center is no longer jurisdictional as customers have been separated from the system and are being serviced individually by dedicated tanks. Please see attached Work Orders specific to the actions taken in this regard.

2. In regard to Item Number 2 of the Notice pertaining to the 3-inch diameter pipe at the Westridge Complex, AmeriGas must maintain records of each corrosion control test, survey and inspection in accordance with Section 192.491 (a), (b) and (c) - Corrosion control records.

- Action Taken: The 3-inch diameter (buried steel) pipe at Westridge Complex has been replaced with 2-inch PE pipe. Please see attached Work Orders specific to actions taken in this regard.

3. In regard to Item Number 3 of the Notice pertaining to welding procedures, AmeriGas must establish written procedures for its steel pipelines in accordance with Section 192.225 (a) and (b) - Welding procedures.

    - Action Taken: As part of normal business operations, AmeriGas maintains its Office of Pipeline Safety-Operations and Maintenance Manual. Included herein is the Section 5.0-Operating & Maintenance Plan, Paragraph 5.5(a)-Welding of Steel Pipelines (Sections 192.221-192.245 Subpart E).

4. In regard to Item Number 4 of the Notice pertaining to weld repairs, AmeriGas must establish weld repair procedures for its steel pipelines Section 192.245 - Repair or removal of defects.

    - Action Taken: As part of normal business operations, AmeriGas maintains its Office of Pipeline Safety-Operations and Maintenance Manual. Included herein is the Section 5.0-Operating & Maintenance Plan, Paragraph 5.5(a)-Welding of Steel Pipelines (Sections 192.221-192.245 Subpart E).

5. Within 90 days from the receipt of the Final Order, AmeriGas must complete all items contained in this proposed compliance order.

    - Action Taken: As provided herein, all items contained in this Proposed Compliance Order have been completed.

6. AmeriGas shall maintain documentation of the safety improvements costs associated with fulfilling this Compliance Order and submit the total to Chris Hoidal, Director, Western region Pipeline and Hazardous Materials Safety Administration. Costs shall be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analysis, and 2) total cost associated with replacement, additions and other charges to pipeline infrastructure.

    - Action Taken: Per Category 1, AmeriGas maintains that there are no specific costs associated with the preparation/revision of plans, procedures, studies and analysis as Operations and Maintenance manuals and Operator Qualifications Procedures were preexistent and updated in the normal course of its business practice.

    - Action Taken: Per Category 2, AmeriGas submits a total valve of $11,605.38 for work associated with replacement, additions and other changes to the pipeline infrastructure.

In reference to CPF 5-2010-006M, Notice of Amendment, AmeriGas is not contesting the Notice and have taken the steps in the Notice as follows:

1. AmeriGas needs to provide the public awareness notice twice annually to persons controlling properties where AmeriGas has facilities. At the time of the inspection, AmeriGas was providing messages to customers and property owners once per year instead of twice annually. AmeriGas' written procedures required a public awareness messages be sent annually to its customers. Section 192.616(j) requires the written procedure to provide its customers public awareness messages twice annually. AmeriGas needs to revise its procedure accordingly.

    - Action Taken: As part of normal business operations, AmeriGas maintains its Office of Pipeline Safety-Operations and Maintenance Manual. Included herein is the Section 5.0-Operating & Maintenance Plan, Subsection 5.3(a)-Public Awareness Program (Section 192.616(j)), Paragraph (A).

If you should have any questions or require additional information/supportive materials in part or whole, i.e. AmeriGas O&M Manual, please contact the undersigned or Jean Konowalczyk, AmeriGas in-house Counsel.

Sincerely,

Ronald Templeman
General Manager, Hawaii
AmeriGas, dba Oahu Gas Service

RT:bnk
Enclosures (copy electronic format via email)

Via email
cc: Phillip Nguyen, Engineer, USDOT, PHMSA (w/enclosures)
Jean Konowalczyk, Counsel, AmeriGas (w/ enclosures)

5.0 OPERATING AND MAINTENANCE PLAN

A. A review and update of this Manual shall occur annually not to exceed every 15 months. The review and/or updates shall be recorded on the Record of Review/Updates sheet.

5.1 INSTRUCTION FOR EMPLOYEES (Section 192.605)

A. This Manual covers operating, maintenance and emergency procedures which shall apply to all gas pipeline distribution systems under the jurisdiction of the Office of Pipeline Safety.

B. Customer-specific records regarding each location's construction, maps, operating history, maintenance records, etc., will be kept in a binder or file cabinet in the front office clearly identified as OPS System(s).

C. The procedures outlined are based on the requirements found in 49 CFR, Parts 191 and 192; NFPA 58, Guidance Manual for Operators of Small LP-Gas Systems and the AmeriGas Safety Manual.

D. When conflicts arise between 49 CFR and NFPA 58, the requirements of NFPA 58 will prevail. When conflicts arise between 49 CFR and Company policies, the more stringent provisions shall prevail.

5.2 INSTALLATION PROCEDURES (Section 192.11)

A. You must perform all installations in accordance with NFPA 58, 49 CFR and the Guidance Manual for Operators of Small LP-Gas Systems. These publications list the different materials qualified for gas service. All materials, parts and fittings used in a pipeline must be compatible.

B. When repairs are required, be aware of the materials that are used in the system. Records indicating the type of materials and location of the piping and system's parts are essential. If such records are not available in the District, you must develop or secure them by:

1. Contacting the previous owners of the system;
2. Contacting the contractor who installed the system;
3. Checking local permits; or
4. Carefully exposing the pipe in certain locations to determine the type of material used.

5.3 DAMAGE PREVENTION PROGRAM (Section 192.614)

A. Before digging, locate the pipe network and other underground utility lines by one or more of the following methods:

1. Use of existing maps;
2. Locate underground metallic pipe and plastic pipe installed with an electrically conductive wire with pipe locating equipment;
3. Locate or verify locations of underground utility lines by contracting with utility companies;
4. Use a One-Call System if available in your area to notify the appropriate utilities of your intention to dig or use the new "811 Call Before You Dig" system for notification; *This type of service generally requires at least a 48 hour notice. (All Districts with OPS installations must belong to or participate in a "One-Call-System." Contact your State AHJ to enroll);*
5. When notified to perform a locate, verify the required response time to complete the task. State laws vary from 48 – 72 hours, most excluding weekends and legal holidays.
6. If the District is provided with notice that excavation is anticipated in the area, AmeriGas personnel should document who notified them of the expected excavation, the date the notice was received and what precautions were taken to prevent accidental damage, such as, temporarily marking the lines before the excavation begins. Retain notices in system books. Section 192.614(c)(3);
7. The District should also inform the excavator as to how to identify our temporary line markers. Section 192.614(c)(4);
8. Temporary markings of underground lines will be identified by use of yellow flags or yellow marking paint. Refer to "811 Call before You Dig" program requirements. Section 192.614(c)(5);
9. AmeriGas personnel will periodically follow-up and inspect the underground piping for which AmeriGas is responsible as necessary in any known areas of heightened potential for excavation. Section 192.614(c)(6); and
10. When blasting has occurred in the vicinity of the gas system, follow Section 7.7, Blasting of this Manual.

B. Where construction and/or maintenance projects are in progress and trenches or ditches are left open in the absence of Company employees, cover the openings; install barricades or rope and mark with **"DANGER"** signs.

C. When you are made aware of an excavation by others that will take place in or around gas lines, advise the contractor of the location of gas lines.

5.3a PUBLIC AWARENESS PROGRAM (Section 192.616(j))

A. Pursuant to its Public Awareness Program, AmeriGas will provide a **Public Awareness Message (PAM)** twice annually to any owner of property on which a master meter or petroleum gas system is located that AmeriGas does not control as set forth below. (See Appendix E of this Manual)

B. The PAM is to be used by **all** Districts with jurisdictional gas pipeline distribution systems, known as OPS systems. This procedure is subject to change. This PAM must include:
   1. A description of the purpose and reliability of the pipeline;
   2. An overview of the hazards of the pipeline and prevention measures used; and
   3. Information about damage prevention, how to recognize and respond to a leak and how to obtain additional information.

C. PHMSA requires that customers of operators of propane pipeline systems, which do not transport propane as a primary activity, be supplied with a PAM twice annually (preferably every six months).

D. PAM Guidelines For Each District With A Jurisdictional Gas Pipeline Distribution System
   1) Run the following report:
      a. Customer Meter by Installation Report:
      b. Print mailing labels for each customer. Include the PAM in the envelope and send to the appropriate customers/operators.
   2) Save the list of recipients in a separate file in the same location as your System Books and document the dates the PAM was sent and the method used to send must also be documented. This must be done each time the message is sent out and must be available for inspection upon request.

5.4 UNDERGROUND PIPELINE DEPTH REQUIREMENT (Section 192.7 and NFPA 58 (2004 ed., Sections 6.8.3.12 and 6.8.4.2)

A. Buried metallic pipe and tubing and polyethylene pipe and tubing shall be installed as follows:
   1. With a minimum of 12 inches of cover.
   2. With a minimum of 18 inches of cover if external damage to the pipe or tubing is likely to result.
   3. With piping installed in conduit or bridged (shielded) if a minimum 12 inches of cover cannot be provided.

5.5 STEEL PIPING SYSTEM SERVICE LIMITATIONS NFPA 58 (2004 ed., Table at 6.8.3.5)

A. Vapor piping with operating pressures in excess of 125 psig must be designed for a working pressure of at least 250 psig. (NFPA 58 (2004 ed., Section 6.8.3.3) Use welded or threaded Schedule 80 pipe for liquid service and vapor service over 125 psig; however, Schedule 40 pipe may be used if welded. Schedule 40 threaded pipe may be used for vapor service under 125 psi.

B. Fittings and valves used at pressures higher than container pressure shall be suitable for a working pressure of at least 350 psig; those used at pressures equal to container pressure (liquid or vapor) shall be suitable for a working pressure of 250 psi; those used at vapor pressures under 125 psi shall be suitable for working pressures of 125 psi.

5.5a WELDING OF STEEL IN PIPELINES (Sections 192.221-192.245 Subpart E)

A. Welding on pipelines must be performed only by outside personnel, who are qualified in accordance with Section 6 of API Standard 1104 or Section IX of the ASME Boiler and Pressure Vessel Code, or who are otherwise qualified under the provisions of Sections 192.225 through 192.245, and qualified to weld on pipe of the appropriate specifications.

B. Prior to performing welding on a pipeline system by outside personnel, the District must secure a copy of the Qualified Welding Procedure, Welder Qualification Test Record and results that are to be used on the pipeline as outlined in API 1104.

5.6 TUBING INSTALLATION

A. Copper tubing may be used where authorized by the authority having jurisdiction and in accordance with the specifications and installation requirements in NFPA 58, and the AmeriGas Safety Manual.

B. Tubing shall be steel, stainless steel, brass, copper, and shall comply with the following:
   (1) Steel tubing — ASTM A 539, *Standard Specification for Electric-Resistance-Welded Coiled Steel Tubing for Gas Fuel Oil Lines*
   (2) Brass tubing — ASTM B 135, *Standard Specification for Seamless Brass Tube*
   (3) Copper tubing
      (a) Type K or L — ASTM B 88, *Specification for Seamless Copper Water Tube*
      (b) ASTM B 280, *Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service*

C. Fittings shall be steel, brass or copper. Pipe fittings shall have a minimum pressure rating as specified in Table 5.8.4.1 NFPA 58 2004 and shall comply with the following:
   (1) Cast-iron pipe fittings shall not be used.
   (2) Brazing filler material shall have a melting point that exceeds 1000°F (538°C).

D. Where external forces could cause damage to the tubing, the tubing must be protected by sleeving with a non-metallic piping. Seal the sleeve at both ends to prevent water from entering the sleeve and freezing.

5.7 PLASTIC PIPE INSTALLATION (NFPA 58 (2004 ed.), Section 5.8.3.1(6))

Plastic pipe (Polyethylene or PE pipe) may be used where authorized by the authority having jurisdiction and in accordance with the provisions of NFPA 58 and the AmeriGas Safety Manual.

5.8 PE PIPE INSTALLER QUALIFICATIONS (Section 192.285)

A. No person may make a plastic pipe joint unless that person has been qualified under the applicable joining procedure by:
   (1) Appropriate training or experience in the use of the procedure; and
   (2) Making a specimen joint from pipe sections joined according to the procedure that passes the inspection and test set forth in paragraph (b) of this section.

B. The specimen joint must be:
   (1) Visually examined during and after assembly or joining and found to have the same appearance as a joint or photographs of a joint that is acceptable under the procedure; and
   (2) In the case of a heat fusion, solvent cement, or adhesive joint:
      (i) Tested under any one of the test methods listed under § 192.283(a) applicable to the type of joint and material being tested;
      (ii) Examined by ultrasonic inspection and found not to contain flaws that would cause failure; or
      (iii) Cut into at least 3 longitudinal straps, each of which is:
         (A) Visually examined and found not to contain voids or discontinuities on the cut surfaces of the joint area; and
         (B) Deformed by bending, torque, or impact, and if failure occurs, it must not initiate in the joint area.

C. A person must be requalified under an applicable procedure, if during any 12-month period that person:
   (1) Does not make any joints under that procedure; or
   (2) Has 3 joints, or 3 percent of the joints made, whichever is greater, under that procedure that are found unacceptable by testing under § 192.513.

D. Once each calendar year employees responsible for making PE connections shall make at least once connection during a training class. That connection shall be qualified by procedures determined by the manufacture of the PE in use at that location. The specimen joint made shall be kept in a suitable location for 5 years and properly identified with the employees name and date of connection. On the 5th year of training the oldest specimen can be discarded. Documentation of this training must be maintained.

5.9 PE PIPE INSTALLATION REQUIREMENTS

A. PE pipe must be manufactured according to ASTM D-2513 specifications that is recommended by the manufacturer for use with LP-Gas and marked with the manufacturer's name or trademark, the SDR (Standard Dimension Ratio) of the pipe, the size of the pipe, the designation "PE", the date manufactured and the designation ASTM D-2513. All PE pipe installed in a new system should be from the same manufacturer. (See also NFPA 58, §5.8.3.1)

B. The maximum propane service pressure permissible for PE piping is 30 psig, and should be as low as practicable to prevent re-liquefication. PE piping may only be used for vapor service and may never be used above ground.

C. Bury PE pipe directly in the ground, or use it to replace a deteriorated buried metal pipe. In the latter case, a slightly smaller PE pipe may be inserted into the existing metal pipe, provided the PE pipe will be of adequate size to supply demand.

D. Joining may be accomplished by using heat fusion, butt or socket welding, or mechanical fittings compatible with the pipe being used, and in accordance with the instructions provided by the manufacturer of the fittings. Detailed procedures for the joining of PE Pipe may be found in the PE manufacturer's training literature.

E. Install all PE pipe below ground. Bring the service above ground by use of an anodeless riser with appropriate mechanical fittings. No PE pipe shall be exposed aboveground. Do not use risers to support external loads. (See NFPA 59, § 6.8.4.3)

F. Support PE pipe along its entire length with properly tamped and compacted soil. Backfill material must not contain large or sharp rocks, broken glass or other objects which may damage the pipe. Where such conditions may exist, use dirt, screenings or sand backfill.

G. Where PE pipe is laid in an area where there has been digging and backfilling, and it appears the backfill may settle, prevent shear and other stress concentrations at valves, connectors and plastic-to-pipe transition fittings by using external stiffeners or sleeves.

H. Provide adequate slack through "snaking" to prevent pullout or separation of a joint from expansion and contraction of the pipe caused by temperature changes. PE pipe will expand or contract one inch for each 10 degrees of temperature change for every 100 feet of pipe. (See NFPA 58, § 6.8.4.5)

I. Take special care to prevent coal tar type coatings or petroleum based tape from contacting the plastic pipe, as it may cause the plastic pipe to deteriorate.

J. PE pipe may be inserted into metal pipe to protect it from damaging soil conditions, vehicular traffic, or as a replacement for an existing main or service line. Protect the PE pipe from damage during the insertion process. In addition, take measures to prevent water from accumulating and freezing in the sleeve and damaging the PE pipe. (See NFPA 58, § 6.8.4.9)

K. Install valves or valve enclosures in a manner that will protect the PE pipe from excessive torsion (twisting) or shearing (cutting) loads when the valve is operated. (See NFPA 58, § 6.8.5.1, 2004 ed.)

L. Install 14 gauge tracer wire over the entire run of PE pipe to allow the location of the pipe. Tracer wire connections must be made with corrosion proof connectors. Ensure that both ends of the tracer wire terminate above ground at each riser. There must be a separation between the PE and the tracer wire. (See NFPA 58, § 6.8.4.6, 2004 ed.)

M. LP-Gas vapor flowing through PE pipe creates a static charge. Take the following precautions to avoid ignition when there is a possibility of a flammable gas-air mixture being present:

1. Use a wet tape conductor, grounded with a metal pin driven into the ground, and lay it in contact with the section of exposed pipe.
2. If a gas mixture may already be present, wet the pipe from the ground end with a mild soap solution, and then apply the tape.
3. Wet the tape occasionally with water.

N. Do not vent gas through ungrounded PE piping in a ditch or excavation, vent to a remote location.

5.10 TAPPING OR REPAIRING LINES UNDER PRESSURE (192.627)

A. **Steel Pipe** All taps or repairs made on steel pipe, whether pressurized or de-pressurized, are to be made only by qualified persons. Where taps or repairs must be made on a pressurized line, obtain approval from the Regional Safety Manager.

1. The following are minimum guidelines when working on de-pressurized lines:

a. Reduce the pressure in the pipe to 0 psig.
b. Ensure there is enough room in the excavation to work safely.
c. Special precautions for cathodically protected pipe: **Turn off rectifier.** Cathodic protection electrical currents will be interrupted by the separation of the pipe with possible spark ignition of any gas vapors that may be present. Attach a jumper wire on the piping so that electrical continuity will be maintained.
d. After repairs have been completed, remove the jumper wire, and wrap or coat all exposed bare steel pipe and valves before backfilling. **Turn rectifier back on.**

B. **Plastic Pipe** The affected section of pipe can be isolated using (2) "pinch tools". Slowly release the gas trapped in the isolated section through a partial opening to zero psig.

CAUTION: When releasing gas in an excavation, the escaping gas can displace the oxygen and can cause asphyxiation. Use a positive pressure respirator if you remain in the excavation during the de-pressurizing. Ensure the excavation has been thoroughly ventilated before resuming work.

CAUTION: When releasing gas ensure that no ignition sources are present, including clothing that might create a static buildup.

CAUTION: Welding or cutting on a pipeline containing a combustible mixture is prohibited.

CAUTION: Trench depth (29 CFR § 1926.651)
Excavation activities must not be conducted without ascertaining the location of all underground facilities that could be affected by the excavation. Each excavator must serve notice of intent to excavate to the One Call Center servicing the area in which the proposed excavation will occur.

5.11 PIPELINE MARKERS (Section 192.707)

A. Install a line marker over each buried main as close as practical to where the main crosses a public road, street or railroad; on aboveground lines where accessible to the public; or whenever necessary to identify the location of the pipe main to reduce the possibility of damage to the system. However, pipeline markers are not required for Class 3 and Class 4 locations that have a damage prevention program.

B. Markers are shown in the Decal Manual and are available through the Procurement Department. The District name and 24-hour telephone number is required on all markers. Marker warnings should be written legibly on a background with sharply contrasting colored letters and indicate "Caution" or "Danger" followed by the word "Gas." The dimensions of the characters on the line markers should be no less than 1 inch tall and ¼ inch stroke width.

5.12 VAPOR METER INSTALLATION (Section 192.357)

Install vapor meters in accordance with the AmeriGas Safety Manual.

5.13 SERVICE LINE VALVES (Section 192.365)

A. Use service line valves capable of being locked.

B. Install service line valves upstream of the regulator and vapor meter and outside of the building. When service line valves must be installed underground, they must be located in a covered durable curb box or standpipe that allows ready operation of the valve and is supported independently of the service line. Do not put stress on the service line with the weight of the box or standpipe.

C. Valves Other Than Cast Iron or Plastic (Section 192.145)
Each valve must meet the minimum requirements of American Petroleum Institute (API) 6D. Valves that meet this standard can be obtained through the Procurement Department, which will ensure that documentation is provided that demonstrates compliance with this OPS Requirement.

5.14 KEY VALVES (Section 192.747)

A. Key valves or critical valves are distribution line valves that are installed to shut down the entire system or to isolate sections of the system in an emergency or for service. Install one at the **outlet** of each high pressure regulator, and at any other location appropriate for isolating piping sections. All valves must be readily accessible.

B. To prevent a potential hazard, do not operate a key valve without the full understanding of its function. No valve should be opened where there is a pressure difference across the valve until the difference is fully understood and it is safe to open the valve.

C. Inspect and service each key valve, including the service valve on the storage tank(s) at least once each calendar year at intervals not to exceed 15 months. Ensure the handle is not "frozen," the valve is free from leaks, the valve is readily accessible and ground movement is not creating a shear force on the connections. If a valve is found to be defective, it should be repaired or replaced immediately. **Record the results on Form No. 5.**

D. **Maintenance on a key valve** usually includes operating the valve to verify that it is operable and does stop the flow of gas, as well as checking the valve for leakage. Appropriate repairs and replacements or adjustments must be made immediately.

5.15 MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) (Section 192.619)

A. Refer to **Appendix C** for formulas and sample calculations in determining the MAOP, and **Appendix C-1** for documentation of MAOP.

B. The high pressure lines should be operated at 10 psig or at a pressure that will maintain the required pressure in the distribution lines, but shall not exceed the MAOP.

C. For 2 psi or higher systems, follow NFPA 58, § 5.8.1.11, 2008 edition.

5.16 REGULATORS AND OVERPRESSURE PROTECTION (Section 192.739)

A. Regulators must be installed in accordance with the manufacturers' instructions, the AmeriGas Safety Manual, (AP No. 9.2), including installing the regulator so that the relief valve (vent opening) is positioned to prevent any dirt, rain, snow, ice, or other debris from entering.

B. With the following additional requirements:
   1) A two-stage system must be used.
   2) As protection against system failure, install two first-stage regulators with pressure gauges capable of reading in 2 psig increments in a series to serve the storage or manifolded tanks (commonly referred to as a "Monitoring Regulator System"). One of the regulators is to function as the primary and must be set at the required distribution pressure; the second is to serve as the backup and must be set at a pressure approximately 2 psig higher.

      Use regulators equipped with high capacity internal relief valves.

C. If the system is shut down for repairs or maintenance, all external relief valve devices currently installed in fixed piping systems must be replaced with a Monitoring Regular System if feasible.

D. Inspect each high pressure regulator at least once each year at intervals not to exceed fifteen (15) months, to determine its physical condition,

including the external surface, adjusting spring, vent opening, and the stability of its mounting. **Record the results of the inspection on Form No. 6.**

E. If external relief valves are used, inspect each external relief valve at least once each year at intervals not to exceed fifteen (15) months, to determine its physical condition, including the external surface and the stability of its mounting. **Refer to Appendix C-1 for inspection form.**

5.17 TESTING PIPING SYSTEMS 192.509,511,513

On new installations, and when repairs are made to an existing system, pressure tests must be performed on all lines before backfilling. The test should not be done at a pressure that would lower the current MAOP of the portion of the system already in use.

Each **steel main** to be operated at or above 1 psi (6.9 kPa) gage must be tested to at least 90 psi (621 kPa) gage.

Each segment of a **steel service line** intended to be operated at a pressure of at least 1 psi (6.9 kPa) gage but not more than 40 psi (276 kPa) gage must be given a leak test at a pressure of not less than 50 psi (345 kPa) gage.

Each **PE Main** and **Service Line** test pressure must be at least 150 percent of the maximum operating pressure or 50 psi (345 kPa) gage, whichever is greater.

5.18 PURGING (Section 192.629)

A. *Purging is the process of replacing the fuel gas in a pipeline with inert gas or charging a gas pipeline that is full of air with fuel gas and requires that a significant amount of combustible mixture not be developed within the pipeline or released into a confined space.* **NEVER USE OXYGEN FOR PURGING.**

B. Purge lines after installation or repair and before placing in operation. Any lines placed out of service should be purged according to this procedure.

C. Whenever a line is purged, take care to ensure that the purging medium is released into one end of the pipe in a moderately rapid and continuous flow to prevent a hazardous mixture of gas and air from forming within the pipe. If necessary, a slug of inert gas may be used to keep the gas and air from mixing. Also take care to ensure that a flammable mixture is not released within a confined space or near ignition points. Since complete purging may be of a short duration, do not leave the point of discharge unattended during purging.

D. When purging lines with a diameter of three inches or more, use an inert gas (nitrogen or carbon dioxide) to displace the air, then displace the inert gas with LP-Gas.

E. When gas piping in service is to be opened for additions, modifications or service, the section to be worked on shall be turned off from the gas supply at the nearest convenient point and the line pressure vented to the outdoors or to ventilated areas of sufficient size to prevent accumulation of flammable mixtures. The remaining gas in the section of pipe shall be displaced by inert gas.

F. When piping full of air is placed in operation, the air in the piping must be displaced with fuel gas, except where the piping is required by the Table below to be purged with an inert gas prior to the introduction of fuel gas. The air can be safely displaced with fuel gas, provided that a moderately rapid and continuous flow of fuel gas is introduced at one end of the line and air is vented out at the other end. The fuel gas shall be continued without interruption until the vented gas is free of air. *The point of discharge shall not be left unattended during purging*. After purging, the vent shall be closed. When required by the Table below, the air in the piping shall first be displaced with an inert gas, and the inert gas shall then be displaced by propane.

Nominal Pipe Size (inches)	*Length of Piping Requiring Purging (feet)*
3	>30
4	>15
6	>10
8 or larger	Any length

G. The open end of gas piping systems being purged shall not be discharged into confined spaces or areas where there are sources of ignition unless precautions are taken to perform this operation in a safe manner by ventilation of the space, control of the purging rate and elimination of all hazardous conditions. **Do not use PE as a discharge pipe!**

5.19 ODORIZATION

(See NFPA 58, 2008 edition § 4.2.3 and TRAINING GUIDE FOR OPERATORS OF SMALL LP GAS SYSTEMS, Chapter II Odorization page II-3)

The Company purchases only odorized gas for resale. Verify the presence of this odorant by "sniff testing" whenever gas is delivered to the bulk plant or when shipments bypass the bulk plant. The results of these tests must be recorded and located in the month end folder at the District.

5.20 ATMOSPHERIC CORROSION CONTROL

Includes ABOVEGROUND STEEL PIPE AND EQUIPMENT.

Properly prepare and paint all aboveground steel pipes and tanks exposed to atmospheric corrosion at time of installation. Inspect aboveground pipe and tanks at least once every three (3) years and repaint as necessary.. **Record inspection results on Form No. 11.**

5.21 CORROSION CONTROL - BURIED PIPELINES (Sections 192.455, 192.457, 192.459 and 192.463)

A. Steel pipe installed before July 31, 1971. Determine any areas of active corrosion by electrical or leak detection survey or other comparable means. Cathodic protection must be installed on areas of active corrosion.

B. Steel pipe installed after July 31, 1971. Wrap all pipe, using X-Trucoat or equivalent, or coat with bitumastic or equivalent. Coat all fittings. Properly apply the coating to ensure that it adheres to the metal surface sufficiently to prevent the entrance of moisture, and that it covers the metal surface completely with no "holidays". Inspect the coating before laying the pipe and backfilling to ensure there is no damage. Backfill with dirt or sand free from rocks or other material that could damage the coating.

C. Pipelines that show evidence of localized pitting or generally corroded areas must be repaired or replaced. Replacement steel pipe must also be coated and cathodically protected.

5.22 CATHODIC PROTECTION (Sections 192.455, 192.465, 192.471, 192.473)

A. Cathodically protect all steel pipe and tanks installed underground, in addition to the corrosion protection prescribed above, using anode bags or a rectifier system that will maintain a negative voltage of at least *negative* 0.85 volt, with reference to a saturated copper-copper sulfate half cell (Compliance with this requirement is not required if the Operator can demonstrate that a corrosive condition does not exist.) Cathodically protect tanks that are underground or mounded by including them in the protective system for the pipe, or isolate them with insulating fittings and protect them separately.

B. To establish test points on a system, an evaluation of the system should be done prior to setting-up the number of test stations. There must be a minimum of two test points per system or one test point for every 35 customers. The purpose of the test points is to enable the periodic determination of the adequacy of the cathodic protection through electrical measurements.

C. Test lead wires must be connected to the pipeline so as to remain mechanically secure and electrically conductive. Each test lead wire must be attached to minimize stress concentration on the pipe. Each bare test lead wire and bared metallic area at point of connection to the pipeline must be coated with an electrical insulating material compatible with the pipe coating. (Section 192.471)

D. Each impressed current type cathodic protection system or galvanic anode system must be designed and installed so as to minimize any adverse effects on existing adjacent underground metallic structures. (Section 192.473)

E. Consult a person or firm qualified in the field of pipeline corrosion control methods to determine the specific requirements and procedures for a system. All valid recommendations made by a contracted person or outside firm must be adhered to at the time of installation or subsequent inspections, whether performed by the contractor or in-house personnel.

F. Install an insulating fitting aboveground, upstream of the vapor meter, to isolate the protected underground piping. If aboveground storage tank(s) are used, install an insulating fitting when necessary to join dissimilar metals underground. DO NOT use a metal sleeve on a metal gas line.

G. A map for each system, showing the location of cathodically protected pipe, anode bags and test points, is to be maintained for as long as the system remains in service. **Use Form No. 3.**

H. Test cathodically protected systems for pipe-to-soil readings each calendar year, with intervals not exceeding 15 months. The readings should be at least *negative* 0.85 volts. **Record readings on Form No. 12 and retain for the Lifetime of the System.**

I. Inspect rectifier systems at least six times a year, with intervals not to exceed 2½ months. **Record results on Form No. 13 and Retain for Five Years.**

J. If readings are low, take corrective action. Two consecutive low readings are a violation of the OPS Regulations. For valid interpretation of the voltage measurement, voltage (IR) drops other than those across the structure-electrolyte boundary must be considered.

5.23 INSPECTION OF EXPOSED UNDERGROUND PIPE (Section 192.459)

Whenever any buried pipeline is exposed for any reason, inspect it for evidence of external corrosion. Where there is general or localized corrosion to the extent that leakage might result, repair or replace the pipe. Where corrosion has reduced the wall thickness to less than 30% of the nominal thickness, replace the pipe. Coat or wrap and cathodically protect any replacement or repaired pipe. **Record the results on Form No. 10 and Retain for the Lifetime of the System.**

5.24 INTERNAL INSPECTION OF PIPE (Section 192.475)

Whenever steel pipe is removed for any reason, inspect the internal surface for corrosion. If internal corrosion is found, investigate the adjacent sections of pipe to determine if there is internal corrosion. Where general corrosion or pitting is found and is such that leakage might result, replace the pipe in accordance with the section above. **Record the results on Form No. 10 and retain for the Lifetime of the System.**

5.25 ACCIDENTAL IGNITION OF GAS (Section 192.751)

A. Take precautions to minimize the danger of the accidental ignition of gas. When a hazardous amount of gas is being vented into the open air, each potential source of ignition must be removed from the area and a fire extinguisher must be provided. Consideration should be paid to possible pedestrian or vehicular traffic or other nearby hazards in areas where the presence of gas from leakage, purging or venting may constitute a hazard of fire or explosion. Use appropriate warning devices, signs and/or barricades, as necessary. Route traffic as far away from the area as practical. Use non-sparking tools and lights that are approved for hazardous locations.

B. Vent gas during maintenance, servicing or purging only after potential sources of ignition are removed and in accordance with NFPA 58. Use vertical stacks. Use a flare stack for a controlled burn, if appropriate. If it is necessary to release a potentially hazardous mixture in a pit or trench, ensure you have constant ventilation and that you have a fully operational CGI meter test before permitting work in the space. Ensure fire extinguishers are readily available.

C. Notify the local fire department when flaring or releasing more than minimal quantities of gas. It is also good public relations to notify residents and businesses in the area when the flaring would attract attention or concern from the public.

5.26 DEACTIVATION OF PIPELINE SEGMENTS TO CUSTOMERS (Section 192.727(d))

A. When service is discontinued to a customer, close the service line valve to prevent the flow of gas. Secure it with a locking device or other means designed to prevent the opening of the valve by unauthorized persons for the use or resumption of service. The customer's piping must be physically disconnected from the gas supply and open pipe ends sealed.

B. Periodically evaluate these discontinued service lines and take one of the following actions:

1. Abandon the service line at the main, using abandonment procedures; or
2. For permanent abandonment, see Section 5.27 of this Manual, below.

Document your actions on an SSO and file in the System Binder or file forever.

5.27 ABANDONMENT OR DEACTIVATION OF FACILITIES (Section 192.727)

When a gas main or service line is abandoned:

A. Each pipeline abandoned in place must be disconnected from all sources and supplies of gas and purged of gas and sealed at the ends. The pipeline need not be purged when the volume of gas is so small that there is no potential hazard.

B. Except for service lines, each inactive pipeline that is not being maintained, must be disconnected from all sources and supplies of gas and purged of gas and sealed at the ends. The pipeline need not be purged when the volume of gas is so small that there is no potential hazard.
C. Physically disconnect the pipeline from the piping system, not more than 24 inches from the main if feasible, vent it to the outdoors in a safe manner if feasible, and seal the ends with a plug or cap. Purge lines 2.5 inches or larger with nitrogen.
D. **Document all abandonment's on an SSO and file in the System Binder and keep on file forever.**

5.28 RESTORATION OF GAS SERVICE (Section 192.725)

Each disconnected service line must be tested in the same manner as a new service line before being reinstated. It must be pressure tested and leak checked. **Document your actions on an SSO**

5.29 USE AND INSTALLATION OF OTHER EQUIPMENT

Other equipment installed or used in a gas system, including, but not limited to, vaporizers, vapor meters and leak detectors, should be listed or approved by the authority having jurisdiction, and installed and operated in accordance with the manufacturer's instructions, AmeriGas Policies and Procedures and the authority having jurisdiction.

5.30 MANUFACTURERS' LITERATURE

Manufacturers' literature, including, but not limited to, specifications and installation and operating instructions, shall be maintained for all equipment installed and serviced in the gas system.

5.31 CONTINUING SURVEILLANCE (Section 192.613)

A. Each District must develop a procedure to ensure that there is a continuing surveillance of each jurisdictional system for which it is responsible to determine and take appropriate action concerning failures, leakage history, corrosion, substantial changes in cathodic protection and other unusual operating or maintenance conditions. This surveillance can be accomplished by training employees to be alert when on-site for any unusual or potentially unsafe conditions and by a periodic review of the inspection and test records of the jurisdictional system.

B. Segments of pipelines that may become unsafe must be replaced, repaired or removed from service. If any segment of the system is determined to be in an unsatisfactory condition, but no immediate hazard exists, initiate a program with specific time lines to recondition, replace, repair or phase out the segment.

5.32 PATROLLING AND INSPECTION (Section 192.721)

A. The frequency of patrolling each jurisdictional system must be determined by the severity of the conditions which could cause failure or leakage, with the consequent hazards to public safety.

B. If there is a condition in the area of the system where anticipated movement of the pipeline could cause failure or leakage (for example, weight from construction, area prone to wash-outs and the like), then the pipeline must be periodically patrolled until the condition no longer exists. The frequency of the patrolling must be determined by the severity of the condition which could cause failure or leakage and the consequent hazards to safety, but no fewer than four times each calendar year in a business district.

C. At a minimum, patrol mains located in residential areas where the piping may be subject to potential damage by ground movement, loss of support or vehicular damage at least two times per year, at intervals not to exceed 7½ months, by walking along the pipeline and observing factors that may affect the safe operation of the pipeline system. Patrolling may be done in conjunction with a leakage survey or as meters are read. Include the following in your inspection:

1. External corrosion of aboveground pipe;
2. The general condition of regulators and meters;
3. Whether line markers are properly displayed;
4. Determine if any construction or excavation that might affect the pipeline is taking place in the immediate area;
5. The condition of the valves and fittings on an aboveground tank, to include ensuring there are no combustibles or flammables with 10 feet;
6. The condition of the valves and fittings in an underground tank dome, including whether there is proper dome drainage; and
7. **Record the results on Form No. 8.**

5.33 LEAKAGE SURVEY (Section 192.723)

A. Leakage surveys must be scheduled as frequently as necessary with due regard to the nature and age of the system and local soil conditions, but at intervals not to exceed five years. If all or part of the system is located in a business district, a gas leakage survey must be conducted at least once every year not exceeding 15 months. You must do a subsurface type of survey when using gas detection equipment to perform the survey such as a CGI (Combustible Gas Indicator) or FI (Flame Ionization Unit)

B. The procedure for using a pressure drop test to prove the integrity of the pipeline is as follows: If you have any drop in pressure, you must do a subsurface survey using a CGI meter. The drop in pressure tells you that you have a leak, but does not tell you the location of the leak. If using a pressure drop test, the pressure during the test should be at least equal to the operating pressure, the time for the test medium to become temperature stabilized and the sensitivity of the instrument being used. The AmeriGas test block gauge method is acceptable.

The leakage survey is to include, but not be limited to, the following:

1. Manhole and catch basin survey. The atmosphere in manholes providing access to gas, electric, telephone, sewer and water systems, curb boxes; catch basins; cracks in surfaces of roadways or sidewalks and other locations providing an opportunity for finding gas leaks.

2. Building survey. The atmosphere in or near cracks in building walls, floors, foundation, floor drains and service line entrances.

3. Distribution mains, service lines and riser survey. A bar hole probe shall be made adjacent to these lines with the test of the atmosphere in the hole. Each riser shall be probed and tested.

4. Vegetation survey. The condition of vegetation above and adjacent to mains, service lines and risers shall be visually inspected for signs of gas leakage. Conduct a bar hole probe where there are signs of possible gas leakage as evidenced by brown or wilted vegetation, leafless trees, etc.

5. **Record results on Form No. 9** (See Appendix A for additional information regarding Leakage Surveys.)

5.34 MAINTENANCE SCHEDULE

Maintain a 12-month schedule of maintenance, tests and inspections required, similar to your vehicle preventive maintenance schedule. The schedule should be posted and available to all personnel involved, especially those who are OQP qualified. To determine the adequacy of existing procedures, documentation evidencing the work performed (such as Sales and Service Orders) must be reviewed by the Sales & Service Manager or District Manager to ensure compliance, adequacy of the work performed and correctness.

5.35 PROCEDURES FOR START-UP AND SHUT-DOWN (Section 192.605)(b)(5))

Shut-down: A system shut-down shall occur at the container(s) shut-off valve(s), or other key valves that are located upstream of a pressure regulating device and/or overpressure protection device.

1. Shut off main tank valves to discontinue source of supply.
2. Locate and repair or replace damaged section of pipeline.
3. If necessary purge system as required, see Sections 5.18 and 5.28 of this Manual.
4. Document and record the customers that were affected by the shut-down.

Start-up: The start-up must be performed in a manner that is designed to assure operation within established pressures (the MAOP limits). No propane shall be introduced into a distribution line unless high pressure (or first stage) and final stage regulators, as well as overpressure protection devices (if required) are installed in the piping.

1. Lock off all lock-wing valves at meter locations.
2. Re-pressurize gas line.
3. Check repaired or replaced sections of piping to ensure that it is leak free by conducting a pressure test and test for leakage.
4. Refer to AmeriGas Safety Manual for appliance lighting.

5.36 PERIODIC REVIEW AND QUALIFICATION OF PERSONNEL (192.605)(b)(8)

A. Refer to the Operator Qualification Program (OQP) (OP-202-B-1) section on Pipeline Operator Qualification File.

B. During the annual review of the OPS Operating & Maintenance Manual and OQP materials, employees are encouraged to give feedback and input on any issues in the Program. Upon collection of this feedback/input from the employees, the Operator Qualification Committee will annually review the feedback and determine if changes need to be made to the Program, including this Manual or other documents used for compliance with the Pipeline Safety Regulations.

OAHU GAS SERVICE

An AmeriGas Company
91-290 HANUA STREET
KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE OTHER: COST

WORK ORDER NUMBER: 49084

SERVICE REQUESTED BY: Pipe Line Safety

ORDER TAKEN BY: BK DATE: — TIME: — ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER: Post Sq.to

PHONE:

SERVICE LOCATION: Ewa Beach

SERVICE REQUESTED: Remove vapor meter

(1)

SERVICE PERFORMED: Remove Vapor Gas Meter
Ser# 9747725O3 at 5538 CF
Out of Service
(2) Inspect Listed parts
OK
(3) Perform Leak check
OK
(4) Rep relight pilot flame OK
(5) Check main burner OK

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
3-7-11	1330	1600	2.5	AC	120.00	300.00

LABOR TOTAL 300.00
SELL PRICE

QUAN.	PART NUMBER AND DESCRIPTION		PRICE	AMOUNT
1	Hon Tru 1	HTHP1666-30	15.04	15.04
1	1st Stage	R622H SGS	57.84	57.84
3	3/4 Elbow	EL1300 0050	13.18	39.54
1	3/4 x [illegible] Gal Pipe	PIP30-0170	1.60/FT	6.72
2	3/4 x 2" Nipple	NP140 .0070	1.68	3.36
1	2" x 3/4 Bushing	BU1300 1540	9.72	9.72
100				
1	3/4 Gal Union	UN-1300-1840	10.50	10.50
1	3/4 x 3 1/2 Gal Nipple	NP140-0500	1.62	1.62

REGULATOR MFG: Fish MFG DATE: 8-10
REG. TYPE: R622H SGS
TANK SIZE: NUMBER: FUEL %

WARRANTIES:
The only warranties applying to this part(s) is that offered by the manufacturer. The selling dealer hereby expressly disclaims all warranties, either expressed or implied including any implied warranties of merchantability or fitness for a particular purpose and neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of these parts. Buyer shall not be entitled to recover from the selling dealer any consequential damages, damages to property, damages for loss of use, loss of time, loss of profits or income or any other incidental damages.

USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: [signature] DATE: 3-7-11

REVIEWED BY: [signature] DATE: 3/8/11

PART TOTAL	144.34
SUBTOTAL	$444.34
SALES TAX	20.94
TOTAL	$465.28

ACCOUNTING COPY

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☐ CASH ☐ CHARGE OTHER: COST

WORK ORDER NUMBER 49079

SERVICE REQUESTED BY: Pipe Line Safety

ORDER TAKEN BY: BK DATE: — TIME: — ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER: Restaurant Sato

PHONE:

SERVICE LOCATION: Ewa Complex

SERVICE REQUESTED: remove Vapor gas Meter
Install 124 gal Tank
0

SERVICE PERFORMED: Set 124 gal Tank
at Location on Foundation blocks

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
3-2-11	1115	1215	1	AK		120.00

LABOR TOTAL 120.00

QUAN.	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT	
	PC #112000			
52	gal propane → will charge customer separate			
2	6x6x30 blocks 050630	25.28	50	56

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: 124 NUMBER: A-101 FUEL %: 0%

PART TOTAL	50	56
SUBTOTAL	170	56
SALES TAX	8	04
TOTAL	178	60

ACCOUNTING COPY

WARRANTIES:
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USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: _____ DATE: _____

REVIEWED BY: _____ DATE: 3/8/11

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☐ CASH ☐ CHARGE OTHER: COST

WORK ORDER NUMBER 47331

SERVICE REQUESTED BY: Keri

ORDER TAKEN BY: OGS - Dept

DATE: —

TIME: ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER:

Maile Center

PHONE:

SERVICE LOCATION: Wanaku Ti, Waianae

SERVICE REQUESTED: remove LPG Vapor meter

SERVICE PERFORMED: upon arrival, perform peep, meter reading, proceed to remove GAS meter at rear of building, Meter use was formally T.C bakery disconnect incomming and out going piping at meter, Make sure gas is off at ball Valve, Secure incoming & outgoing piping with pad locks Check for leaks, No leaks. meter Info — Ser # P022439 Register # 3120

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
10-21-10	1245	130	.75	T.T.		

LABOR TOTAL 121.50

QUAN.	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: NUMBER: FUEL %

PART TOTAL —
SUBTOTAL 120 00
SALES TAX 5 65
TOTAL 125.65

WARRANTIES:
The only warranties applying to this part(s) is that offered by the manufacturer. The selling dealer hereby expressly disclaims all warranties, either expressed or implied including any implied warranties of merchantability or fitness for a particular purpose and neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of these parts. Buyer shall not be entitled to recover from the selling dealer any consequential damages, damages to property, damages for loss of use, loss of time, loss of profits or income or any other incidental damages.

USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: _____ DATE: _____

REVIEWED BY: _____ DATE: 10/21/10

ACCOUNTING COPY

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91-290 HANUA STREET
KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE OTHER: COST

WORK ORDER NUMBER 47241

SERVICE REQUESTED BY: Pipe Line Safety

ORDER TAKEN BY: BK DATE: TIME: ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER: West Ridge

PHONE:

SERVICE LOCATION: West Ridge

SERVICE REQUESTED: Install Plastic gas line into 3" Steel Pipe

SERVICE PERFORMED: Install Listed parts good perform gas check at 20 PSI for 30 min good check Lock-in at regulator at 4 PSI for 10 min set gas pressure into building at 5 PSI good remove temporary hose at regulator

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE (SELL PRICE)	AMOUNT
8-3-10	945	245	5 x 2 min	T.T. NIC	120.00	1,200.00
8-4-10	730	230	7 x 2 min	T.T. NIC	120.00	1,680.00
8-5-10	1230	1245	.25 x 2 min	T.T. NIC	120.00	60.00
					LABOR TOTAL	2,940.00

QUAN.	PART NUMBER AND DESCRIPTION		PRICE	AMOUNT	
1	3x2 Bell Bell Reducer		9.46	9	46
1	2x3½ nipple	NP-1410-0890	2.60	2	60
~~1~~	~~2" [illegible] Elbow~~				
2	2" CD	NP1420-0890	5.00	10	00
6	2" Elbow	EL1300-0910	13.22	79	32
1	2" x 37 ft gas pipe	PI-4	3.16/FT	116	92
2	2" TEE	TE1300-0390	24.82	49	64
3	2x5 nipple	NP1410-0920	7.02	21	06
2	2x3½ nipple	NP-1420 0890	2.60	5	20
1	1803 Regulator				
4	2x4 nipple	NP-1420-0890	2.60	10	40

(note) on 1803 regulator replace spring for 165 regulator

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: NUMBER: FUEL %

PART TOTAL	304	60
SUBTOTAL	3,244	60
SALES TAX	152	89
TOTAL	3,397.	49

WARRANTIES:
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USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: DATE:

REVIEWED BY: [signature] DATE: 8/18/10

OF0753-Ma 08/05

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91-290 HANUA STREET
KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE — OTHER: COST

WORK ORDER NUMBER 47242 P

SERVICE REQUESTED BY:

ORDER TAKEN BY: DATE: TIME: ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER: West Ridge

PHONE:

SERVICE LOCATION: West Ridge

SERVICE REQUESTED: Install plastic 90s Piping Throug 3" Steel

SERVICE PERFORMED: p/n Barricade and Return back to safe system

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
8-5-10	1000	1030	5	HC	120.00	60.00

LABOR TOTAL 60.00

QUAN.	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT
1	Bill Reduce	9.46	9.46
1		2.60	2.60

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: NUMBER: FUEL %

PART TOTAL	—
SUBTOTAL	60.00
SALES TAX	2.83
TOTAL	62.83

WARRANTIES:
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USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: DATE:

REVIEWED BY: [signature] DATE: 8/18/10

OF0753-Ma 08/05

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KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE OTHER: POST

WORK ORDER NUMBER 47303

SERVICE REQUESTED BY: Neal

ORDER TAKEN BY: OGS DATE: 8-5-10 TIME: ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER: West ridge

PHONE:

SERVICE LOCATION: Aiea

SERVICE REQUESTED: remove tank

SERVICE PERFORMED: prep 575 tank info on tank listed below at bottom right of page, check leak test, no leaks, load 2 of 2 tanks onto boom truck, post work proceed to return tank to OGS,

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
8-5-10	10:00	12:45	75	T.T.		

LABOR TOTAL 120.00

QUAN.	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: 575 NUMBER: 697 FUEL % 20

PART TOTAL	—
SUBTOTAL	120.00
SALES TAX	5.65
TOTAL	125.65

CUSTOMER: Not returned DATE:

REVIEWED BY: [signature] DATE: 8/18/10

WARRANTIES:
The only warranties applying to this part(s) is that offered by the manufacturer. The selling dealer hereby expressly disclaims all warranties, either expressed or implied including any implied warranties of merchantability or fitness for a particular purpose and neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of these parts. Buyer shall not be entitled to recover from the selling dealer any consequential damages, damages to property, damages for loss of use, loss of time, loss of profits or income or any other incidental damages.
USED MERCHANDISE HAS NO WARRANTY.

OF0753-Ma 08/05

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91-290 HANUA STREET
KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE OTHER: ☐ COST

WORK ORDER NUMBER 47302

SERVICE REQUESTED BY: Service Dept

ORDER TAKEN BY: DG | DATE: 8-5-10 | TIME: ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER:

West ridge

PHONE:

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
8/5/10	815	900	.75	T.T.	120.00	120.00

LABOR TOTAL 120.00

SERVICE LOCATION: Aiea

SERVICE REQUESTED: remove Tank

SERVICE PERFORMED: Prep 575 tank, into listed below at bottom right of page - check leak test, no leaks, load 1st of 2 575 tank onto boom truck. perform put check work primary tank back to OG's

QUAN.	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: 575 NUMBER: G-108 FUEL %: 20

PART TOTAL	—
SUBTOTAL	120 00
SALES TAX	5 65
TOTAL	125.65

WARRANTIES:

The only warranties applying to this part(s) is that offered by the manufacturer. The selling dealer hereby expressly disclaims all warranties, either expressed or implied including any implied warranties of merchantability or fitness for a particular purpose and neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of these parts. Buyer shall not be entitled to recover from the selling dealer any consequential damages, damages to property, damages for loss of use, loss of time, loss of profits or income or any other incidental damages.

USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: NO, Need. DATE:

REVIEWED BY: DATE: 8/8/10

OF0753-Ma 08/05

OAHU GAS SERVICE

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91-290 HANUA STREET
KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE OTHER: COST

WORK ORDER NUMBER 47234

SERVICE REQUESTED BY: DOT Pipe Line Safty

ORDER TAKEN BY: BK DATE: / TIME: / ☐ AM ☒ PM

SOLD TO

ACCOUNT NUMBER: 199022 West Ridge

PHONE:

SERVICE LOCATION: Aiea

SERVICE REQUESTED: install plastic gas piping

SERVICE PERFORMED: SET STS at Location using Listed Parts

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
7-23-10	11:45	1:45	1x2 min	AK, SET	120.00	240.00

LABOR TOTAL 240.00

QUAN.	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT	
2	6x6x30 ~~[illegible]~~ 30			
	~~[illegible]~~ 30 OSCB 30	25.28	50	56

REGULATOR MFG: MFG DATE:

REG. TYPE: serial #225382

TANK SIZE: STS NUMBER: PT-106 FUEL %: 0

PART TOTAL	50	56
SUBTOTAL	290	56
SALES TAX	13	69
TOTAL	304	25

WARRANTIES:
The only warranties applying to this part(s) is that offered by the manufacturer. The selling dealer hereby expressly disclaims all warranties, either expressed or implied including any implied warranties of merchantability or fitness for a particular purpose and neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of these parts. Buyer shall not be entitled to recover from the selling dealer any consequential damages, damages to property, damages for loss of use, loss of time, loss of profits or income or any other incidental damages.

USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: DATE:

REVIEWED BY: [signature] DATE: 8/18/10

OF0753-Ma 08/05

OAHU GAS SERVICE

An AmeriGas Company
91-290 HANUA STREET
KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE OTHER: COS

WORK ORDER NUMBER 46962

SERVICE REQUESTED BY:

ORDER TAKEN BY: Neal DATE: 1-22-10 TIME: ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER: 199022

Westridge

PHONE:

SERVICE LOCATION: Ewa City

SERVICE REQUESTED:

SERVICE PERFORMED:

Set one ~~555~~ 515 tank
with 2 6x6x3 foot pads

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
1-22-10	145	245		LW/Neal	1	120.00

LABOR TOTAL 120,00

QUAN	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT	
1pc	515 tank G-91 → (OGS owned)			
2pc	6X6X30 footpad	25.28	50	56

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: 515 NUMBER: serial 229800 G-91 FUEL % 0%

PART TOTAL	50	56
SUBTOTAL	170	56
SALES TAX	8	04
TOTAL	178.	60

TOTAL INSTALLED

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USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: _____ DATE: _____

REVIEWED BY: _____ DATE: 1/27/10

ACCOUNTING COPY

OAHU GAS SERVICE

An AmeriGas Company
91-290 HANUA STREET
KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE OTHER: COST

WORK ORDER NUMBER 47235

SERVICE REQUESTED BY:

ORDER TAKEN BY: DATE: TIME: ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER: West Ridge

PHONE:

SERVICE LOCATION: Aiea

SERVICE REQUESTED: Install plastic gas piping

(1) Set barricades at location

(2) Fill with water

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
7-22-10	830	1000	1.50x2 min	HK, CPY	120.00	180.00
7-22-10	1130	1200	.5x2 min	HK, TCT	120.00	120.00
					LABOR TOTAL	300.00

QUAN.	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT
3	barricade	$14.00	126.00
	Barricades rental from safety systems		

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: NUMBER: FUEL %

PART TOTAL	126.00
SUBTOTAL	426.00
SALES TAX	20.07
TOTAL	446.07

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USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: DATE:

REVIEWED BY: [signature] DATE: 7/27/10

OF0753-Ma 08/05

OAHU GAS SERVICE

An AmeriGas Company
91-290 HANUA STREET
KAPOLEI, HAWAII 96707-1783
TEL: (808) 682-5796 FAX: (808) 682-3872

☐ CASH ☐ CHARGE OTHER: COST

WORK ORDER NUMBER 47218 J

SERVICE REQUESTED BY: Pipeline Safety

ORDER TAKEN BY: BK DATE: TIME: ☐ AM ☐ PM

SOLD TO

ACCOUNT NUMBER: West Oahu

PHONE:

SERVICE LOCATION: West Oahu

SERVICE REQUESTED: Install plastic pipe into Steel Pipe

SERVICE PERFORMED: Install 2" Pipe Plastic into 3" Galvanize Steel pipe 7001

(2) Install Cast Iron Type Valve Location to Building

(3) Remove all Existing Union and Pipe fitting

DATE	TIME IN	TIME OUT	HOURS	SERVICE PERSON	RATE	AMOUNT
7-12-10	1115	315	4 1/2 HRS	AE, TT	120.00	960.00
7-28-10	730	330	8 HRS	AE, LM	120.00	1,920.00
7-28-10	1030	330	5 1/2 HRS	TT, BK	120.00	1,200.00
7-29-10						
7-30-10	930	200	4.5 x 2 MN	AK, LM	120.00	1,080.00
					LABOR TOTAL	5,160.00

QUAN.	PART NUMBER AND DESCRIPTION	PRICE	AMOUNT
1	2" Tee PFS	39.77	79 44
2	2" x 20' Plastic Pipe PE2000WK Z150WM45	2.0/FT	466 20
1	2" x 45° Elbow		
3	2" Union Union LM 1310 Z150XMMD	29.12	87 36
2	2" Ball Valve 414W420C	61.76	123 52
	VV08 FF2-200		
	(Note) on 7.28-10		
	Lock Check With Chk 2PSL		
	Tag 3 days 7001		

REGULATOR MFG: MFG DATE:

REG. TYPE:

TANK SIZE: NUMBER: FUEL %

PART TOTAL	756 52
SUBTOTAL	5916 52
SALES TAX	278 79
TOTAL	6,195 31

CUSTOMER COPY

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USED MERCHANDISE HAS NO WARRANTY.

CUSTOMER: DATE:

REVIEWED BY: DATE: 8/18/10