

# Appendix A-1

## **PGW – Operational Steps Taken Subsequent to the Torresdale Incident and/or at the Request of the PUC Gas Safety Division**

1. PGW has re-qualified all work crews as to PGW's procedures for not entering a building when more than 40% LEL is discovered inside the building.
  - (a) In the first quarter of 2011, existing Distribution Department Bulletin #212 was revised.
  - (b) PGW emergency responders and field supervisors were re-trained and re-qualified (June 2011) regarding building evacuation and ventilation when atmospheric gas detection instruments reveal readings of 40% or greater LEL, i.e. a 2% or more concentration of natural gas in the atmosphere. PGW personnel are also regarded as evacuees and may not re-enter the property until it is safe.
  - (c) PGW emergency responders and field supervisors were re-trained and re-qualified (June 2011) on Emergency Response and the revised Distribution Department Bulletins.
- Supporting Documentation:
  - (a) Bulletin 212.
  - (b-1) June, 2011 Training Agenda;
  - (b-2) Training Schedule;
  - (b-3) June 2011 Training Summary;
  - (b-4) Field Operations Sign-In Sheets;
  - (b-5) Distribution Sign-In Sheets;
  - (b-6) Field Services Sign-In Sheets;
  - (b-7) Field Operations Sign-In Sheets (follow-up training).
  - (c) See Items (b-1) – (b-7).
- Cross-References: Prayer for Relief at ¶¶ (c), (o);  
Joint Petition For Settlement (“Settlement”), ¶ 23(a).

1(a)



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**LEAK RESPONSE AND INVESTIGATION  
PROCEDURE**

Effective April 21, 2011

Bulletin Number #212  
Dated September 15, 2008

**I. Purpose**

To provide clear direction to PGW employees when they are responding to and investigating an odor complaint. Odor complaints may originate from the police or fire departments, other utilities, contractors, customers or the general public. Odor complaints must be investigated promptly. Any delay in responding to a reported odor complaint must immediately be brought to the attention of the Dispatcher on duty.

If the investigation reveals a gas leak, the leak must be evaluated and action taken in accordance with the guidelines outlined in this procedure. All leak indications must be investigated to identify any potential hazardous conditions. Once a hazardous condition is identified, immediate action must be taken to make conditions safe. **Action must be taken toward protecting people first and then property.**

The employee assigned to the investigation must assume (for any odor complaint investigation) that a hazardous condition exists. Only after an odor complaint investigation is completed shall an operator determine an appropriate classification.

**II. Definitions**

- AREA CHECK – The appropriate area to investigate the original reported odor complaint. This is determined by the nature of the notification (phone call) and the investigation itself. **Minimum** coverage should be 50 feet in all directions (approximately three row houses each way) from the odor complaint or any reading.
- BAR HOLE – a 1” diameter or larger hole probed into the ground in a uniform manner with the use of a steel bar. The depth of each bar hole should be along side and near the bottom of the structure (gas main or service line) being checked. All bar holes should be made in a uniform manner.
  - ◇ PURPOSE OF BAR HOLES – used to sample gas/air mixtures underground in an attempt to pinpoint the largest concentration of natural gas and the source of the leak.
- BUILDING LINE – the extended house line from the side of a building.
- CGI – Can’t Get In
- CURB LINE – The outside edge of the curb, where the curb meets the street. A directional identification must be noted on each curb line measurement. (Example: EWC = east of the west curb line)
- ENN – Entry Not Necessary; see section “III.B.1. What buildings must be checked?” (The use of the ENN rules does not apply to FSD technicians that are not qualified. The only FSD technicians qualified are “A” men and above.)



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- FFW – Generally means “Front Foundation Wall”. However, for a leak investigation the term also means to check “ALL APPROPRIATE BASEMENT WALLS”, all walls where a gas main (outside) may run adjacent to the building (not only the front wall).
- FIRST RESPONDER – term used to describe the first trained responder to arrive on scene of an emergency, accident, natural or human-made disaster, gas leak, fire or similar event. Such people may be PGW personnel, firefighters, police, other law enforcement or emergency medical services, or lay rescuers to deal with the situation and protect life and property.
- GABLE END – where the end (side) wall of a building does not connect to another building. On all reports that a gable end is indicated the direction of the gable end must also be recorded, example: a single dwelling on a north-south street shall have the address recorded and gabled end to the north and south. See example drawings.
- GDI – Gas Detection Instrument
- GENERAL ATMOSPHERE - is an open area within a room on any floor of a property. The general atmosphere is not behind a wall, in the corners of a room, between or against walls, floors, or in the area of the ceiling joist, or close to the FFW.
- INCIDENT COMMAND CENTER – a designated location used to coordinate activities and share information.
  - ◇ INCIDENT COMMAND LOCATION - ON SCENE – The location of the highest ranking PGW employee responsible for all activities at the job site.
- LOWER EXPLOSIVE LIMIT (LEL) – Lowest concentration (percentage) of gas in air needed for the gas to ignite when given an ignition source. Concentrations lower than LEL are “too lean” to burn. 5% gas in air is the LEL of PGW gas.
- “M PACT” BAR HOLE – a ¼” to 1” diameter hole probed into the ground in a uniform manner with the use of an insulated “M Pact O” tool. The depth of each bar hole should be approximately 14” deep but not to exceed 18”.
  - ◇ PURPOSE OF “M PACT” BAR HOLE – used to sample gas/air mixtures underground to determine if a gas leak exists on a natural gas facility and to determine the gas migration pattern if a leak exists.
- MIGRATION – the area of natural gas movement from and around the source of the leak.
- MIGRATION LIMITS – the outer boundaries of natural gas movement in all directions. A circle of “zero readings” around a migration pattern is necessary to establish the migration limit.



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- **ODOR COMPLAINT** – a report of a possible inside or outside gas odor, leak, explosion or other hazardous conditions which may involve gas pipelines, or other gas facilities, customer’s house piping, or appliances. All odors must be confirmed using a GDI.
- **OPERATOR** – a PGW Operations’ representative – technician, foreman, supervisor, etc.
- **ONE HOUSE CHECK**— a term used during a declared foreign odor allowing the technician or foreman to make a limited check for safety. Job must be within the area affected from the foreign odor. Permission must be obtained through the dispatcher or supervisor. See “Foreign odor” in “III.A. General Requirements” below.
- **OUTSIDE SOURCE** – (who calls in an odor) a PGW employee, other utility, police or fire personnel, contractors, customers and the general public.
- **PPM GDI GAS READINGS** – samples of the atmosphere taken with a parts per million (PPM) gas detection instrument. Any **INSIDE** reading qualifies as a reading and requires a physical action. An **OUTSIDE** reading of 2% LEL or higher is required in order to qualify as a recordable reading.
- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.
- **READING** – a repeatable deviation on a GDI or equivalent expressed in % LEL & % Gas scales.
- **SAFETY PERIMETER** – The boundary of an area outside of the influence of the leaking gas. Also known as a Collapse Zone by the Philadelphia Fire Department.
- **SUSTAINED READING** – a gas reading found after a bar hole or structure has been opened and is allowed to stabilize or ventilate. **NOTE:** This reading should be recorded on the final report.
- **UNIFORM MANNER** – all bar holes shall be spaced evenly and have the same size and depth.
- **UPPER EXPLOSIVE LIMIT (UEL)** – At concentrations above the UEL the gas has displaced so much air that there is not enough oxygen for the gas to burn. When readings are above the UEL, be aware that the gas concentration will come down though the explosive limit of gas when the source of the gas leak is removed or through ventilation. 15% gas in air is the UEL of PGW gas.
- **VENTILATE** – This term, when used in reference to buildings, structures, manholes and confined spaces, means the introduction of fresh air into the affected structure. Ventilation can be accomplished by opening doors and windows, breaking windows, opening basement grates, and removing manhole covers or lids to prevent or reduce the level of natural gas in the affected structure. This term, when used in reference to gas readings underground, means to draw residual natural gas from below the surface with the use of pneumatic mechanical devices.



**III. Procedure**

**A. General Requirements**

- **ACTION MUST ALWAYS BE TAKEN TOWARD PROTECTING PEOPLE FIRST AND THEN PROPERTY.**
- **All requirements listed throughout this procedure represent minimum requirements and are not meant to limit the Operator in making decisions where experience, safety and common sense indicates otherwise.**
- **All employees responsible for conducting leak investigations must be qualified per PGW Operator Qualification Plan.**
- Employees must wear all required personal protection equipment per PGW Policies.
- Odor complaints are to be dispatched promptly regardless of their source.
- Any delay in arrival to the location of the complaint must be reported to the Dispatcher immediately.
- Conduct all odor complaint investigations as if a hazard exists until it is determined otherwise. Determine the extent of the hazard (leak) by making appropriate GDI checks, observations and tests.
- Review all information given on the order.
- If possible, enter all buildings through the main entrance.
- If available, interview the caller for relevant information.
- If during the initial leak investigation it is determined that a hazard exists, call the Dispatcher immediately providing details of the existing hazard.
- **Mobile phones must be turned off before entering properties for the leak investigation.** All communications must be conducted outside in a natural gas free atmosphere.
- If you suspect that the source of the leak involves any portion of PGW’s system that would require a Pressure Operation, notify Dispatching immediately.
- Foreign Odors - on a wide spread foreign odor incident, when instructed by a Dispatcher or Supervisor, the leak investigation can be limited to one premise and a check of structures (boxes) directly outside that premise (“one house check”, see definitions). If gas readings are discovered follow the complete leak investigation procedure.
- Leak indications may come from sources other than natural gas (marsh gas, gasoline spills, etc.).
- If there are other “First Responders” agencies (PFD, PPD) on location, discuss with them as to their actions already completed and any findings of their investigation.
- Immediately establish a communications chain to share pertinent information with all PGW Fire Responders and any other First Responder agencies.



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1. Forced Entry

Upon the initial visit, if any house that requires a leak investigation per this procedure is apparently locked and secure and it is not possible to gain entrance, make an exterior examination. Examine at the basement windows, mailbox or any other place where an indication of the inside atmosphere may be sampled. If an odor or reading of gas is detected coming from a premise either from outside that premise or from an adjoining property, make forcible entry through a window or a door.

- If a forcible entry is required, inform the Dispatcher. The Dispatchers will call 911. Give the Dispatcher the address of every house(s) requiring forced entry.
- Do as little damage as possible.
- During normal business hours notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6532 (voice mail).
- Sign and leave Form #6489 to inform the customer that it was necessary for PGW to enter the premise.
- Complete a detailed Accident Report (Form 119) and submit it at the end of your shift.

2. Chain of Command – Incident Command Center

When **both Distribution and Field Services *union-covered personnel*** are on location, the **Distribution Foreman is in charge and responsible** for following all procedures, directing make safe procedures and then continuing the investigation.

A Field Service Department Supervisor or Distribution Department Supervisor has the authority to supersede the Distribution Foreman.

When **both Distribution and Field Services *supervision*** are on location of a leak investigation, the highest ranking **Distribution Supervisor is in charge**.

All actions will be communicated and coordinated through the person in charge. If there is a change of the person in charge; relay all pertinent information to the person taking control on the job site, then announce the change to key personnel.

As additional PGW personnel arrive they should report to the person in charge who will provide instructions and a summary of current conditions and actions taken as well as any actions underway.

PGW Incident Command Center will be where the person in charge is located. If there are other agencies on location (PFD, PPD) that have the ultimate responsibility for the event (i.e., PFD at fire or explosion), the PGW person in charge will coordinate all actions and findings through that agency's Incident Command Center. Once PGW reports to the location of the





controlling agency's command center, PGW must maintain continuous representation at that location.

3. Dispatching Resources Available:

- Distribution Crew(s)
- FSD Technician(s)
- Emergency Grease Equipment
- Cut-Cap Trailer
- Excavation Equipment including Vacuum Excavation truck
- FSD and/or Distribution Supervision
- Pressure Force Supervision and Crews
- Police or Fire Departments through 911 to assist (evacuations, safety perimeter, traffic control, public safety, etc)
- PECO
- PWD
- Notification or dispatching of Supervisory Chain of Command.

4. Odor

If during the course of an investigation a gas odor is detected, the source must be confirmed as soon as possible using a GDI instrument. The course of action may include further migration checks and eventual classifying of the leak. If required, request assistance immediately through the Dispatcher if the odor appears to be coming from inside a building.

B. Inside Leak Investigation (on any odor complaint, inside or outside)

1. What Buildings Must Be Checked (See attached illustrations of this procedure)

- Check the premise closest to the odor complaint. If the odor complaint was reported by a passerby, concentrate on the premise closest to the reported odor.
- If a **reading or odor is found inside** the first premise and the source is suspected from any Distribution facility (mains and services) or another building, the adjoining building(s) must be checked. (Note: in the case of a twin house (gable end) property, the unattached house must be attempted to be checked but can be considered for Entry Not Necessary (see section B.4., and see illustrations).
- Continue to investigate adjoining buildings until no gas reading is found.
- If **no reading or odor is found inside** the initial premise, attempt to enter and check properties on either side. These properties may be considered for "Entry Not Necessary" (See Section B.4.).



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A building must be checked when a reading is found within 5 feet of the building, including the side of the building (Distribution also required).

- A building must be checked when a reading is found inside the curb line in front of the premise and a bar hole cannot be made within 5 feet.
- A building must be checked when a vent box reading is found in front of the premise, (Distribution also required).
- A building must be checked when there is a reading over the service and the service is steel installed in 1975 or before (older).
- Considerations should be made to check additional properties when there is wall to wall paving or frost conditions.

## 2. Performing The Inside Leak Investigation

- Turn on and zero the GDI using fresh air before entering any premises. Follow the operating instructions for the GDI found in your handbook.
- Normally, the first premise to visit should be the house of the odor complaint. However, the first premise requiring entry may be dictated by the intensity and location of the hazard (leak).
- Knock on door – DO NOT USE THE DOOR BELL.
- Identify yourself. Verify the customer's name and address (if it is the order address).
- **The operator should not switch lights on or off. The customer must also be warned not to switch any electric devices on or off, or to smoke during the investigation.**
- Question the customer regarding the odor complaint regarding the location and intensity of the odor
- Go to the area of where the leak or odor is reported to exist and determine the source of the odor. Take additional GDI readings of the atmosphere as you proceed to this area.
- **Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE and notify Dispatching.**
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- **See Evacuation Procedure described in Section III.B.3 (below).**
- If your investigation confirms a gas leak inside, eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. **Ventilate** the premise. Attempt to shut off gas from the curb box to the property.



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- If there is an LEL reading in the general atmosphere of a property, request Dispatching to notify PECO for assistance.
- If the leak is found inside on exposed piping, control the escaping gas- make conditions safe.
- Continue an inside investigation with the use of a GDI. Examine all appliances and piping, fuel line, meter and meter connections. Also, check the location of water service, gas service and sewer pipe where they enter the building. Check the foundation walls that are adjacent to streets.
- A foundation wall check shall include GDI sampling at any utility entrance through the wall such as gas, water, sewer, cable, drains, electric service and additionally any major cracks or holes that could provide an access for leaking gas. Check all foundation walls that are adjacent to streets.
- Continue to check affected and adjoining properties. Monitor and report any change in conditions to Dispatching.
- All leaks inside must be found and resolved before the employee investigating leaves the job site or is relieved from the job site by someone who will continue the investigation.
- Methods that can be used for an investigation to verify the source of an inside gas odor are:
  - ◊ odor check (smell)
  - ◊ sound check (listening for hissing or blowing)
  - ◊ GDI
  - ◊ soapy solution
- A meter and piping test *is required* to verify the source of an inside gas odor. (for exceptions such as master meters or commercial properties, call a Supervisor for assistance).
- Any inside investigation that has a reading coming into the building from an outside source requires a Distribution Crew. FSD will notify the Dispatcher to call for Distribution. Communication by cellular phone with the Dispatcher shall be made from outside the affected property. Report the initial readings found, as well as any subsequent changes to the initial leak investigation findings. As soon as possible, transmit an electronic message via Mobile Mail confirming the voice contact and update the AIMS Leak Survey screen.
- When a leak is discovered on an appliance covered by PLP, the technician should complete the repair or refer to a qualified PGW Technician.
- (Distribution) In all cases where Distribution responds to an odor complaint and FSD is on location, it is the Foreman's responsibility to examine the FFW(s) and take atmospheric GDI readings. Distribution Foremen or FSD techs are not to enter evacuate buildings to examine the FFW(s) or take atmospheric readings until action has been taken to reduce gas levels below LEL level.



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- After checking all inside premises, monitor inside readings and continue an outside leak investigation.
- If a leak is discovered inside the premise, follow the guidelines listed in the table below:

| <b>Leak discovered on:</b>   | <b>Repair procedure:</b>  |
|--|---|
| If a leak is discovered on <u>PGW piping</u> (from the head of service up to the meter outlet) | Shut off gas supply by closing the curb valve and/or head of service valve (if available) or install the appropriate size service stopper. Make repair and restore gas service to the customer.   |
| If a leak is discovered on <u>customer piping</u> (downstream of meter connections)            | <p>A repair will be permitted on 1 ¼" and smaller thread leaks only. The repair will be completed by using the established method of installing Perma-Gum on the leaking threads.</p> <p>After the leak has been repaired, the Technician will recheck the repaired joint with a GDI to verify there is no leakage.</p> <p>If there are no readings on the GDI, the Technician will issue a Class B hazard tag referring the customer to seek assistance from the appropriate Contractor to make the permanent repair.</p> <p>The Technician will list all information on MDT and refer order to the FSD Training Section.</p> <p>In cases involving multiple units, industrial or commercial applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.</p> |
| Leaks involving any type of shut off valve, union, cracked or defective fitting.               | <p>Leaks at shutoff valves and fittings can be permanently repaired by greasing in the valve or tightening the fitting.</p> <p>In cases where these actions do not repair the leak, the defective part of the fuel line must be disconnected and capped if possible. If the fuel line can not be disconnected, the gas must be shut off* with locking device and plug swivel at the meter.</p> <p>A Class A hazard tag must be issued referring customer to the appropriate Contractor to make the permanent repair.</p> <p>The Technician will also complete a temporary shut off work order. In cases involving multiple units, industrial or commercial applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.</p>                                    |
| If a leak is discovered and isolated to an appliance   | <p>Shut gas off to the appliance.</p> <p>Issue the appropriate hazard tag.</p>  |
| General Notes concerning   | If a residential premise has been shut off and relies on gas heat, also provide a "CO and Emergency assistance information card"  |



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|                                 |  |
|---------------------------------|--|
| <p>Inside Leaks and Repairs</p> | <p>to provide the customer information of City agencies which can help.</p> <p>FSD Training will track and maintain records of all repairs that were completed. All temporary repairs will have follow-up by a positive, documented phone call to the customer. Call will be documented on the BCCS customer contact screen and separate FSD list.</p> <p><b>Note:</b> a temporary repair discovered <i>on any subsequent visit</i> is considered a Class A hazard and requires a temporary shut off as described above.</p> <p>All information pertaining to a piping or appliance hazardous condition must be recorded on the Hazard Screen of AIMS.</p> |
|---------------------------------|--|

III.B.3 Evacuation Procedure (minimum requirements)

- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- Do not re-enter the property until the source of leak has been located, made safe or repaired and the LEL levels are reduced to a safe level.
- Eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. Attempt to shut off gas from the curb box to the property.
- Request Dispatching to notify PECO for assistance
- Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Restrict access into the Safety Perimeter to PGW employees required to perform their duties.
- Call for assistance from the Fire Department (call 911) through the Dispatcher. The PFD and PPD will assist you with evacuating and maintaining the Safety Perimeter.
- Evacuate the adjoining properties and move the occupants outside the safety perimeter. Consider the worst case scenario.
- If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.
- Continue to report any more evacuation(s) and call for more assistance.



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3. Procedure for Entry Not Necessary (ENN) Investigation (see Section B.1. for buildings eligible for this procedure). This procedure will only be followed by qualified FSD technicians and Distribution Foremen. Qualified FSD technicians are A men and above.

**Check mail slots, windows, basement entry doors, anything to obtain a sample of the inside atmosphere.**

- Obtain a sample of the inside atmosphere by checking mail slots, windows, basement entry doors, etc. with your GDI.
  - **If a potential hazard exists, make a forcible entry.** Follow procedures listed above.
  - For all CGIs which appear non-hazardous, check the main and service information – age, material and location for the Distribution facilities in front of the property.
  - Make “M-Pact” bar holes in front of the CGI building as close to the building as possible.
  - Make “M-Pact” bar holes over the gas service of the CGI building.
  - Check all outside readings for migration. If there is no migration within 5 feet of the building, the building can be considered for ENN.
  - A building must be checked when there is a reading over the service and the service is steel installed in 1975 or before (older).
  - If during the leak investigation it is determined that other buildings on the block have underground service conduits (electric or Bell), do not make the premise ENN.
  - If conditions are questionable, use the Locksmith Procedure and gain entry.
4. Checklist To Allow ENN
- √ Building does not meet the requirements in section titled “What Buildings Must Be Checked” (III-B-1)
  - √ No readings or anticipated migration to within 5 feet of the building.
  - √ No readings over a pre-1975, steel service (to the building in question).
  - √ No readings in vent box.
  - √ No evidence of underground conduit services (electric or bell).

5. Locksmith Procedure

- a. A request for a Locksmith to gain entrance to a building should be made under the following conditions:
- ❖ Immediate forced entry is not necessary.
  - ❖ Property is not eligible for ENN.
  - ❖ You have exhausted all other options to gain entrance such as checking with neighbors, phone call to customer or self entry.



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- ❖ Two PGW employees are required when entering an unoccupied property.

b. Field Operations Personnel Responsibilities

- ❖ Call Dispatcher or Clerk for Locksmith.
- ❖ If a police officer arrives on scene, report his badge number to the Dispatcher.
- ❖ Report back to Dispatcher or Clerk with the Locksmith's arrival time and a final report.
- ❖ Fill out a 119 property damage report.
- ❖ If lock is changed and keys cannot be given to customer, notify Dispatcher or Clerk of location of keys.
- ❖ During normal business hours, notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6014 (voice mail).
- ❖ Sign and leave Form #6489 (door hanger) to inform the customer that it was necessary for PGW to enter the premise.
- ❖ Assure premise is secured.
- ❖ Sign voucher for Locksmith.

c. Dispatch or Clerk Responsibilities

- ❖ Dispatcher or Clerk contacts Locksmith and notifies police (911).
- ❖ Dispatcher or Clerk will log the Locksmith's arrival time and final report of all houses entered.
- ❖ If a police officer arrives on scene, the Dispatcher or clerk will log the police officer's badge number in the Locksmith Log.

C. Outside Leak Investigation

1. Outside Leak Investigation Procedure

- **Check buildings first, following all previous instructions for "Inside Leak Investigation" (Section III - B.).**
- Exchange information with PGW employee(s) or customers already on location.
- (Distribution and FSD relief) Verify all readings reported.
- Make an area check of all outside underground structures (CB, WB, VB, MH, etc.) in the vicinity of known readings or near the odor complaint. Determine the proper size of the area check. This can be expanded based on the investigation (Minimum 50' in all directions from the odor complaint or a confirmed reading).
- Bar hole as necessary to assure an effective investigation.
- (FSD) Check that there are no readings requiring an immediate Distribution Investigation, see list below (Criteria for a Distribution Crew to be called).



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- Investigate all readings for migration. Confirm that migration does not approach within 5 feet of any building.
- (FSD) When snow or frost restricts investigation, call for Distribution. Continue to check for migration by making inside property checks while waiting for Distribution.
- All duct line or sewer readings must be investigated in all directions to confirm migration pattern.
- Follow Odor Complaint Investigation Reference Guide





**LEAK/FIRE DUTY SECTION**  
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Dated January 16, 2008

**ODOR COMPLAINT INVESTIGATION REFERENCE GUIDE**

|    | Nature of complaint or readings found  |   |   |    |   |   |   |   |   |   |
|----|--|---|---|----|---|---|---|---|---|---|
| 1  | Conduit Type Manhole with reading - Footway and Roadway Location ex. Sewers, electric ducts, communication ducts etc.  | A | B | C  | D | E |   |   |   |   |
| 2  | Foreign Odor - Odor from underground source and coming through foundation walls, drain, vent, stop box, manhole, etc. or odor from an above ground source such as gasoline, cleaning fluid, paint, chemicals, etc. <b>*If the foreign odor is a wide spread event the dispatcher may instruct a technician to replace "C" with "K" if the job is inside the affected area.</b> | A | B | *C | D |   | F |   |   | * |
| 3  | Gas reading reported by FSD and the DD employee can not confirm the reading and feels a leak does not exist.   | A | B | C  | D |   |   | G |   |   |
| 4  | An odor complaint received directly from a customer on the street  | A | B | C  | D |   |   |   |   | J |
| 5  | Gas leak inside building coming from outside sources   | A | B | C  | D |   |   |   |   |   |
| 6  | Non-Conduit Manhole - Footway Location - Examples: Water mains, survey boxes etc.  | A | B | C  | D |   |   |   |   |   |
| 7  | Leak in Street - Gas blowing into air from underground source  | A | B | C  | D |   |   |   |   |   |
| 8  | Investigating reports of gas odors in a subway or tunnel   |   |   | C  | D |   |   | G | H |   |
| 9  | Electrical Burnouts  |   |   | C  | D |   | F | G | H |   |
| 10 | No odor outside - "No Odor"  |   |   | C  | D |   |   |   |   |   |
| 11 | Gas leak inside a building downstream of the head of service on exposed piping   | A | B |    | D |   |   |   |   | K |

**REFERENCE CODE MINIMUM REQUIREMENTS GUIDE**

|          |   |
|----------|---|
| <b>A</b> | Follow Inside Leak Investigation at building closest to the odor complaint  |
| <b>B</b> | Follow Inside Leak Investigation at adjoining buildings if necessary or determine if the property can be considered for "ENN" Entry Not Necessary   |
| <b>C</b> | Follow Outside Leak Investigation Instructions  |
| <b>D</b> | Use a calibrated Gas Detection Instrument at every point that you investigate for a possible gas leak   |
| <b>E</b> | All conduit and sewer type manhole investigations shall extend to cover and to find clear the most closely connected manhole in all directions along the route of the manhole in which the reading exist. |
| <b>F</b> | Dispatcher/supervisor will determine if notification of Air Management is required  |
| <b>G</b> | A Field Operations Supervisor or above must review the investigation prior to determining a "Safe to Hold" status   |
| <b>H</b> | A Field Operations Supervisor or above must be present during the Investigation   |
| <b>J</b> | Notify the Dispatcher on duty as soon as reported by customer   |
| <b>K</b> | Outside leak investigation limited to GDI check of structures (boxes) in front of the building. "(one house check)"   |

2. Checklist For A Distribution Crew To Be Called – Work Immediately



**LEAK/FIRE DUTY SECTION**  
**FIELD OPERATIONS**  
**DISTRIBUTION/FIELD SERVICES**  
**DEPARTMENTS**  
**Effective April 21, 2011**

**LEAK RESPONSE AND INVESTIGATION**  
**PROCEDURE**

Bulletin Number #212  
Dated January 16, 2008

All FSD technicians below B man (in rank) cannot make outside leaks safe to hold. They must call Distribution for any leaks found that require Distribution Crew attendance. This check list for not calling Distribution is only for FSD A men and above.

- a. (FSD) Readings and or conditions as noted below require an immediate notification for a Distribution response. FSD Dispatchers must be informed as soon as an initial outside reading is discovered in these structures. Maintain regular communications with the FSD Dispatcher on the status of the investigation. Make final report to FSD Dispatchers when released by Distribution or conditions will be left safe-to-hold.
  - √ A leak that represents an existing hazard to persons or property, and requires immediate action
  - √ Any reading in sewer manholes, storm inlets, vent boxes, light standards
  - √ Any reading inside a building coming from an outside source
  - √ Any reading within 5 feet of a building
  - √ Any reading in subways
  - √ Any reading in PGW manholes
  - √ Reading of 76% LEL or greater in a conduit manhole
  - √ Any reading in two (2) or more conduit manholes of the same type
  - √ Indications of a broken main or third party damage
  - √ Electrical Burnouts
  - √ Readings on a block which contains a 150 PSI (or greater) main (Dispatcher to review)
- b. If readings do not meet the criteria listed above, the leak may be classified as safe to hold (see below - Checklist for Safe-To-Hold). Once an outside reading is discovered, all reports should be made to DISTRIBUTION DISPATCHERS.

3. Checklist For Safe To Hold

- √ There are no readings that require Distribution visit (see previous list).
- √ Area check does not indicate migration toward the building. All readings found outside were checked for migration – no migration was found within 5 feet of any buildings.
- √ Migration is not anticipated to move toward a building structure.
- √ There is no leak history associated with this leak causing repeated calls. Verification to be obtained from Dispatchers.
- √ Patches or trenches indicating recent construction work should be checked carefully – no migration was found within 5 ft of any buildings.
- √ No snow or frost to restrict investigation. (FSD) When snow or frost restricts investigation, call for Distribution. Continue to check for migration by making inside property checks while waiting for Distribution.
- √ Street block does not have a 150 PSI (or greater) main. (Reading must be pinpointed).



**LEAK/FIRE DUTY SECTION**  
**FIELD OPERATIONS**  
**DISTRIBUTION/FIELD SERVICES**  
**DEPARTMENTS**  
**Effective April 21, 2011**

**LEAK RESPONSE AND INVESTIGATION**  
**PROCEDURE**

Bulletin Number #212  
Dated January 16, 2008

**D. Final Reports**

- Make oral report to Distribution and FSD Dispatchers via phone.
- Record your findings including reading found in the AIMS database.

**IV. Associated Documentation**

**A. Relevant Code**

1. 49 CFR Part 192.605 Procedural Manual for Operations, Maintenance, and Emergencies
2. 49 CFR Part 192.615 Written Emergency Procedures

**B. Related Documents**

1. Distribution Department Bulletin #63 - Notification Procedure of a Potential Emergency Involving a Pressure Operation
2. Distribution Department Bulletin #212 - Leak Response and Investigation Procedure
3. Distribution Department Bulletin #227 - Initiation of a Pressure Operation
4. Distribution Department Bulletin #228 - Pressure Control Operation Outline Procedure.
5. Distribution Department Bulletin #230 - Organization for Emergency Operations.

**C. Attachments**

Sample Leak Investigation Illustrations


**V. Handbooks**

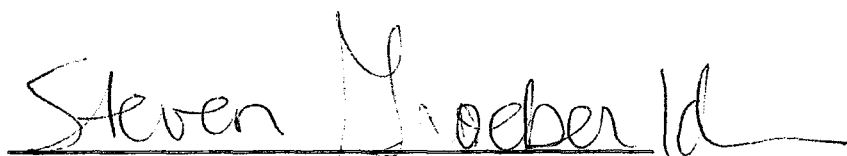
FSD Operations Manual (Section I)  
Distribution Foreman's Handbook (Section I)

**VI. Transaction Listing**

TR 2007-#03

**Approved By:**

  
\_\_\_\_\_  
**John Jolly**  
**Manager, Distribution Department**

  
\_\_\_\_\_  
**Steven Groeber**  
**Director, Field Operations & Work Planning**

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## AGENDA

### FIELD OPERATIONS REFRESHER TRAINING

#### JUNE and JULY, 2011

Field Operations Distribution Foremen, Field Service Technicians, Distribution Inspectors and Management Personnel Attended The Refresher Training On One Of the Following Days Listed Below.

Field Operations Trainers and Personnel Involved Includes, Robert Smith, John Pearce, Richard Herbert, Beverley Bright, John Zuk, Carlos Rojas, Jose Delgado and Joseph Durante.

Saturday June 18, Tuesday June 21, Wednesday June 22, Thursday June 23, Saturday June 25, Tuesday June 28, Wednesday June 29, Thursday June 30, Tuesday July 12, Wednesday July 13, Thursday July 14 and Wednesday July 20, 2011.

The Following Field Operations Procedures Were Reviewed And Discussed in Detail. The instructors read each procedure word for word to the trainees and class. During the training the instructors often gave several examples as they taught the class. The instructors also asked and answer all questions after each procedure.

#### *Distribution Foremen, Field Service Technicians, Distribution Inspectors and Management Personnel Field Service*

Leak Response and Investigation Procedure DDB# 212

PFD and PECO Assistance on Leak Calls DDB# 285

#### *Distribution Foremen, Distribution Inspectors and Management Personnel*

Deactivating Abandoned Distribution Facilities and Activating New Distribution Facilities DDB# 124

Mechanical Fitting Failures DDB# 289

Testing for Gas Flow (two-way test) DDB# 278

Definitions of Leak Types DDB# 287

1" Coiled Plastic Pipe

Test requirements for Service and Main Installations DDB# 251

**Management Personnel:**

**Training Requirements DDB# 284**

**Notification Procedure of a Potential Emergency Involving a Pressure Operation DDB# 63**

**Initiation of a Pressure Operation DDB# 227**

**Pressure Force Emergency Valves Operational Condition DDB# 281**

**Procedure for Pipeline Incident Investigations DDB# 245**

**Pressure Force:**

***Refresher training on the procedures listed below was conducted on 6/24, 27, 30, 2012 for the pressure group.***

**Pressure Force Emergency Valves Operational Condition DDB# 281**

**Initiation of a Pressure Operation DDB# 227**

**Notification Procedure of a Potential Emergency Involving a Pressure Operation DDB# 63**

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## Refresher Training Schedule

| Field Operations Supervision |                             | Date       | Location           | Time          |
|------------------------------|-----------------------------|------------|--------------------|---------------|
| Group 1                      | (part of roster of 120-140) | 06/18/2011 | Auditorium (65-75) | 07:00 - 12:30 |
| Group 1a                     | (part of roster of 120-140) | 06/18/2011 | Cafeteria (55-65)  | 07:00 - 12:30 |
| Group 2                      | (part of roster of 65)      | 06/25/2011 | Auditorium (55-65) | 07:00 - 12:30 |

| Distribution Union |                             | Date       | Location           | Time          |
|--------------------|-----------------------------|------------|--------------------|---------------|
| Group 1            | (part of roster of 120-140) | 06/18/2011 | Auditorium (65-75) | 07:00 - 11:00 |
| Group 1a           |                             | 06/18/2011 | Cafeteria (55-65)  | 07:00 - 11:00 |
| Group 2            | (part of roster of 65)      | 06/25/2011 | Auditorium (55-65) | 07:00 - 11:00 |

| Manager / Instructor |                            | Date       | Location   | Time          |
|----------------------|----------------------------|------------|------------|---------------|
| Group 1              | Bright / Durante / Herbert | 06/18/2011 | Auditorium | 06:00 - 13:00 |
| Group 1a             | Pearce / Smith / Rojas     | 06/18/2011 | Cafeteria  | 06:00 - 13:00 |
| Group 2              | Bright / Delgado           | 06/25/2011 | Auditorium | 06:00 - 13:00 |

| Field Service Union |                              | Date       | Location  | Time          |
|---------------------|------------------------------|------------|-----------|---------------|
| Mont.               | 0700 & 0730 (start 0700)     | 06/21/2011 | Mont      | 07:00 - 09:00 |
| Mont.               | 0800 & 0830 (start 0900)     | 06/21/2011 | Mont      | 09:00 - 11:00 |
| Mont.               | Mid Shifts all start at 1500 | 06/21/2011 | Mont      | 15:00 - 17:00 |
| Porter              | 0700 & 0730 (start 0700)     | 06/22/2011 | Passyunk  | 07:00 - 09:00 |
| Porter              | 0800 & 0830 (start 0900)     | 06/22/2011 | Passyunk  | 09:00 - 11:00 |
| Porter              | Mid Shifts all start at 1500 | 06/22/2011 | Passyunk  | 15:00 - 17:00 |
| Belfield            | 0700 & 0730 (start 0700)     | 06/23/2011 | Belfield  | 07:00 - 09:00 |
| Belfield            | 0800 & 0830 (start 0900)     | 06/23/2011 | Belfield  | 09:00 - 11:00 |
| Belfield            | Mid Shifts all start at 1500 | 06/23/2011 | Belfield  | 15:00 - 17:00 |
| Castor              | All am Shifts 0700 start     | 06/28/2011 | Castor    | 07:00 - 09:00 |
| Castor              | All Mid Shifts               | 06/28/2011 | Castor    | 15:00 - 09:00 |
| Tioga               | All Shifts                   | 06/29/2011 | Tioga     | 07:00 - 09:00 |
| Metershop           | All Shifts                   | 06/30/2011 | Metershop | 07:00 - 09:00 |

Various Trainers and managers depending on schedules.

| Pressure Force | Date | Location | Time |
|----------------|------|----------|------|
|----------------|------|----------|------|



1(b-3)

# PHILADELPHIA GAS WORKS FIELD OPERATIONS PROCEDURES REFRESHER TRAIN/UPDATE

| PERSONNEL                     | TIME         | P/T             | P/T             | P/T                 | PROCEDURES and TIME |                 |     |                       | P/T             | P/T               | P/T         | P/T                | LOCATION             |
|-------------------------------|--------------|-----------------|-----------------|---------------------|---------------------|-----------------|-----|-----------------------|-----------------|-------------------|-------------|--------------------|----------------------|
|                               |              | 251             | 63              | 212                 | 285                 | 227             | 230 | 245                   | 281             | 284               | 286         | 289 278 287<br>124 |                      |
| FSD FIELD UNION               | 2:00         |                 |                 | 1.5h                | 20 <sup>M</sup>     |                 | N   |                       |                 |                   | N           |                    | TRAINING AT STATION  |
| DIST FIELD UNION              | 4:00         | 15 m            |                 | 1.5h                | 20 <sup>M</sup>     |                 | N   |                       |                 |                   | N           | 10,20<br>15,40m    | SAT AUD/CONF RMs     |
| PRESSURE FORCE UNION          | 0.20         |                 |                 |                     |                     |                 | N   |                       | 20 <sup>M</sup> |                   | N           |                    | P.F. SUPER@ STAND UP |
| FSD DIST, SUPER AND ABOVE     | 5:00         | 15 m            | 15 m            | 1.5h                | 20 <sup>M</sup>     | 15 <sup>M</sup> | N   | 30 <sup>M</sup>       | 20 <sup>M</sup> | 10 <sup>M</sup>   | N           | 10,20<br>15,40m    | SAT AUD/CONF RMs     |
| DIST SUPER, DISP AND ABOVE    | 5:00         | 15 <sup>M</sup> | 15 <sup>M</sup> | 1.5h                | 20 <sup>M</sup>     | 15 <sup>M</sup> | N   | 30 <sup>M</sup>       | 20 <sup>M</sup> | 10 <sup>M</sup>   | N           | 10,20 15,40m       | SAT AUD/CONF RMs     |
|                               |              |                 |                 |                     |                     |                 |     |                       |                 |                   |             |                    |                      |
|                               |              |                 |                 | <b>DISTRIBUTION</b> |                     | <b>OT</b>       |     | <b>PRESSURE FORCE</b> |                 | <b>MANAGEMENT</b> |             |                    |                      |
| UNION HOURS                   | 250          | 250             |                 |                     | 108                 | 10              |     | COUNT                 |                 | 56                | 23          |                    |                      |
| TOTAL HOURS                   | 1            | 2               |                 |                     | 4                   | 0.2             |     | HOURS                 |                 | 5                 | 5           |                    |                      |
| DISTRIBUTION RATE - TIME/HALF | 250          | 500             |                 |                     | 432                 | 2               |     | TOTAL                 |                 | 280               | 115         |                    |                      |
|                               | 32.2         | 32.2            |                 |                     | 31.14               | 31.14           |     | RATE                  |                 | 55                | 55          |                    |                      |
|                               | 1.5          | 0               |                 |                     | 1.5                 | 0               |     | TIME/HALF             |                 | 1.5               | 0           |                    |                      |
|                               | 48.3         | 32.2            |                 |                     | 46.75               | 31.14           |     |                       |                 | 82.5              | 55          | TOTALS             |                      |
| <b>SUB TOTAL OT</b>           | \$ 12,075.00 | \$ 16,100.00    |                 |                     | \$ 20,196.00        | \$ 62.28        |     |                       |                 | \$23,100.00       |             | \$ 71,533.28       |                      |
| <b>SUB TOTAL NON-OT</b>       |              |                 |                 |                     |                     |                 |     |                       |                 |                   | \$ 6,325.00 | \$ 6,325.00        |                      |
| m-minutes - h-hours           |              |                 |                 |                     |                     |                 |     |                       |                 |                   |             |                    |                      |
| jzbbjprs 5-18-2011            |              |                 |                 |                     |                     |                 |     |                       |                 |                   |             |                    |                      |
|                               |              |                 |                 |                     |                     |                 |     |                       |                 |                   |             | \$ 77,858.28       |                      |

|                          | Field Service  | Distribution                                 | Pressure Force                  | Management                                   |
|--------------------------|--|--|---------------------------------|--|
| <b>Training Dates</b>    | Tues-Wed-Thurs<br>June 21, 22 and 23<br>June 28, 29 and 30<br>July 6 and 7 | Saturday<br>June 18 and 25 -7am 1200         | Any week Day<br>June            | Saturday<br>June 18 and 25 -7am 1200         |
| <b>Make Up Date</b>      | July 12 and 13   | July 9                                       |                                 | July 9                                       |
| <b>Training Location</b> | Stations-Passyunk Training Center  | Passyunk Training Center<br>800 Auditorium - | Pressure Force<br>Write up area | Passyunk Training Center<br>800 Auditorium - |

1(b-4)

# FIELD OPERATIONS PROCEDURE REVIEW

SATURDAY- JUNE 18 ,2011

INSTRUCTORS: BEVERLY  
BRIGHT & JOSE  
DELGADO

## AUDITORIUM

|      | LAST<br>NAME : | FIRST<br>NAME : | SIGN NAME :          | PR#  | ADP # |
|------|----------------|-----------------|----------------------|------|-------|
| ✓ 1  | Barnes         | Askia           | Askia Barnes         | 4095 | 11935 |
| ✓ 2  | Bozzetto       | John            | John D. Bozzetto     | 4617 | 11559 |
| ✓ 3  | Bradley        | John            | John Bradley         | 4442 | 11495 |
| ✓ 4  | Brickhouse     | Reginald        | Reginald Brickhouse  | 4048 | 11217 |
| ✓ 5  | Bucher         | Daniel          | Don Bucher           | 4273 | 11394 |
| ✓ 6  | Burke          | Peter           | Peter Burke          | 4435 | 11489 |
| ✓ 7  | Cain           | Michael         | im Cain              | 4030 | 11201 |
| ✓ 8  | Daniels        | Eric            | Eric Daniels         | 4286 | 12031 |
| ✓ 9  | Ferrara        | Dominic         | Dom Ferrara          | 4107 | 11268 |
| ✓ 10 | Hochstuhl      | Anthony         | Anthony Hochstuhl    | 4042 | 11211 |
| ✓ 11 | Hughes, Jr.    | Kevin           | Kevin Hughes Jr      | 4146 | 12470 |
| ✓    | Johnson        | Charles         | Chak Johnson         | 4037 | 11207 |
| ✓ 13 | Kehoe          | Gerard          | Gerard Kehoe         | 4629 | 11564 |
| ✓ 14 | Malinowski     | Joseph          | Joseph H. Malinowski | 4440 | 11493 |
| ✓ 15 | Matricardi     | Gregory         | Greg Matricardi      | 4147 | 11302 |
| 16   | McFadden       | Carl            |                      | 4036 | 11206 |
| ✓ 17 | McNamara       | Daniel          | Daniel C. McNamara   | 4537 | 11532 |
| ✓ 18 | Morgan         | William         | William Morgan       | 4033 | 11855 |
| ✓ 19 | Murray         | George          | George Murray        | 4149 | 11304 |
| ✓ 20 | Murray         | Shawn           | Shawn Murray         | 4355 | 12066 |
| ✓ 21 | Paley          | Michael         | Michael Paley        | 4557 | 11535 |
| ✓ 22 | Stephens       | Atheem          | Atheem Stephens      | 4059 | 11228 |
| ✓ 23 | Stephens, Jr.  | Gregory         | Greg Stephens        | 4467 | 11511 |
| ✓ 24 | Sullivan       | Brian           | Brian Sullivan       | 4101 | 11262 |
| ✓ 25 | Tracy          | Paul            | Paul Tracy           | 4339 | 11428 |
| ✓    | Valentin       | Edgardo         | Edgardo Valentin     | 4454 | 11876 |
| 27   | Vega           | Jose            | 7127111              | 4376 | 11453 |
| ✓ 28 | Waller         | Michael         | Michael P. Waller    | 4290 | 11404 |

|      |              |         |                    |      |       |
|------|--------------|---------|--------------------|------|-------|
| ✓ 29 | Wirchnianski | Peter   | <i>[Signature]</i> | 4675 | 11570 |
| ✓ 30 | Hughes       | Michael | <i>[Signature]</i> | 4163 | 11317 |
| ✓ 31 | Jones        | Quentia | <i>[Signature]</i> | 281  |       |
| ✓ 32 | Gonzalez     | Maurice | <i>[Signature]</i> | 4121 |       |
| 33   |              |         |                    |      |       |
| 34   |              |         |                    |      |       |
| 35   |              |         |                    |      |       |
| 36   |              |         |                    |      |       |
| 37   |              |         |                    |      |       |
| 38   |              |         |                    |      |       |

# FIELD OPERATIONS PROCEDURE REVIEW

SATURDAY- JUNE 18, 2011

INSTRUCTORS: CARLOS  
ROJAS & RICHARD  
HERBERT

## CAFETERIA

|      | LAST NAME :         | FIRST NAME :     | SIGN NAME :             | PR#             | ADP # |
|------|---------------------|------------------|-------------------------|-----------------|-------|
| ✓ 1  | Ayers               | Maurice          | <i>Maurice Ayers</i>    | 4128            | 11284 |
| 2    | <del>Bakeoven</del> | <del>James</del> | <del></del>             | <del>4178</del> |       |
| ✓ 3  | Beall               | Matthew          | <i>Math Beall</i>       | 4245            | 11381 |
| ✓ 4  | Benjamin            | Anthony          | <i>Ed Center</i>        | 4358            | 11440 |
| ✓ 5  | Carter              | Edward           | <i>E. Benjamin</i>      | 4257            | 11952 |
| ✓ 6  | Clipner             | Robert           | <i>R. Clipner</i>       | 4025            | 11196 |
| ✓ 7  | Coletti             | Christopher      | <i>Chris Coletti</i>    | 4237            | 12210 |
| ✓ 8  | Dunn                | Robert           | <i>Robert L. Dunn</i>   | 4099            | 11260 |
| ✓ 9  | Eckroade            | Brian            | <i>Brian Eckroade</i>   | 4369            | 12428 |
| ✓ 10 | Gallagher           | Dennis           | <i>Dennis Gallagher</i> | 4566            | 11539 |
| ✓ 11 | Godfrey             | Christopher      | <i>Chris Godfrey</i>    | 4368            | 12430 |
| ✓ 12 | Gonzalez            | Maurice          | <i>Maurice Gonzalez</i> | 4121            | 11937 |
| ✓ 13 | Hales               | Joseph           | <i>Joseph Hales</i>     | 4152            | 11307 |
| 14   | Harding             | David            | <i>6/25/11</i>          | 4031            | 11202 |
| ✓ 15 | Kemp                | Marion           | <i>Marion Kemp</i>      | 4261            | 11386 |
| ✓ 16 | King                | Matthew          | <i>Matthew King</i>     | 4348            | 12069 |
| ✓ 17 | Knappik             | Francis          | <i>Francis Knappik</i>  | 4475            | 11514 |
| ✓ 18 | LaTorre             | Jose             | <i>Jose LaTorre</i>     | 4483            | 11520 |
| ✓ 19 | Mathews             | David            |                         | 4350            | 12068 |
| ✓ 20 | McGuigan            | John             | <i>John M. McGuigan</i> | 4047            | 11216 |
| 21   | Mincer              | Joseph           | <i>6/25/11</i>          | 4379            | 11455 |
| ✓ 22 | Morris              | Stephen          | <i>Stephen Morris</i>   | 4174            | 11327 |
| ✓ 23 | Pereira             | Angel            | <i>Angel Pereira</i>    | 4221            | 11368 |
| 24   | Quinn               | Thomas           | <i>6/25/11</i>          | 4363            | 11443 |
| ✓ 25 | Rivera              | Ricardo          | <i>Ricardo Rivera</i>   | 4244            | 11947 |
| ✓ 26 | Rodriguez           | Nestor           | <i>Nestor Rodriguez</i> | 4390            | 11464 |
| ✓ 27 | Serody              | William          | <i>William Serody</i>   | 4162            | 11316 |
| ✓ 28 | Smink               | Kevin            | <i>Kevin Smink</i>      | 4441            | 11494 |
| ✓ 29 | Smith               | John             | <i>John P. Smith</i>    | 4275            | 11395 |

|      |                      |                 |                              |                 |                  |
|------|----------------------|-----------------|------------------------------|-----------------|------------------|
| ✓ 30 | Strong               | Damont          | <del>Damont Strong</del>     | 4259            | 11953            |
| ✓ 31 | Swider               | John            | <del>John Swider</del>       | 4354            | 11437            |
| 32   | <del>Szymanski</del> | <del>Mark</del> | <del>6/25/11</del>           | <del>4451</del> | <del>11306</del> |
| ✓ 33 | Tierney              | Joseph          | <del>Joseph M. Tierney</del> | 4596            | 11550            |
| ✓ 34 | Tobin                | James           | <del>James M. Tobin</del>    | 4402            | 11470            |
| ✓ 35 | Tomczak              | Brian           | <del>Brian Tomczak</del>     | 4159            | 11314            |
| ✓ 36 | Tomczak              | Richard         | <del>Richard Tomczak</del>   | 4216            | 11364            |
| ✓ 37 | Walker               | John            | <del>John Walker</del>       | 4077            | 11242            |
| ✓ 38 | Weaver               | Cecil           | <del>Cecil Weaver</del>      | 4619            | 11560            |
| ✓ 39 | Whalen               | Stephen         | <del>Stephen Whalen</del>    | 4473            | 11512            |
| ✓ 40 | Willis               | Khary           | <del>Khary Willis</del>      | 4087            | 12209            |
| 41   |                      |                 | Steve Groeber                |                 |                  |
| 42   |                      |                 |                              |                 |                  |
| 43   |                      |                 |                              |                 |                  |
| 44   |                      |                 |                              |                 |                  |
| 45   |                      |                 |                              |                 |                  |
| 46   |                      |                 |                              |                 |                  |
| 47   |                      |                 |                              |                 |                  |

# FIELD OPERATIONS PROCEDURE REVIEW

SATURDAY- JUNE 18 ,2011

INSTRUCTORS: BEVERLY  
BRIGHT & JOSE  
DELGADO

## AUDITORIUM

|    | LAST NAME : | FIRST NAME : | SIGN NAME :       | PR# | ADP # |
|----|-------------|--------------|-------------------|-----|-------|
| 1  | Arrington   | Jane         | Jane Arrington    | 524 | 10290 |
| 2  | Bright      | Beverley     | Beverley Bright   | 127 | 10316 |
| 3  | Brown       | Thomas       | Thomas Brown      | 154 | 10318 |
| 4  | Cassar      | James        | James Cassar      | 536 | 10359 |
| 5  | Delgado     | Jose         | Jose Delgado      | 120 | 11073 |
| 6  | Dixon       | Kevin        | Kevin Dixon       | 676 | 11403 |
| 7  | Donaghy     | Patrick      | Patrick Donaghy   | 551 | 10300 |
| 8  | Dunn        | John         | John Dunn         | 182 | 10319 |
| 9  | Etim        | Christopher  | Christopher Etim  | 274 | 12121 |
| 10 | Fuller      | Gregory      | Gregory Fuller    | 552 | 10301 |
| 11 | Fusi        | Michael      | Michael Fusi      | 378 | 12623 |
|    | Gaydosh     | Gerard       | Gerard Gaydosh    | 630 | 10911 |
| 13 | Keebler     | John         | John Keebler      | 566 | 10308 |
| 14 | Marinzoli   | Matthew      | Matthew Marinzoli | 658 | 12101 |
| 15 | Murphy      | William      | William Murphy    | 237 | 10328 |
| 16 | Pendergast  | Thomas       | Thomas Pendergast | 452 | 12427 |
| 17 | Reese       | Ronald       | Ron Reese         | 586 | 10881 |
| 18 | Rizzo       | John         | John Rizzo        | 431 | 11203 |
| 19 | Sanchez     | Juan         | Juan Sanchez      | 564 | 10306 |
| 20 | Sheehan     | Dennis       | Dennis Sheehan    | 351 | 11061 |
| 21 | Smith       | Richard      | Rich Smith        | 409 | 10281 |
| 22 | Uditsky     | Robert       | R Uditsky         | 410 | 10282 |
| 23 | Warfield    | Rodney       | Rodney Warfield   | 664 | 11119 |
| 24 | Wilcox      | William      | William Wilcox    | 677 | 11293 |
| 25 | Wirt        | Richard      | Richard Wirt      | 637 | 11441 |
| 26 | Zekanis     | Eric         | Eric Zekanis      | 548 | 10362 |
|    | Luk         | John         | John Luk          | 38  | 10436 |
| 28 | PEARCE      | JOHN         | John Pearce       | 19  | 10334 |
| 29 | J.          |              |                   |     |       |



# FIELD OPERATIONS PROCEDURE REVIEW

SATURDAY- JUNE 18, 2011

INSTRUCTORS: CARLOS  
ROJAS & RICHARD  
HERBERT

## CAFETERIA

|      | LAST NAME<br>:    | FIRST<br>NAME : | SIGN NAME :        | PR#            | ADP #            |
|------|-------------------|-----------------|--------------------|----------------|------------------|
| / 1  | Awad              | Burhan          | <i>[Signature]</i> | 661            | 12374            |
| / 2  | Barker            | Christina       | <i>[Signature]</i> | 690            | 12575            |
| / 3  | Barnes            | Darnell         | <i>[Signature]</i> | 422            | 11231            |
| / 4  | Barreto           | Javier          | <i>[Signature]</i> | 445            | 10196            |
| / 5  | Benincasa         | William         | <i>[Signature]</i> | 621            | 11442            |
| / 6  | Breslin           | Bernard         | <i>[Signature]</i> | 531            | 11004            |
| / 7  | Delussey          | Joseph          | <i>[Signature]</i> | 544            | 10297            |
| / 8  | Furtek            | Daniel          | <i>[Signature]</i> | 443            | 12949            |
| / 9  | Hawkinson         | Joseph          | <i>[Signature]</i> | 665            | 12111            |
| / 10 | Herbert           | Richard         | <i>[Signature]</i> | 520            | 10916            |
| / 11 | Howell            | Robert          | <i>[Signature]</i> | 334            | 10332            |
|      | Hughes            | Kevin           | <i>[Signature]</i> | 541            | 10295            |
| / 13 | James             | Timothy         | <i>[Signature]</i> | 396            | 10278            |
| / 14 | Jefferson         | Burton          | <i>[Signature]</i> | 529            | 11107            |
| / 15 | Johnson           | Mark            | <i>[Signature]</i> | 121            | 10896            |
| / 16 | Jones             | Quentin         | ON UNION SHEET     | 281            | 10954            |
| / 17 | Kelly             | John            | <i>[Signature]</i> | 379            | 10340            |
| / 18 | Leva              | Joseph          | <i>[Signature]</i> | 424            | 11959            |
| / 19 | Medley            | Arnold          | <i>[Signature]</i> | 464            | 10197            |
| / 20 | <del>Medley</del> | <del>Eric</del> |                    | <del>543</del> | <del>10364</del> |
| / 21 | Palombi           | William         | <i>[Signature]</i> | 391            | 10345            |
| / 22 | Peacock           | Temple          | <i>[Signature]</i> | 472            | 10201            |
| / 23 | Pearce            | John            | <i>[Signature]</i> | 19             | 10334            |
| / 24 | Rivera            | Hector          | <i>[Signature]</i> | 554            | 10302            |
| / 25 | Rojas             | Carlos          | <i>[Signature]</i> | 569            | 10336            |
| /    | Tollera           | Natinael        | <i>[Signature]</i> | 691            | 12578            |
| / 27 | WELTC             | RAY             | <i>[Signature]</i> | 556            |                  |
| / 28 | Smith             | Robert          | <i>[Signature]</i> | 421            | 11647            |



# FIELD OPERATIONS PROCEDURE REVIEW

SATURDAY- JUNE 25 ,2011

INSTRUCTORS: Joseph  
Durante, Jose Delgado &  
Richard Herbert

## AUDITORIUM

| LAST NAME | FIRST NAME | SIGNATURE : | PR#                       | ADP # |       |
|-----------|------------|-------------|---------------------------|-------|-------|
| 1         | Armstrong  | Christopher | Christopher Armstrong     |       |       |
| 2         | Barry      | Michael     | Mike Barry                | 498   | 10288 |
| 3         | Bream      | Ryan        | 7/12/11                   |       |       |
| 4         | Doar       | William     | W Doar                    | 117   | 10315 |
| 5         | Durante    | Joseph      | Joseph Durante            | 118   | 11235 |
| 6         | Feeney     | Joseph      | Joseph Feeney             | 270   | 11001 |
| 7         | Holmes     | Anthony     | Anthony Holmes            | 528   | 10356 |
| 8         | Kirby      | Joseph      | Joseph Kirby              | 482   | 10350 |
| 9         | Klingbiel  | Michael     | M Klingbiel               |       |       |
| 10        | Lopez      | Jorge       | Jorge Lopez               | 258   | 11158 |
| 11        | McAndress  | Vincent     | Vincent McAndress 7/13/11 | 178   | 11172 |
|           | McCoullum  | Earl        | Earl McCoullum            | 686   | 12350 |
| 13        | McGrath    | Patrick     | Patrick McGrath           | 331   | 10273 |
| 14        | Moore      | Robert      | Robert Moore              | 138   | 11127 |
| 15        | Parzanese  | Michael     | Michael Parzanese         | 115   | 12807 |
| 16        | Reichert   | Dennis      | Dennis Reichert           | 538   | 10360 |
| 17        | Robinson   | Donna       | 6-18-11                   | 526   | 10292 |
| 18        | Rudrick    | Brian       | Brian Rudrick             | 152   | 11537 |
| 19        | Shapiro    | Jeffrey     | Jeffrey Shapiro           | 350   | 11027 |
| 20        | Stokes     | Fernando    | Fernando Stokes           | 585   |       |
| 21        | Thai       | Hoan        | Hoan Thai                 | 436   | 12434 |
| 22        | Welte      | Raymond     | Raymond Welte             | 556   | 10303 |
| 23        | Weston     | Michael     | Michael Weston            | 151   | 10268 |
| 24        | DELGADO    | JOSE        | Jose Delgado              | 100   |       |
| 25        | BRIGHT     | Brenda      | Brenda Bright             | 127   | -     |
|           | JOLLY      | JOHN        | John Jolly                | 573   |       |
| 21        | Dunn       | Thomas      | Thomas Dunn               | 4363  |       |
| 28        | Speed      | N. Nandi    | N. Nandi                  | 534   |       |
| 29        | Medley     | ERIC        | Eric Medley               | 543   |       |

# FIELD OPERATIONS PROCEDURE REVIEW

SATURDAY- JUNE 25 ,2011

|   |            |
|---|------------|
| INSTRUCTORS: Joseph Durante, Jose Delgado & Richard Herbert | AUDITORIUM |
|---|------------|

|      | LAST NAME : | NAME :               | SIGN NAME :             | PR#  | ADP # |
|------|-------------|----------------------|-------------------------|------|-------|
| ✓ 1  | Adams       | Shawn                | <i>[Signature]</i>      | 4041 | 11210 |
| ✓ 2  | Bakeoven    | James                | <i>[Signature]</i>      | 4178 | 11330 |
| ✓ 3  | Bright      | Leroy                | <i>[Signature]</i>      | 4117 | 11277 |
| ✓ 4  | DeJesus     | Hector               | <i>[Signature]</i>      | 4248 | 11382 |
| ✓ 5  | Di Mezzo    | James                | <i>[Signature]</i>      | 4020 | 11191 |
| ✓ 6  | Fox         | Lawrence             | <i>[Signature]</i>      | 4425 | 11484 |
| - 7  | Gambino     | Joseph               | 7/12/11                 | 4264 | 11388 |
| ✓ 8  | Harding     | David                | <i>[Signature]</i>      | 4031 | 11202 |
| ✓ 9  | Holmes      | Cornell              | <i>[Signature]</i>      | 4342 | 12064 |
| ✓ 10 | Jackson     | Steven               | <i>[Signature]</i>      | 4382 | 11457 |
| ✓ 11 | Kane        | Dennis               | <i>[Signature]</i>      | 4195 | 11346 |
| ...  | Latorre     | Jose                 | <i>[Signature]</i>      | 4483 | 11520 |
| ✓ 13 | McFadden    | Carl                 | <i>[Signature]</i>      | 4036 | 11206 |
| ✓ 14 | Mincer      | Joseph               | <i>[Signature]</i>      | 4379 | 11455 |
| ✓ 15 | Offenback   | William              | <i>[Signature]</i>      | 4481 | 11518 |
| ✓ 16 | Paul        | James                | <i>[Signature]</i>      | 4238 | 11376 |
| ✓ 17 | Peluyera    | Wanda                | <i>[Signature]</i>      | 4135 | 11291 |
| ✓ 18 | Pyle        | Gary                 | <i>[Signature]</i>      | 4645 | 11566 |
| ✓ 19 | Santos      | Edwin                | <i>[Signature]</i>      | 4239 | 11377 |
| 20   | Spanudis    | William              | 7/12/11                 | 4600 | 11551 |
| ✓ 21 | Stinson     | Mark                 | <i>[Signature]</i>      | 4415 | 11478 |
| ✓ 22 | Szymanski   | <del>MARK</del> Mark | <i>[Signature]</i>      | 4151 | 11306 |
| 23   | Vega        | Jose                 | <i>[Signature]</i>      | 4376 | 11453 |
| ✓ 24 | Yates       | Daniel               | <i>[Signature]</i>      | 4474 | 11513 |
| 25   | -           |                      |                         |      |       |
| ✓ 27 | QUINN       |                      | SIGNER IN ON NEXT SHEET |      |       |
| 28   |             |                      |                         |      |       |
| 29   |             |                      |                         |      |       |

? 52

worked

# FIELD OPERATIONS PROCEDURE REVIEW

TUESDAY & WEDNESDAY- JULY 12,13,2011

INSTRUCTORS: Joseph Durante,  
Carlos Rojas, Jose Delgado & Richard  
Herbert

## AUDITORIUM

|    | LAST NAME : | FIRST NAME : | SIGN NAME :                   | PR#  | ADP # |
|----|-------------|--------------|-------------------------------|------|-------|
| 1  | Ford        | Terrance     | <i>Terrance Ford</i>          | 4344 | 11432 |
| 2  | Gallagher   | Paul         | <i>Paul Gallagher</i>         | 4155 | 11310 |
| 3  | Cullen      | Bryan        | <i>Bryan Cullen</i>           | 4075 | 11240 |
| 4  | Spanudis    | William      | <i>William Spanudis</i>       | 4600 | 11551 |
| 5  | McDevitt    | Robert       | <i>Robert McDevitt</i>        | 4172 | 11325 |
| 6  | Munford *   | Lonny        | <i>Lonny Munford</i>          | 4313 | 11414 |
| 7  | Smith       | Whitney      | <i>Whitney Smith</i>          | 4523 | 11527 |
| 8  | Gambino *   | Joseph       | <i>Joseph Gambino</i>         | 4264 | 11388 |
| 9  | Hill        | Wayne        | <i>Wayne Hill</i>             | 4325 | 11420 |
| 10 | Felder      | Damon        | <i>Damon Felder</i>           | 4045 | 11214 |
| 11 | Dunne       | Ryan         | <i>Ryan Dunne</i>             | 4043 | 11212 |
| 12 | Arington    | William      | <i>William Arington</i>       | 4081 | 11245 |
| 13 | Jackson     | Corey        | <i>Corey Jackson</i>          | 4127 | 11283 |
| 14 | Biddle      | Robert       | <i>Robert Biddle</i>          | 4228 | 11941 |
| 15 | Williams *  | John         | <i>John Williams</i> / 8/3/11 | 4263 | 11954 |
| 16 | Donaghy     | David        | <i>David Donaghy</i>          | 4319 | 11417 |
| 17 |             |              |                               |      |       |
| 18 |             |              |                               |      |       |
| 19 |             |              |                               |      |       |
| 20 |             |              |                               |      |       |
| 21 |             |              |                               |      |       |
| 22 |             |              |                               |      |       |
| 23 |             |              |                               |      |       |
| 24 |             |              |                               |      |       |
| 25 |             |              |                               |      |       |
| 26 |             |              |                               |      |       |
| 27 |             |              |                               |      |       |
| 28 |             |              |                               |      |       |
| 29 |             |              |                               |      |       |

# FIELD OPERATIONS PROCEDURE REVIEW

TUESDAY & WEDNESDAY- JULY 12,13,2011

| INSTRUCTORS: Joseph Durante, Carlos Rojas, Jose Delgado & Richard Herbert |              | <b>AUDITORIUM</b>      |     |       |
|---|--------------|------------------------|-----|-------|
| LAST NAME :   | FIRST NAME : | SIGN NAME :            | PR# | ADP # |
| 1 Lipski  | Stephen      | <i>[Signature]</i>     | 198 | 10321 |
| 2 Donaldson   | Allan        | <i>[Signature]</i>     | 217 | 10324 |
| 3 Eck   | Gerald       | <i>[Signature]</i> 132 | 295 | 11469 |
| 4 Bream   | Ryan         | <i>[Signature]</i>     | 132 | 12657 |
| 5 Sullivan  | Timothy      | <i>[Signature]</i>     | 300 | 10892 |
| 6 Howard  | Jacob        | <i>[Signature]</i>     | 134 | 11170 |
| 7 McAndress   | Vincent      | <i>[Signature]</i>     | 178 | 11172 |
| 8   |              | <i>[Signature]</i>     |     |       |
| 9   |              | <i>[Signature]</i>     |     |       |
| 10  |              |                        |     |       |
| 11  |              |                        |     |       |
| 12  |              |                        |     |       |
| 13  |              |                        |     |       |
| 14  |              |                        |     |       |
| 15  |              |                        |     |       |
| 16  |              |                        |     |       |
| 17  |              |                        |     |       |
| 18  |              |                        |     |       |
| 19  |              |                        |     |       |
| 20  |              |                        |     |       |
| 21  |              |                        |     |       |
| 22  |              |                        |     |       |
| 23  |              |                        |     |       |

*Tues*

*Tues*

1(b-5)





1(b-6)

Field Service Training Department

M O A T G O M E R Y

Supervisor: Jose Delgado

Leak refresher / tempered meters

6-21-11

|    | Payroll | Name ( Print )       | Signature          |
|----|---------|----------------------|--------------------|
| 1  | 9782    | Betz, Robert         | Robert Betz        |
| 2  | 9973    | Boukidis, Michael    | Michael Boukidis   |
| 3  | 9264    | Burnett, Jerome      | Jerome Burnett     |
| 4  | 9929    | Cannon, Lawrence     |                    |
| 5  | 9202    | Carter, Wade         | Wade Carter        |
| 6  | 9719    | Clark, Andrew        |                    |
| 7  | 9907    | Colbert, John        |                    |
| 8  | 9788    | Colon, Albert        | Albert Colon       |
| 9  | 9892    | Cruz, McAuley        | McAuley Cruz       |
| 10 | 9314    | Corbett, John        | John Corbett       |
| 11 | 9753    | Cyriaque, Larrieux   |                    |
| 12 | 9256    | DeLeon, Enrique      |                    |
|    | 9712    | DiDio, Ralph         | Ralph DiDio        |
| 14 | 9974    | Dunn, Michael        |                    |
| 15 | 9944    | Farrell, Neil        | Neil Farrell       |
| 16 | 9944    | Farrinas, Philip     | Philip Farrinas    |
| 17 | 9937    | Fuller, Thomas       | Thomas Fuller      |
| 18 | 9631    | Gares Jr., Thomas    | Thomas Gares Jr.   |
| 19 | 9358    | Givens, Darnell      | Darnell Givens     |
| 20 | 9932    | Hidey, Robert        | Robert Hidey       |
| 21 | 9947    | Hudson, Michael      | Michael Hudson     |
| 22 | 9925    | Kelly, James         | James Kelly        |
| 23 | 9257    | Kilbride, Thomas     | Thomas Kilbride    |
| 24 | 9890    | Krokenberger, Alfred |                    |
| 25 | 9923    | Lipinski, Krzysztof  | Krzysztof Lipinski |
|    | 243     | Henry Short          | Henry Short        |
| 27 | 127     | BEVERLEY BRIGBT      | Beverley Bright    |

Field Service Training Department

MONTGOMERY

Supervisor: Jose Delgado

Leak refresher / tempered meters

6-21-11

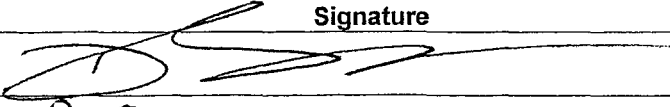
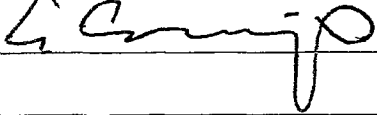
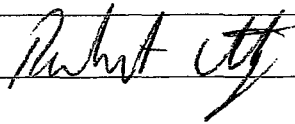
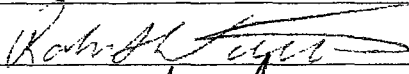
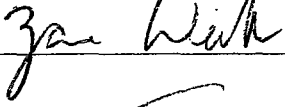




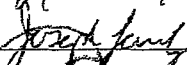
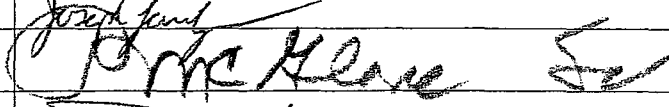




|    | Payroll | Name (Print)         | Signature                     |
|----|---------|----------------------|-------------------------------|
| 1  | 9987    | Lopez, Eric          | <i>Eric Lopez 9987</i>        |
| 2  | 9981    | Lyon, Michael        |                               |
| 3  | 9305    | McDonough, Michael   |                               |
| 4  | 9215    | McGlone Jr., Patrick |                               |
| 5  | 9277    | McKee, John          |                               |
| 6  | 9872    | McMullen, Patrick    | <i>Patrick McMullen</i>       |
| 7  | 9754    | McNichols, David     | <i>David McNichols</i>        |
| 8  | 9961    | Michalowski, Stephen | <i>Stephen P. Michalowski</i> |
| 9  | 9883    | Miller, Timothy      | <i>Tim Miller</i>             |
| 10 | 9435    | Pabon, Ricky         | <i>Ricky Pabon</i>            |
| 11 | 9224    | Palmer, Ryan         | <i>Ryan Palmer</i>            |
| 12 | 9924    | Pereira, Jose        | <i>Jose Pereira</i>           |
|    | 9321    | Perez, Felipe        | <i>Felipe A. Perez</i>        |
| 14 | 9993    | Pizzo, Michael       |                               |
| 15 | 9568    | Plunkett, Justin     | <i>Justin Plunkett</i>        |
| 16 | 9855    | Plunkett, Terrence   | <i>Terrence Plunkett</i>      |
| 17 | 9995    | Purcell, Ryan        | <i>Ryan Purcell</i>           |
| 18 | 9551    | Reels, Bernard       | <i>Bernard Reels</i>          |
| 19 | 9852    | Rivera Jr., William  | <i>William Rivera Jr.</i>     |
| 20 | 9888    | Rivera, Joseph       |                               |
| 21 | 9966    | Rodgers, Michael     | <i>Michael Rodgers</i>        |
| 22 | 9309    | Rowley, Francis      | <i>Francis Rowley</i>         |
| 23 | 9727    | Shaw, Thomas         |                               |
| 24 | 9954    | Shensky, Joshua      | <i>Joshua Shensky</i>         |
| 25 |         |                      |                               |
| 27 |         |                      |                               |

Field Service Training Department

MONTGOMERY

Supervisor: Jose Delgado Leak refresher / tempered meters

6-21-11

|    | Payroll | Name ( Print )   | Signature  |
|----|---------|------------------|--|
| 1  | 9724    | Simeo, Damien    |    |
| 2  | 9207    | Smigo, Anthony   |    |
| 3  | 9880    | Smith, Brian     |  |
| 4  | 9722    | Stephen, Davis   |  |
| 5  | 9203    | Stone, David     |  |
| 6  | 9955    | Utz, Robert      |    |
| 7  | 9497    | Velez, Natalio   |  |
| 8  | 9404    | Wall, James      |  |
| 9  | 9780    | Watford, Robert  |    |
| 10 | 9302    | Weeks, Zane      |    |
| 11 | 9918    | Wissman, William |  |
| 12 | 9886    | Wolf, Raymond    |   |
|    | 9558    | melvin. william  |  |
| 14 | 1290    | Fred Mac Connell |  |
| 15 | 9867    | Nicholas King    |  |
| 16 | 9898    | Joe Unelst       |   |
| 17 | 9266    | P MC GLOVE       |  |
| 18 | 9508    | DENNIS DE SANTIS |  |
| 19 | 9287    | Adrian MILKY     |  |
| 20 | 9287    | VINCENT ROSA     |  |
| 21 | 9560    | STAN MYCHACK     |  |
| 22 |         |                  |  |
| 23 |         |                  |  |
| 24 |         |                  |  |
| 25 |         |                  |  |
| 26 |         |                  |  |
| 27 |         |                  |  |

# STREET LEAK meeting. 6-22-2011

PORTER STATION

| Date           | NAME                       | SIGNATURE            |
|----------------|----------------------------|----------------------|
| 1 6/22/11      | Bertele, Andrew - 9777     | Andrew Bertele       |
| 2 6/22/11      | Blazejewski, Ed - 9726     | Ed Blazejewski 9726  |
| 3 6/22/11      | Byrd, Idriss - 9908        | Idriss Byrd          |
| 4 22 June 2011 | Carrington, Leslie - 9634  | Leslie Carrington    |
| 5 6/22/11      | Cipparone, Joseph - 9986   | Joe Cipparone        |
| 6 6-22-11      | Crossan, Michael - 9381    | Michael Crossan      |
| 7              | Cureton, Joel - 9902       |                      |
| 8              | Cyle, David - 9265         |                      |
| 9              | DeSantis, Dennis - 9508    |                      |
| 10             | Diskin, Edward - 9254      |                      |
| 11 6-22-11     | Dunn, Anthony - 9322       | Anthony Dunn         |
| 12 6-22-11     | Dupree, Anthony - 9885     | Anthony Dupree       |
| 13 6-22-11     | Eife, Donald - 9963        | Donald Eife          |
| 14 6-22-11     | Evers, Edward - 9911       | Edward Evers         |
| 15             | Feeney, Joseph - 270       |                      |
| 16 6-22-11     | Feliciano, Angel - 9379    | Angel Feliciano      |
| 17 6-22-11     | Felintin, David - 9991     | David Felintin       |
| 18             | Ferguson, Randolph - 9388  |                      |
| 19             | Fluellen, Arletha - 9334   |                      |
| 20 6/22/11     | Fredell, Jarad - 9740      | Jarad Fredell 9740   |
| 21             | Fredericks, Michael - 9453 |                      |
| 22 6/22/11     | Gaetano, Pascale - 9752    | Pascale Gaetano 9752 |
| 23             | Gallagher, George - 9271   |                      |
| 24 6/22/11     | Gaskins, George - 9270     | George Gaskins #9270 |
| 25 6-22-11     | Gil, Jesse - 9553          | Jesse Gil 9553       |
| 26 6-22-11     | Haynes, Jason - 9951       | Jason Haynes         |
| 27 6-22-11     | Huggins, Kenneth - 9916    | Kenneth Huggins      |
| 28             | Jefferson, Burton - 529    |                      |
| 29 6/22/11     | Johnson, Dwight - 9421     | Dwight Johnson       |
| 30 6/22/11     | Jones Jr, Tomil - 9450     | Tomil Jones Jr       |
| 31             | Jones, Brennan - 9513      |                      |

6/22/11

0127

Beverly Hughes

|   |         |  |      |                     |
|---|---------|--|------|---------------------|
| 2 |         | Keebler, John - 566                          |      |                     |
| 3 | 6/22/11 | Kelly, Marcus - 9512                         | 9512 | Mark Kelly          |
| 4 | 6/22/11 | Ladson, Rasheed - 9957                       | 9957 | Rasheed             |
| 5 |         | Lee, Walker - 9294                           |      |                     |
| 6 | 6/22/11 | Lewis, Corey - 9741                          | 9741 | Corey Lewis         |
| 7 | 6/22/11 | Little, Joseph - 9337                        | 9337 | Joseph Little       |
| 8 | 6-22-11 | McCormick, Ronald - 9440                     | 9440 | Ronald McCormick    |
| 9 | 6-22-11 | McGrath, William - 9375                      |      | William McGrath     |
| 0 |         | McIntire, Anthony - 9336                     |      |                     |
| 1 | 6/22/11 | McKeown, Michael - 9471                      | 9471 | M. B. McKeown       |
| 2 |         | McSorley, John - 9333                        |      |                     |
| 3 | 6/22/11 | Molyneux, John - 9219                        | 9219 | John Molyneux       |
| 4 | 6-22-11 | Morgan, Gary - 9743                          |      | Gary Morgan         |
| 5 |         | Mossman, John - 9589                         |      |                     |
| 6 | 6/22/11 | Myers, Roy - <sup>9473</sup> <del>9424</del> |      | Roy Myers           |
| 7 | 6/22/11 | Oglesby, Ralph - 9750                        |      | Ralph Oglesby       |
| 8 |         | Passa, Vince - 9287                          |      |                     |
| 9 |         | Pietropaolo, James - 9319                    |      |                     |
| 0 |         | Pinto, John - 9286                           |      |                     |
| 1 | 6-22-11 | Polito, Mark - 9282                          |      | Mark Polito         |
| 2 |         | Pollag, Richard - 9693                       |      |                     |
| 3 | 6-22-11 | Pownall, Ralph - 9331                        | 9331 | Ralph Pownall       |
| 4 | 6-22-11 | Rambo, George - 9550                         |      | George Rambo        |
| 5 | 6-22-11 | Redding, Dan - 9299                          |      | Dan Redding         |
| 6 | 6/22/11 | Rishkofski, Terrence - 9556                  |      | Terrence Rishkofski |
| 7 | 6/22/11 | Sawyer, John - 9630                          |      | John Sawyer         |
| 8 | 6/22/11 | Schiavo, Joseph - 9461                       |      | Joseph Schiavo      |
| 9 | 6/22/11 | Schmitz, Christopher - 9755                  |      | Christopher Schmitz |
| 0 | 6/22/11 | Schuck, John - 9542                          |      | John Schuck         |
| 1 | 6-22-11 | Scott, Darrell - 9744                        |      | Darrell Scott       |
| 2 | 6-22-11 | Scott, Kaiseem - 9996                        |      | Kaiseem Scott       |
| 3 | 6-22-11 | Shelton, Philip - 9894                       |      | Philip Shelton      |
| 4 | 6/22/11 | Simeo, Nicholas - 9989                       |      | Nicholas Simeo      |
| 5 |         | Skipper, Derek - 9412                        |      |                     |

|    |         |                          |      |                  |
|----|---------|--------------------------|------|------------------|
| 66 |         | Smith, James - 9910      |      |                  |
| 67 |         | Stead, Damon - 9863      |      |                  |
| 68 | 6/22/11 | Stevenson, Arthur - 9318 | 9318 | Arthur Stevenson |
| 69 | 6/22/11 | Strohm, Harry - 9245     | 9245 | Harry Strohm     |
| 70 |         | Taylor, Don - 9327       |      |                  |
| 71 | 6-22-11 | Thorsen, Kyle - 9854     | 9854 | Kyle Thorsen     |
| 72 |         | Torres, Ivan - 9502      |      |                  |
| 73 | 6-22-11 | Tracey, Michael - 9310   |      | Michael Tracey   |
| 74 | 6/22/11 | Trainor, Michael - 9992  |      | Michael Trainor  |
| 75 |         | Utley, Terry - 9893      |      |                  |
| 76 | 6/22/11 | Walerski, Stanley - 9941 |      | Stanley Walerski |
| 77 |         | Warfield, Rodney - 664   |      |                  |

8  
SEARCHED 5445  
SERIALIZED 10/15

9 6-22-11  
Smith, James 9900  
James Smith

30 6-22-11  
Williams, Deen 9748  
Deen Williams

81 6-22-11  
Paul Rebilly

2 6-22-11  
MARK Glover 9686

53 6/22/11  
Christopher Weiszer 9685

4 6/22/11  
Ryan Baldwin Ryan Baldwin

5 6/22/11  
Ed Morrone #9804

6 6/22/11  
Christopher White 9709  
Christopher White

BELFIELD

St. L. K. Reister (2 ARS)

| Employee           | Payroll           | Date      |                     |
|--------------------|-------------------|-----------|---------------------|
| Alburger, William  | 9610 ✓            | 6-23-11   | Wm Al               |
| Andrews, Donald    | 9901 ✓            | 6-23-11   | Donald Andrews      |
| Bell, Ronald       | 9420 ✓            | 6-23-11   | 12-23-11 R. Bell    |
| Bolger, Hanif      | 9928              |           |                     |
| Brangan, William   | 9983 ✓            | 6-23-11   | William Brangan     |
| Carcel, James      | 9786 ✓            | 6-23-11   | J. Carcel           |
| Carolina, Leroy    | 9967              |           |                     |
| Cichonski, Justin  | 9747              |           |                     |
| Clark, T.C.        | 9408 ✓            | 6/23/11   | T.C. Clark          |
| Cleveland, Jamar   | 9778              |           |                     |
| Cole, Cecil        | 9795 ✓            | 6-23-11   | Cecil Cole          |
| Coles, Christopher | 9706 ✓            | 6-23-11   | Chris Coles         |
| Cowan, Kimberly    | 9969              |           |                     |
| Cunningham, Chris  | 9976 ✓            | 6-23-11   | Chris Cunningham    |
| Daulerio, Joseph   | 9637              |           |                     |
| Diaz, Rafael       | 9952              |           |                     |
| Faulks, Robert     | 9248 ✓            | 6-23-11   | Robert Faulks       |
| Floyd, Michael     | 9960 ✓            | 6-23-11   | Michael Floyd       |
| Galliani, Antonio  | 9772 ✓            | 6-23-11   | Antonio Galliani    |
| Garret, Eric       | 9432              |           |                     |
| Gibbons, Kevin     | 9466 ✓            | 6-23-11   | Kevin Gibbons       |
| Gilbert, Vince     | 9208 ✓            | 6-23-11   | Vince Gilbert       |
| Goode, Lamont      | 9984 ✓            | 6/23/11   | Lamont Goode        |
| Grooves, Joseph    | 9934              |           |                     |
| Healy, Robert      | 9301              |           |                     |
| Hoggard, Clarence  | 9895              |           |                     |
| Jackson, Jamal     | <del>9942</del> ✓ | 6-23-2011 | Jamal Jackson 9942  |
| Jackson, Jamie     | <del>9424</del> ✓ | 6-23-11   | Jamie Jackson 9424  |
| Johnson Mark       | 121               |           |                     |
| Jones Quentin      | 281               |           |                     |
| Knecht, Kevin      | 9980 ✓            | 6-23-11   | Kevin Knecht        |
| Lemmon, Garrett    | <del>9924</del> ✓ | 6-23-11   | Garrett Lemmon 9924 |
| Leslie, Mike       | <del>9416</del> ✓ |           |                     |
| Lewis, Eugene      | 9416              |           |                     |
| Marable, Malik     | 9213 ✓            | 6-23-11   | Malik Marable       |
| Marquez, Juan      | 9678 ✓            | 6-23-11   | Juan Marquez        |
| McGlone, Patrick   | 9304              |           |                     |
| Middleton, Harold  | <del>9355</del> ✓ | 6-23-11   | Harold Middleton    |
| Miller, Adam       | 9982              |           |                     |
| Monaghan Chris     | 9707 ✓            | 6-23-11   | Chris Monaghan      |
| Morris, Brian      | 9730              |           |                     |
| Piotrowicz, John   | 9732 ✓            | 6-23-11   | John Piotrowicz     |

30

Taylor, Don 9327 ✓ 6-23-11  
 Beverly Bright 9327 - 6-23-11









Street Leak Refresher

06/29/2011 TIOGA

| Name                   | Signature                 |
|------------------------|---------------------------|
| Dom Campagna #9231     | ✓ <i>Dom Campagna</i>     |
| Fran Long #9544        | ✓ <i>Fran Long</i>        |
| Robert Hayes #9232     | ✓ <i>Robert Hayes</i>     |
| Anthony Heffner #9587  | ✓ <i>Anthony Heffner</i>  |
| Robert Mallard #9431   | ✓ <i>Robert Mallard</i>   |
| John Morson #9742      | ✓ <i>John Morson</i>      |
| Angelo Monaco #9288    | ✓ <i>Angelo Monaco</i>    |
| Don Canty #9554        | ✓ <i>Don Canty</i>        |
| Terry Keough #9289     | ✓                         |
| Robert Highsmith #9267 | ✓ <i>Robert Highsmith</i> |
| Richard Barron #9970   | ✓ <i>Richard Barron</i>   |
| Richard Jackson #9586  | ✓ <i>Richard Jackson</i>  |
| Jeffrey Storino #9605  | ✓ <i>Jeffrey Storino</i>  |
| William Jennings #9561 | ✓ <i>William Jennings</i> |
| Timothy Beck #9348     |                           |
| Joseph McGarrity #9433 |                           |
| Frank Raddi #9438      | ✓ <i>Frank Raddi</i>      |
| Richard Cole #9237     |                           |
| Pat Donaghy            |                           |
| Vinny McAddress        | <i>Vinny McAddress</i>    |

**Field Service Training Department**

June 30, 2011

Supervisor: R.Herbert

Leak Refresher #212,230,285,280

|   | Payroll | Name ( Print )  | Signature       |
|---|---------|-----------------|-----------------|
| 1 | 0134    | Jacobs Howard ✓ | Jacobs Howard   |
| 2 | 9398    | Tim Beck ✓      | Tim Beck        |
| 3 | 9433    | Joe McGarrity ✓ | Joe McGarrity   |
| 4 | 9529    | Rich DiLucia ✓  | Richard DiLucia |
| 5 | 9723    | RAY FRYBIEK ✓   | Ray Frybick     |
| 6 |         |                 |                 |
| 7 |         |                 |                 |
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Field Service Training Department

June 30, 2011

Supervisor: R.Herbert

Leak Refresher #212,230,285,280

Meter Shop

| Payroll | Name (Print)           | Signature            |
|---------|------------------------|----------------------|
| 1 9259  | VON E. Morgan ✓        | Von E. Morgan        |
| 2 9504  | Bob GALLAGHER ✓        | Bob Gallagher        |
| 3 9240  | Bruce H Williams ✓     | Bruce Williams       |
| 4 9220  | Roland Lees ✓          | Roland Lees          |
| 5 9502  | Ivan A. TORRES ✓       | Ivan A Torres        |
| 6 9217  | Frank D. Georgiu ✓     | F. D. Georgiu        |
| 7 9112  | MARK McFETT ✓          | Mark McFett          |
| 8 9355  | Daniel P. Mersiewsky ✓ | Daniel P. Mersiewsky |
| 9 9664  | Pat Cunningham ✓       | Pat Cunningham       |
| 0 9580  | JM Conner ✓            | J. Conner            |
| 1 9222  | Mike Stroman ✓         | Mike Stroman         |
| 2 9292  | Keith Creston Sh ✓     | Keith Creston Sh.    |
| 3 9277  | Jack McKee ✓           | Jack McKee           |
| 4 9491  | ANDY Miller ✓          | Andy Miller          |
| 5 9495  | BRAD COOPER ✓          | Brad Cooper          |
| 6 9364  | Edy [unclear] ✓        | [unclear]            |
| 7 9581  | FRED DeRiBAS ✓         | Fred DeRiBas         |
| 8 9444  | TOM MASI ✓             | Tom Masi             |
| 9 9677  | Ed DAVIS ✓             | Ed Davis             |
| 0 9218  | TOM Gruber ✓           | Tom Gruber           |
| 1 586   | RON REESE ✓            | Ron Reese            |
| 2 9216  | T.J. SHAN ✓            | T.J. Shan            |
| 3 325   | Sean [unclear] ✓       | Sean [unclear]       |
| 4 416   | RONALD BLASZCZAK ✓     | Ronald Blaszcak      |
| 5 9223  | THOMAS SULLIVAN ✓      | Thomas Sullivan      |
| 6 9261  | Ken Johnson ✓          | Ken Johnson          |
| 7 300   | TIM SULLIVAN ✓         | Tim Sullivan         |



Field Service Training Department

July 13, 2011

Supervisor: Jose Delgado

FSD Leak Refresher Makeup

| Payroll           | Name ( Print )      | Signature |
|-------------------|---------------------|-----------|
| 1 9784            | BLOOM G.            |           |
| 2 9928            | BOLGER. H           | ✓         |
| 3 9783            | BONK J.             |           |
| 4 9967            | CAROLINA L.         |           |
| 5 9747            | CICHONSKI J.        | ✓         |
| 6 9778            | CLEVELAND, J        | ✓         |
| 7 9969            | COWAN K.            | ✓         |
| 8 9902            | CURETON J.          | ✓         |
| 9 9265            | CYLC D.             | ✓         |
| 10 9256           | DELEON E.           |           |
| 11 9952           | DIAZ R.             | ✓         |
| 12 9254           | DISKIN E.           |           |
| 1 9974            | DUNN M.             | ✓         |
| 14 9388           | FERGUSON R.         | ✓         |
| 15 9334           | FLUELLEN A.         | ✓  0377   |
| 16 9740           | FREDELL J.          | ✓         |
| 17 9453           | FREDERICKS M.       | ✓         |
| 18 9432           | GARRETT E.          | ✓         |
| 19 9670           | GOULD L.            | ✓         |
| 20 9934           | GROVES J.           | ✓         |
| 21 9301           | HEALY R.            | ✓         |
| 2 9895            | HOGGARD C.          |           |
| 3 9236            | HUDSON E.           |           |
| 4 <del>9784</del> | <del>JAMES D.</del> |           |
| 5 9289            | KEOUGH T.           | ✓         |
| 6 9890            | KROKENBERGER A.     | ✓         |
| 7 9294            | LEE W.              |           |

Field Service Training Department

July 13, 2011

Supervisor: Jose Delgado

FSD Leak Refresher Makeup

|    | Payroll | Name ( Print ) | Signature               |
|----|---------|----------------|-------------------------|
| 1  | 9958    | LEWIS E.       | ✓ <i>E. Lewis</i>       |
| 2  | 9981    | LYON M.        |                         |
| 3  | 9305    | MCDONOUGH M.   |                         |
| 4  | 9215    | MCGLONE JR. P. | ✓ <i>P. McGlone Jr.</i> |
| 5  | 9336    | MCINTIRE A.    |                         |
| 6  | 9221    | McMULLEN M.    |                         |
| 7  | 9589    | MOSSMAN J.     | ✓ <i>J. Mossman</i>     |
| 8  | 9621    | ODONNELL R.    | ✓ <i>R. O'Donnell</i>   |
| 9  | 9286    | PINTO J.       |                         |
| 10 | 9993    | PIZZO M.       |                         |
| 11 | 9855    | PLUNKETT T.    | ✓ <i>T. Plunkett</i>    |
| 12 | 9693    | POLLAG R.      | ✓ <i>R. Pollag</i>      |
| 13 | 9889    | POWELL C.      |                         |
| 14 | 9749    | QUENZER M.     | ✓ <i>M. Quenzler</i>    |
| 15 | 9965    | RANDT J.       | ✓ <i>J. Randt</i>       |
| 16 | 9703    | REDMOND A.     | ✓ <i>A. Redmond</i>     |
| 17 | 9309    | ROWLEY F.      |                         |
| 18 | 9877    | SCHMITT B.     | ✓ <i>Bruce Schmitt</i>  |
| 19 | 9756    | SCHMITT M.     |                         |
| 20 | 9204    | SCOTT A.       | ✓ <i>A. Scott</i>       |
| 21 | 9727    | SHAW JR. T.    | ✓ <i>T. Shaw Jr.</i>    |
| 22 | 9243    | SHORT H.       | ✓ <i>H. Short</i>       |
| 23 | 9412    | SKIPPER D.     |                         |
| 24 | 9863    | STEAD D.       | ✓ <i>D. Stead</i>       |
| 25 | 9722    | STEPHEN D.     | ✓ <i>Davis Stephen</i>  |
| 26 | 9203    | STONE D.       |                         |
| 27 | 9497    | VELEZ N.       |                         |



Field Service Training Department

July 13, 2011

Supervisor: Jose Delgado

FSD Leak Refresher Makeup

|    | Payroll | Name ( Print ) | Signature         |
|----|---------|----------------|-------------------|
| 1  | 9404    | WALL J.        |                   |
| 2  | 9696    | WATERS S.      | ✓ Steve Waters    |
| 3  | 9918    | WISSMAN W.     | ✓ William Wissman |
| 4  | 9940    | WOODSON S.     | ✓ Steve Woodson   |
| 5  | 9809    | NACRESA, W.    | ✓ W. Nacresa      |
| 6  | 9794    | Dr. James      | ✓ Dr. James       |
| 7  | 9237    | Rich Cole      | ✓ Richard Cole    |
| 8  |         |                |                   |
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5 HRS.

Field Service Training Department

July 13, 2011

Supervisor: Jose Delgado

FSD Leak Refresher Makeup

|    | Payroll | Name (Print)           | Signature            |
|----|---------|------------------------|----------------------|
| 1  | 178     | Vincent J. McAddress ✓ | Vincent J. McAddress |
| 2  | 132     | Gerald Eck ✓           | Gerald Eck           |
| 3  | 0300    | Tim Sullivan ✓         | Tim Sullivan         |
| 4  | 217     | Allan Donaldson ✓      | Allan Donaldson      |
| 5  | 134     | JACOB HOWARD ✓         |                      |
| 6  |         |                        |                      |
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BHRS

Field Service Training Department

July 14, 2011

Supervisor: Jose Delgado

FSD Leak Migration Class

|    | Payroll | Name ( Print )     |   | Signature                |
|----|---------|--------------------|---|--------------------------|
| 1  | 9911    | Edward Evers       | ✓ | Edward Evers             |
| 2  | 9803    | Damen Stead        | ✓ | Damen Stead              |
| 3  | 9907    | Vik W ColBERT      | ✓ | <del>Vik W ColBERT</del> |
| 4  | 431     | John Rizzo         | ✓ | John Rizzo               |
| 5  | 657     | Yachiao A. Chapman | ✓ | Yachiao Chapman          |
| 6  |         |                    |   |                          |
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Field Service Training Department

Date: 7-18-11

Supervisor: R. HERBERT

Class: 

| Roll   | Name (Print)    | Signature     |
|--------|-----------------|---------------|
| 1 9410 | DEREK SKIPPER ✓ | Derek Skipper |
| 2 9993 | MIKE PIZZO ✓    | Mike Pizzo    |
| 3      |                 |               |
| 4      |                 |               |
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1(b-7)

FIELD OPERATIONS. - Bulletins # 63, 230 227, 281

Meeting:

Date: June 2011

|      | <u>Print</u>     | <u>Sign</u>      |      |
|------|------------------|------------------|------|
| ✓ 1  | Michael Cosgrove | Michael Cosgrove | 6/24 |
| ✓ 2  | Joseph James     | Joseph James     | 6/24 |
| ✓ 3  | Joseph Kerr      | Joseph Kerr      | 6/27 |
| ✓ 4  | Abdier Serrano   | Abdier Serrano   | 6/27 |
| 5    | Louis Woods      | Louis Woods      | 6/27 |
| 6    | AARON FAUSTER    | Aaron Fauster    | 6/27 |
| 7    | DAN HARRIS       | Dan Harris       | 6/27 |
| ✓ 8  | DAVID PIERSON    | David Pierson    | 6/27 |
| ✓ 9  | ANTHONY DINA     | Anthony Dina     | 6/30 |
| ✓ 10 | ROBERTO GONZALEZ | Robert Gonzalez  | 6/30 |

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Prisoner Love

# Appendix A-2

2. PGW has revised a written procedure that establishes the parameters and steps needed to be taken by PGW field supervisors in notifying the electric utility to shut off the electric power during emergency situations.
  - (a) In the first quarter of 2011, PGW promulgated Distribution Department Bulletin #285 and revisions have been made to Distribution Department Bulletin # 212 in the following sections: III.A.3, “Dispatching Resources Available” revised to include the Philadelphia Electric Company (“PECO”). Additionally, under III.B.3 “Evacuation Procedure” the following language has been added: “Request Dispatching to notify PECO for assistance.” Lastly, the following language has been added to Bulletin No. 212 at III.B.2: “If there is an LEL reading in the general atmosphere of a property, request Dispatching to notify PECO for assistance.”
  - (b) On March 31, 2011, and again on October 11, 2011, training drills were conducted involving PGW and PECO personnel. These drills were designed to test coordination between the companies should the report of a gas leak require termination of electric service to the affected area.
  - (c) PGW emergency responders and field supervisors were re-trained and re-qualified (June 2011) on Emergency Response and the revised Distribution Department Bulletins. (Refer to Tab 1.)
  - (d) PGW made approximately 80 Calls for PECO assistance per the new procedure during PGW's peak operating season 2011-12.<sup>1</sup>
  - Supporting Documentation:
    - (a-1) Bulletin 212.
    - (a-2) Bulletin 285.
    - (b-1) Summary of PECO Test 3/31/2011;
    - (b-2) Evidence of Training Drill 10/11/2011. See also Item 2(d), which includes an entry dated 10/11/11, 1236 McKinley Street, **marked “Test.”**
    - (c) See Item (a-1); PECO Policy Concerning PGW Assistance.
    - (d) Call logs re: Requests for PECO Assistance.
  - Cross-References: Prayer for Relief at ¶ (d).  
Settlement, ¶ 23(b).

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<sup>1</sup> On May 17, 2012, the Director of Technical Utility Services issued a letter to all electric distribution companies (EDCs) and natural gas distribution companies (NGDCs) requesting information on existing procedures concerning electric and/or gas shut off in an emergency. If no procedures exist, the letter, for the first time, directs the establishment of such procedures between EDCs and NGDCs. This letter further encourages EDCs and NGDCs to work cooperatively and to consider improvements to their notification procedures. Accordingly, PGW will consider further revisions to its new notification procedure based on the outcome of this proceeding and (possibly) input from other EDCs and NGDCs as they implement this new requirement.  
{L0496818.1}



$$2(a-1)$$



FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS

**LEAK RESPONSE AND INVESTIGATION  
PROCEDURE**

Effective April 21, 2011

Bulletin Number #212  
Dated September 15, 2008

**I. Purpose**

To provide clear direction to PGW employees when they are responding to and investigating an odor complaint. Odor complaints may originate from the police or fire departments, other utilities, contractors, customers or the general public. Odor complaints must be investigated promptly. Any delay in responding to a reported odor complaint must immediately be brought to the attention of the Dispatcher on duty.

If the investigation reveals a gas leak, the leak must be evaluated and action taken in accordance with the guidelines outlined in this procedure. All leak indications must be investigated to identify any potential hazardous conditions. Once a hazardous condition is identified, immediate action must be taken to make conditions safe. **Action must be taken toward protecting people first and then property.**

The employee assigned to the investigation must assume (for any odor complaint investigation) that a hazardous condition exists. Only after an odor complaint investigation is completed shall an operator determine an appropriate classification.

**II. Definitions**

- AREA CHECK – The appropriate area to investigate the original reported odor complaint. This is determined by the nature of the notification (phone call) and the investigation itself. **Minimum** coverage should be 50 feet in all directions (approximately three row houses each way) from the odor complaint or any reading.
- BAR HOLE – a 1” diameter or larger hole probed into the ground in a uniform manner with the use of a steel bar. The depth of each bar hole should be along side and near the bottom of the structure (gas main or service line) being checked. All bar holes should be made in a uniform manner.
  - ◇ PURPOSE OF BAR HOLES – used to sample gas/air mixtures underground in an attempt to pinpoint the largest concentration of natural gas and the source of the leak.
- BUILDING LINE – the extended house line from the side of a building.
- CGI – Can’t Get In
- CURB LINE – The outside edge of the curb, where the curb meets the street. A directional identification must be noted on each curb line measurement. (Example: EWC = east of the west curb line)
- ENN – Entry Not Necessary; see section “III.B.1. What buildings must be checked?” (The use of the ENN rules does not apply to FSD technicians that are not qualified. The only FSD technicians qualified are “A” men and above.)



**FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS**

**LEAK RESPONSE AND INVESTIGATION  
PROCEDURE**

**Effective April 21, 2011**

**Bulletin Number #212  
Dated September 15, 2008**

- **FFW** – Generally means “Front Foundation Wall”. However, for a leak investigation the term also means to check “ALL APPROPRIATE BASEMENT WALLS”, all walls where a gas main (outside) may run adjacent to the building (not only the front wall).
- **FIRST RESPONDER** – term used to describe the first trained responder to arrive on scene of an emergency, accident, natural or human-made disaster, gas leak, fire or similar event. Such people may be PGW personnel, firefighters, police, other law enforcement or emergency medical services, or lay rescuers to deal with the situation and protect life and property.
- **GABLE END** – where the end (side) wall of a building does not connect to another building. On all reports that a gable end is indicated the direction of the gable end must also be recorded, example: a single dwelling on a north-south street shall have the address recorded and gabled end to the north and south. See example drawings.
- **GDI** – Gas Detection Instrument
- **GENERAL ATMOSPHERE** - is an open area within a room on any floor of a property. The general atmosphere is not behind a wall, in the corners of a room, between or against walls, floors, or in the area of the ceiling joist, or close to the FFW.
- **INCIDENT COMMAND CENTER** – a designated location used to coordinate activities and share information.
  - ◊ **INCIDENT COMMAND LOCATION - ON SCENE** – The location of the highest ranking PGW employee responsible for all activities at the job site.
- **LOWER EXPLOSIVE LIMIT (LEL)** – Lowest concentration (percentage) of gas in air needed for the gas to ignite when given an ignition source. Concentrations lower than LEL are “too lean” to burn. 5% gas in air is the LEL of PGW gas.
- **“M PACT” BAR HOLE** – a ¼” to 1” diameter hole probed into the ground in a uniform manner with the use of an insulated “M Pact O” tool. The depth of each bar hole should be approximately 14” deep but not to exceed 18”.
  - ◊ **PURPOSE OF “M PACT” BAR HOLE** – used to sample gas/air mixtures underground to determine if a gas leak exists on a natural gas facility and to determine the gas migration pattern if a leak exists.
- **MIGRATION** – the area of natural gas movement from and around the source of the leak.
- **MIGRATION LIMITS** – the outer boundaries of natural gas movement in all directions. A circle of “zero readings” around a migration pattern is necessary to establish the migration limit.



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- **ODOR COMPLAINT** – a report of a possible inside or outside gas odor, leak, explosion or other hazardous conditions which may involve gas pipelines, or other gas facilities, customer’s house piping, or appliances. All odors must be confirmed using a GDI.
- **OPERATOR** – a PGW Operations’ representative – technician, foreman, supervisor, etc.
- **ONE HOUSE CHECK**— a term used during a declared foreign odor allowing the technician or foreman to make a limited check for safety. Job must be within the area affected from the foreign odor. Permission must be obtained through the dispatcher or supervisor. See “Foreign odor” in “III.A. General Requirements” below.
- **OUTSIDE SOURCE** – (who calls in an odor) a PGW employee, other utility, police or fire personnel, contractors, customers and the general public.
- **PPM GDI GAS READINGS** – samples of the atmosphere taken with a parts per million (PPM) gas detection instrument. Any **INSIDE** reading qualifies as a reading and requires a physical action. An **OUTSIDE** reading of 2% LEL or higher is required in order to qualify as a recordable reading.
- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.
- **READING** – a repeatable deviation on a GDI or equivalent expressed in % LEL & % Gas scales.
- **SAFETY PERIMETER** – The boundary of an area outside of the influence of the leaking gas. Also known as a Collapse Zone by the Philadelphia Fire Department.
- **SUSTAINED READING** – a gas reading found after a bar hole or structure has been opened and is allowed to stabilize or ventilate. **NOTE:** This reading should be recorded on the final report.
- **UNIFORM MANNER** – all bar holes shall be spaced evenly and have the same size and depth.
- **UPPER EXPLOSIVE LIMIT (UEL)** – At concentrations above the UEL the gas has displaced so much air that there is not enough oxygen for the gas to burn. When readings are above the UEL, be aware that the gas concentration will come down though the explosive limit of gas when the source of the gas leak is removed or through ventilation. 15% gas in air is the UEL of PGW gas.
- **VENTILATE** – This term, when used in reference to buildings, structures, manholes and confined spaces, means the introduction of fresh air into the affected structure. Ventilation can be accomplished by opening doors and windows, breaking windows, opening basement grates, and removing manhole covers or lids to prevent or reduce the level of natural gas in the affected structure. This term, when used in reference to gas readings underground, means to draw residual natural gas from below the surface with the use of pneumatic mechanical devices.



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### III. Procedure

#### A. General Requirements

- **ACTION MUST ALWAYS BE TAKEN TOWARD PROTECTING PEOPLE FIRST AND THEN PROPERTY.**
- **All requirements listed throughout this procedure represent minimum requirements and are not meant to limit the Operator in making decisions where experience, safety and common sense indicates otherwise.**
- **All employees responsible for conducting leak investigations must be qualified per PGW Operator Qualification Plan.**
- Employees must wear all required personal protection equipment per PGW Policies.
- Odor complaints are to be dispatched promptly regardless of their source.
- Any delay in arrival to the location of the complaint must be reported to the Dispatcher immediately.
- Conduct all odor complaint investigations as if a hazard exists until it is determined otherwise. Determine the extent of the hazard (leak) by making appropriate GDI checks, observations and tests.
- Review all information given on the order.
- If possible, enter all buildings through the main entrance.
- If available, interview the caller for relevant information.
- If during the initial leak investigation it is determined that a hazard exists, call the Dispatcher immediately providing details of the existing hazard.
- **Mobile phones must be turned off before entering properties for the leak investigation.** All communications must be conducted outside in a natural gas free atmosphere.
- If you suspect that the source of the leak involves any portion of PGW's system that would require a Pressure Operation, notify Dispatching immediately.
- Foreign Odors - on a wide spread foreign odor incident, when instructed by a Dispatcher or Supervisor, the leak investigation can be limited to one premise and a check of structures (boxes) directly outside that premise ("one house check", see definitions). If gas readings are discovered follow the complete leak investigation procedure.
- Leak indications may come from sources other than natural gas (marsh gas, gasoline spills, etc.).
- If there are other "First Responders" agencies (PFD, PPD) on location, discuss with them as to their actions already completed and any findings of their investigation.
- Immediately establish a communications chain to share pertinent information with all PGW First Responders and any other First Responder agencies.



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1. Forced Entry

Upon the initial visit, if any house that requires a leak investigation per this procedure is apparently locked and secure and it is not possible to gain entrance, make an exterior examination. Examine at the basement windows, mailbox or any other place where an indication of the inside atmosphere may be sampled. If an odor or reading of gas is detected coming from a premise either from outside that premise or from an adjoining property, make forcible entry through a window or a door.

- If a forcible entry is required, inform the Dispatcher. The Dispatchers will call 911. Give the Dispatcher the address of every house(s) requiring forced entry.
- Do as little damage as possible.
- During normal business hours notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6532 (voice mail).
- Sign and leave Form #6489 to inform the customer that it was necessary for PGW to enter the premise.
- Complete a detailed Accident Report (Form 119) and submit it at the end of your shift.

2. Chain of Command – Incident Command Center

When **both Distribution and Field Services *union-covered personnel*** are on location, the **Distribution Foreman is in charge and responsible** for following all procedures, directing make safe procedures and then continuing the investigation.

A Field Service Department Supervisor or Distribution Department Supervisor has the authority to supersede the Distribution Foreman.

When **both Distribution and Field Services *supervision*** are on location of a leak investigation, the highest ranking **Distribution Supervisor is in charge**.

All actions will be communicated and coordinated through the person in charge. If there is a change of the person in charge; relay all pertinent information to the person taking control on the job site, then announce the change to key personnel.

As additional PGW personnel arrive they should report to the person in charge who will provide instructions and a summary of current conditions and actions taken as well as any actions underway.

PGW Incident Command Center will be where the person in charge is located. If there are other agencies on location (PFD, PPD) that have the ultimate responsibility for the event (i.e., PFD at fire or explosion), the PGW person in charge will coordinate all actions and findings through that agency's Incident Command Center. Once PGW reports to the location of the



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controlling agency's command center, PGW must maintain continuous representation at that location.

3. Dispatching Resources Available:

- Distribution Crew(s)
- FSD Technician(s)
- Emergency Grease Equipment
- Cut-Cap Trailer
- Excavation Equipment including Vacuum Excavation truck
- FSD and/or Distribution Supervision
- Pressure Force Supervision and Crews
- Police or Fire Departments through 911 to assist (evacuations, safety perimeter, traffic control, public safety, etc)
- PECO
- PWD
- Notification or dispatching of Supervisory Chain of Command.

4. Odor

If during the course of an investigation a gas odor is detected, the source must be confirmed as soon as possible using a GDI instrument. The course of action may include further migration checks and eventual classifying of the leak. If required, request assistance immediately through the Dispatcher if the odor appears to be coming from inside a building.

B. Inside Leak Investigation (on any odor complaint, inside or outside)

1. What Buildings Must Be Checked (See attached illustrations of this procedure)

- Check the premise closest to the odor complaint. If the odor complaint was reported by a passerby, concentrate on the premise closest to the reported odor.
- If a **reading or odor is found inside** the first premise and the source is suspected from any Distribution facility (mains and services) or another building, the adjoining building(s) must be checked. (Note: in the case of a twin house (gable end) property, the unattached house must be attempted to be checked but can be considered for Entry Not Necessary (see section B.4., and see illustrations).
- Continue to investigate adjoining buildings until no gas reading is found.
- If **no reading or odor is found inside** the initial premise, attempt to enter and check properties on either side. These properties may be considered for "Entry Not Necessary" (See Section B.4.).



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A building must be checked when a reading is found within 5 feet of the building, including the side of the building (Distribution also required).

- A building must be checked when a reading is found inside the curb line in front of the premise and a bar hole cannot be made within 5 feet.
- A building must be checked when a vent box reading is found in front of the premise, (Distribution also required).
- A building must be checked when there is a reading over the service and the service is steel installed in 1975 or before (older).
- Considerations should be made to check additional properties when there is wall to wall paving or frost conditions.

2. Performing The Inside Leak Investigation

- Turn on and zero the GDI using fresh air before entering any premises. Follow the operating instructions for the GDI found in your handbook.
- Normally, the first premise to visit should be the house of the odor complaint. However, the first premise requiring entry may be dictated by the intensity and location of the hazard (leak).
- Knock on door – DO NOT USE THE DOOR BELL.
- Identify yourself. Verify the customer's name and address (if it is the order address).
- **The operator should not switch lights on or off. The customer must also be warned not to switch any electric devices on or off, or to smoke during the investigation.**
- Question the customer regarding the odor complaint regarding the location and intensity of the odor
- Go to the area of where the leak or odor is reported to exist and determine the source of the odor. Take additional GDI readings of the atmosphere as you proceed to this area.
- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- **See Evacuation Procedure described in Section III.B.3 (below).**
- If your investigation confirms a gas leak inside, eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. **Ventilate** the premise. Attempt to shut off gas from the curb box to the property.





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- If there is an LEL reading in the general atmosphere of a property, request Dispatching to notify PECO for assistance.
- If the leak is found inside on exposed piping, control the escaping gas- make conditions safe.
- Continue an inside investigation with the use of a GDI. Examine all appliances and piping, fuel line, meter and meter connections. Also, check the location of water service, gas service and sewer pipe where they enter the building. Check the foundation walls that are adjacent to streets.
- A foundation wall check shall include GDI sampling at any utility entrance through the wall such as gas, water, sewer, cable, drains, electric service and additionally any major cracks or holes that could provide an access for leaking gas. Check all foundation walls that are adjacent to streets.
- Continue to check affected and adjoining properties. Monitor and report any change in conditions to Dispatching.
- All leaks inside must be found and resolved before the employee investigating leaves the job site or is relieved from the job site by someone who will continue the investigation.
- Methods that can be used for an investigation to verify the source of an inside gas odor are:
  - ◇ odor check (smell)
  - ◇ sound check (listening for hissing or blowing)
  - ◇ GDI
  - ◇ soapy solution
- A meter and piping test *is required* to verify the source of an inside gas odor. (for exceptions such as master meters or commercial properties, call a Supervisor for assistance).
- Any inside investigation that has a reading coming into the building from an outside source requires a Distribution Crew. FSD will notify the Dispatcher to call for Distribution. Communication by cellular phone with the Dispatcher shall be made from outside the affected property. Report the initial readings found, as well as any subsequent changes to the initial leak investigation findings. As soon as possible, transmit an electronic message via Mobile Mail confirming the voice contact and update the AIMS Leak Survey screen.
- When a leak is discovered on an appliance covered by PLP, the technician should complete the repair or refer to a qualified PGW Technician.
- (Distribution) In all cases where Distribution responds to an odor complaint and FSD is on location, it is the Foreman's responsibility to examine the FFW(s) and take atmospheric GDI readings. Distribution Foremen or FSD techs are not to enter evacuate buildings to examine the FFW(s) or take atmospheric readings until action has been taken to reduce gas levels below **LEL level**.



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- After checking all inside premises, monitor inside readings and continue an outside leak investigation.
- If a leak is discovered inside the premise, follow the guidelines listed in the table below:

| Leak discovered on:  | Repair procedure:   |
|--|---|
| If a leak is discovered on <u>PGW piping</u> (from the head of service up to the meter outlet) | Shut off gas supply by closing the curb valve and/or head of service valve (if available) or install the appropriate size service stopper. Make repair and restore gas service to the customer.   |
| If a leak is discovered on <u>customer piping</u> (downstream of meter connections)            | <p>A repair will be permitted on 1 ¼” and smaller thread leaks only. The repair will be completed by using the established method of installing Perma-Gum on the leaking threads.</p> <p>After the leak has been repaired, the Technician will recheck the repaired joint with a GDI to verify there is no leakage.</p> <p>If there are no readings on the GDI, the Technician will issue a Class B hazard tag referring the customer to seek assistance from the appropriate Contractor to make the permanent repair.</p> <p>The Technician will list all information on MDT and refer order to the FSD Training Section.</p> <p>In cases involving multiple units, industrial or commercial applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.</p> |
| Leaks involving any type of shut off valve, union, cracked or defective fitting.               | <p>Leaks at shutoff valves and fittings can be permanently repaired by greasing in the valve or tightening the fitting.</p> <p>In cases where these actions do not repair the leak, the defective part of the fuel line must be disconnected and capped if possible. If the fuel line can not be disconnected, the gas must be shut off* with locking device and plug swivel at the meter.</p> <p>A Class A hazard tag must be issued referring customer to the appropriate Contractor to make the permanent repair.</p> <p>The Technician will also complete a temporary shut off work order. In cases involving multiple units, industrial or commercial applications; contact a SUPERVISOR to determine an alternate method of repair and recheck.</p>   |
| If a leak is discovered and isolated to an appliance   | <p>Shut gas off to the appliance.</p> <p>Issue the appropriate hazard tag.</p>  |
| General Notes concerning   | If a residential premise has been shut off and relies on gas heat, also provide a “CO and Emergency assistance information card”  |



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|                                 |  |
|---------------------------------|--|
| <p>Inside Leaks and Repairs</p> | <p>to provide the customer information of City agencies which can help.</p> <p>FSD Training will track and maintain records of all repairs that were completed. All temporary repairs will have follow-up by a positive, documented phone call to the customer. Call will be documented on the BCCS customer contact screen and separate FSD list.</p> <p><b>Note:</b> a temporary repair discovered <i>on any subsequent visit</i> is considered a Class A hazard and requires a temporary shut off as described above.</p> <p>All information pertaining to a piping or appliance hazardous condition must be recorded on the Hazard Screen of AIMS.</p> |
|---------------------------------|--|

III.B.3 Evacuation Procedure (minimum requirements)

- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- Do not re-enter the property until the source of leak has been located, made safe or repaired and the LEL levels are reduced to a safe level.
- Eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. Attempt to shut off gas from the curb box to the property.
- Request Dispatching to notify PECO for assistance
- Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Restrict access into the Safety Perimeter to PGW employees required to perform their duties.
- Call for assistance from the Fire Department (call 911) through the Dispatcher. The PFD and PPD will assist you with evacuating and maintaining the Safety Perimeter.
- Evacuate the adjoining properties and move the occupants outside the safety perimeter. Consider the worst case scenario.
- If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.
- Continue to report any more evacuation(s) and call for more assistance.



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3. Procedure for Entry Not Necessary (ENN) Investigation (see Section B.1. for buildings eligible for this procedure). This procedure will only be followed by qualified FSD technicians and Distribution Foremen. Qualified FSD technicians are A men and above.

**Check mail slots, windows, basement entry doors, anything to obtain a sample of the inside atmosphere.**

- Obtain a sample of the inside atmosphere by checking mail slots, windows, basement entry doors, etc. with your GDI.
- **If a potential hazard exists, make a forcible entry.** Follow procedures listed above.
- For all CGIs which appear non-hazardous, check the main and service information – age, material and location for the Distribution facilities in front of the property.
- Make “M-Pact” bar holes in front of the CGI building as close to the building as possible.
- Make “M-Pact” bar holes over the gas service of the CGI building.
- Check all outside readings for migration. If there is no migration within 5 feet of the building, the building can be considered for ENN.
- A building must be checked when there is a reading over the service and the service is steel installed in 1975 or before (older).
- If during the leak investigation it is determined that other buildings on the block have underground service conduits (electric or Bell), do not make the premise ENN.
- If conditions are questionable, use the Locksmith Procedure and gain entry.

4. Checklist To Allow ENN

- √ Building does not meet the requirements in section titled “What Buildings Must Be Checked” (III-B-1)
- √ No readings or anticipated migration to within 5 feet of the building.
- √ No readings over a pre-1975, steel service (to the building in question).
- √ No readings in vent box.
- √ No evidence of underground conduit services (electric or bell).

5. Locksmith Procedure

- a. A request for a Locksmith to gain entrance to a building should be made under the following conditions:
  - ❖ Immediate forced entry is not necessary.
  - ❖ Property is not eligible for ENN.
  - ❖ You have exhausted all other options to gain entrance such as checking with neighbors, phone call to customer or self entry.



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- ❖ Two PGW employees are required when entering an unoccupied property.

b. Field Operations Personnel Responsibilities

- ❖ Call Dispatcher or Clerk for Locksmith.
- ❖ If a police officer arrives on scene, report his badge number to the Dispatcher.
- ❖ Report back to Dispatcher or Clerk with the Locksmith's arrival time and a final report.
- ❖ Fill out a 119 property damage report.
- ❖ If lock is changed and keys cannot be given to customer, notify Dispatcher or Clerk of location of keys.
- ❖ During normal business hours, notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6014 (voice mail).
- ❖ Sign and leave Form #6489 (door hanger) to inform the customer that it was necessary for PGW to enter the premise.
- ❖ Assure premise is secured.
- ❖ Sign voucher for Locksmith.

c. Dispatch or Clerk Responsibilities

- ❖ Dispatcher or Clerk contacts Locksmith and notifies police (911).
- ❖ Dispatcher or Clerk will log the Locksmith's arrival time and final report of all houses entered.
- ❖ If a police officer arrives on scene, the Dispatcher or clerk will log the police officer's badge number in the Locksmith Log.

C. Outside Leak Investigation

1. Outside Leak Investigation Procedure

- **Check buildings first, following all previous instructions for "Inside Leak Investigation" (Section III - B).**
- Exchange information with PGW employee(s) or customers already on location.
- (Distribution and FSD relief) Verify all readings reported.
- Make an area check of all outside underground structures (CB, WB, VB, MH, etc.) in the vicinity of known readings or near the odor complaint. Determine the proper size of the area check. This can be expanded based on the investigation (Minimum 50' in all directions from the odor complaint or a confirmed reading).
- Bar hole as necessary to assure an effective investigation.
- (FSD) Check that there are no readings requiring an immediate Distribution Investigation, see list below (Criteria for a Distribution Crew to be called).



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- Investigate all readings for migration. Confirm that migration does not approach within 5 feet of any building.
- (FSD) When snow or frost restricts investigation, call for Distribution. Continue to check for migration by making inside property checks while waiting for Distribution.
- All duct line or sewer readings must be investigated in all directions to confirm migration pattern.
- Follow Odor Complaint Investigation Reference Guide



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**ODOR COMPLAINT INVESTIGATION REFERENCE GUIDE**

|    | Nature of complaint or readings found  |   |   |    |   |   |   |   |   |   |
|----|--|---|---|----|---|---|---|---|---|---|
| 1  | Conduit Type Manhole with reading - Footway and Roadway Location ex. Sewers, electric ducts, communication ducts etc.  | A | B | C  | D | E |   |   |   |   |
| 2  | Foreign Odor - Odor from underground source and coming through foundation walls, drain, vent, stop box, manhole, etc. or odor from an above ground source such as gasoline, cleaning fluid, paint, chemicals, etc. <b>*If the foreign odor is a wide spread event the dispatcher may instruct a technician to replace "C" with "K" if the job is inside the affected area.</b> | A | B | *C | D |   | F |   |   | * |
| 3  | Gas reading reported by FSD and the DD employee can not confirm the reading and feels a leak does not exist.   | A | B | C  | D |   |   | G |   |   |
| 4  | An odor complaint received directly from a customer on the street  | A | B | C  | D |   |   |   |   | J |
| 5  | Gas leak inside building coming from outside sources   | A | B | C  | D |   |   |   |   |   |
| 6  | Non-Conduit Manhole - Footway Location - Examples: Water mains, survey boxes etc.  | A | B | C  | D |   |   |   |   |   |
| 7  | Leak in Street - Gas blowing into air from underground source  | A | B | C  | D |   |   |   |   |   |
| 8  | Investigating reports of gas odors in a subway or tunnel   |   |   | C  | D |   |   | G | H |   |
| 9  | Electrical Burnouts  |   |   | C  | D |   | F | G | H |   |
| 10 | No odor outside - "No Odor"  |   |   | C  | D |   |   |   |   |   |
| 11 | Gas leak inside a building downstream of the head of service on exposed piping   | A | B |    | D |   |   |   |   | K |

**REFERENCE CODE MINIMUM REQUIREMENTS GUIDE**

|          |   |
|----------|---|
| <b>A</b> | Follow Inside Leak Investigation at building closest to the odor complaint  |
| <b>B</b> | Follow Inside Leak Investigation at adjoining buildings if necessary or determine if the property can be considered for "ENN" Entry Not Necessary   |
| <b>C</b> | Follow Outside Leak Investigation Instructions  |
| <b>D</b> | Use a calibrated Gas Detection Instrument at every point that you investigate for a possible gas leak   |
| <b>E</b> | All conduit and sewer type manhole investigations shall extend to cover and to find clear the most closely connected manhole in all directions along the route of the manhole in which the reading exist. |
| <b>F</b> | Dispatcher/supervisor will determine if notification of Air Management is required  |
| <b>G</b> | A Field Operations Supervisor or above must review the investigation prior to determining a "Safe to Hold" status   |
| <b>H</b> | A Field Operations Supervisor or above must be present during the Investigation   |
| <b>J</b> | Notify the Dispatcher on duty as soon as reported by customer   |
| <b>K</b> | Outside leak investigation limited to GDI check of structures (boxes) in front of the building. "(one house check)"   |

2. Checklist For A Distribution Crew To Be Called – Work Immediately



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All FSD technicians below B man (in rank) cannot make outside leaks safe to hold. They must call Distribution for any leaks found that require Distribution Crew attendance. This check list for not calling Distribution is only for FSD A men and above.

- a. (FSD) Readings and or conditions as noted below require an immediate notification for a Distribution response. FSD Dispatchers must be informed as soon as an initial outside reading is discovered in these structures. Maintain regular communications with the FSD Dispatcher on the status of the investigation. Make final report to FSD Dispatchers when released by Distribution or conditions will be left safe-to-hold.
  - √ A leak that represents an existing hazard to persons or property, and requires immediate action
  - √ Any reading in sewer manholes, storm inlets, vent boxes, light standards
  - √ Any reading inside a building coming from an outside source
  - √ Any reading within 5 feet of a building
  - √ Any reading in subways
  - √ Any reading in PGW manholes
  - √ Reading of 76% LEL or greater in a conduit manhole
  - √ Any reading in two (2) or more conduit manholes of the same type
  - √ Indications of a broken main or third party damage
  - √ Electrical Burnouts
  - √ Readings on a block which contains a 150 PSI (or greater) main (Dispatcher to review)
- b. If readings do not meet the criteria listed above, the leak may be classified as safe to hold (see below - Checklist for Safe-To-Hold). Once an outside reading is discovered, all reports should be made to DISTRIBUTION DISPATCHERS.

3. Checklist For Safe To Hold

- √ There are no readings that require Distribution visit (see previous list).
- √ Area check does not indicate migration toward the building. All readings found outside were checked for migration – no migration was found within 5 feet of any buildings.
- √ Migration is not anticipated to move toward a building structure.
- √ There is no leak history associated with this leak causing repeated calls. Verification to be obtained from Dispatchers.
- √ Patches or trenches indicating recent construction work should be checked carefully – no migration was found within 5 ft of any buildings.
- √ No snow or frost to restrict investigation. (FSD) When snow or frost restricts investigation, call for Distribution. Continue to check for migration by making inside property checks while waiting for Distribution.
- √ Street block does not have a 150 PSI (or greater) main. (Reading must be pinpointed).





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**D. Final Reports**

- Make oral report to Distribution and FSD Dispatchers via phone.
- Record your findings including reading found in the AIMS database.

**IV. Associated Documentation**

**A. Relevant Code**

1. 49 CFR Part 192.605 Procedural Manual for Operations, Maintenance, and Emergencies
2. 49 CFR Part 192.615 Written Emergency Procedures

**B. Related Documents**

1. Distribution Department Bulletin #63 - Notification Procedure of a Potential Emergency Involving a Pressure Operation
2. Distribution Department Bulletin #212 - Leak Response and Investigation Procedure
3. Distribution Department Bulletin #227 - Initiation of a Pressure Operation
4. Distribution Department Bulletin #228 - Pressure Control Operation Outline Procedure.
5. Distribution Department Bulletin #230 - Organization for Emergency Operations.

**C. Attachments**

Sample Leak Investigation Illustrations

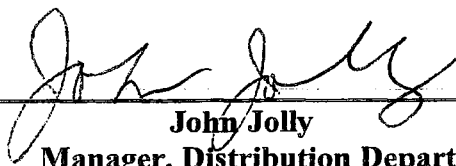
**V. Handbooks**

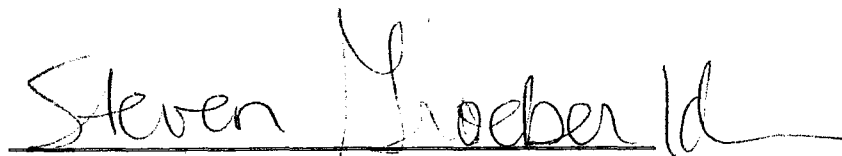
FSD Operations Manual (Section I)  
Distribution Foreman's Handbook (Section I)

**VI. Transaction Listing**

TR 2007-#03

**Approved By:**

  
\_\_\_\_\_  
**John Jolly**  
Manager, Distribution Department

  
\_\_\_\_\_  
**Steven Groeber**  
Director, Field Operations & Work Planning

$$2(a-2)$$



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

**PFD AND PECO ASSISTANCE ON  
LEAK CALLS**

Effective Date: March 25, 2011

Bulletin Number: #285  
Supersedes: N/A

## **I. Purpose**

To provide field operations personnel guidance when handling leak calls with LEL readings in the general atmosphere of a building. These procedures provide steps needed to contact the Philadelphia Fire Department and PECO to assist PGW in these situations.

## **II. Definitions**

- FFW – Generally means “Front Foundation Wall”. However, for a leak investigation the term also means to check “ALL APPROPRIATE BASEMENT WALLS”, all walls where a gas main (outside) may run adjacent to the building (not only the front wall)
- FIRST RESPONDER – term used to describe the first trained responder to arrive on scene of an emergency, accident, natural or human-made disaster, gas leak, fire or similar event. Such people may be PGW personnel, firefighters, police, other law enforcement or emergency medical services, or lay rescuers to deal with the situation and protect life and property.
- GDI – Gas Detection Instrument
- GENERAL ATMOSPHERE - is an open area within a room on any floor of a property. The general atmosphere is not behind a wall, in the corners of a room, between or against walls, floors, or in the area of the ceiling joist, or close to the FFW.
- INCIDENT COMMAND CENTER – a designated location used to coordinate activities and share information.
  - ◇ INCIDENT COMMAND LOCATION - ON SCENE – The location of the highest ranking PGW employee responsible for all activities at the job site.
- LOWER EXPLOSIVE LIMIT (LEL) – Lowest concentration (percentage) of gas in air needed for the gas to ignite when given an ignition source. Concentrations lower than LEL are “too lean” to burn. 5% gas in air is the LEL of PGW gas.



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

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LEAK CALLS**

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- **READING** – a repeatable deviation on a GDI or equivalent expressed in % LEL & % Gas scales.
- **SAFETY PERIMETER** – The boundary of an area outside of the influence of the leaking gas. Also known as an Exclusion Area by the Philadelphia Fire Department.
- **VENTILATE** – This term, when used in reference to buildings, structures, manholes and confined spaces, means the introduction of fresh air into the affected structure. Ventilation can be accomplished by opening doors and windows, breaking windows, opening basement grates, and removing manhole covers or lids to prevent or reduce the level of natural gas in the affected structure. This term, when used in reference to gas readings underground, means to draw residual natural gas from below the surface with the use of pneumatic mechanical devices.

**LEL reading in the General Atmosphere is any reading detected with a GDI in a building as you enter and proceed through a building to the FFW.**

**III. Procedure**

**PGW Dispatcher** receives notification from any PGW First Responder stating there is a reading in the general atmosphere of a property or a report directly from the PFD of any reading or odor in the building, the dispatcher taking the call will request, record and communicate to PECO the following information:

- Leak heading address
- Number of properties with atmospheric readings,
- Address of premises with atmospheric readings (cross streets, or any special information to assist someone responding to this location)
- Atmospheric reading level
- Number of properties and people evacuated
- Address of evacuations
- PGW person in charge
- Is the Philadelphia Fire Department on Location?



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

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**The PGW Dispatcher will:**

1. If the Philadelphia Fire Department is not on location, notify the PFD (911) requesting assistance.
2. Notify PECO requesting assistance at 215-841-3670; backup number is 215-841-4141.
3. Notify the Supervisor of the area or the on call supervisor. Follow the Emergency Notification Procedure. Out of hours you should also consider calling the closest supervisor living in the area of the event.
4. PECO will treat the call as a level 1 emergency. PECO refers to this as PF-1 meaning Police/Fire 1 and dispatch time is within fifteen minutes.
5. PECO also has PF-2 which has a dispatch time of one hour and PF-3 which has a dispatch time of four hours. These response levels should not be used for events with general atmospheric readings in a building.
6. PECO will assign a technician to respond with the instruction to report to the PGW person in charge on location (Incident Command Location- On Scene). If the person in charge for PGW changes PECO needs to be updated.
7. PECO will provide the PGW Dispatcher with an estimated time of arrival after the order has been assigned.
8. PECO will provide the PGW Dispatcher a contact number for the PECO responder after the order has been assigned.
9. Notify the PGW person in charge of PECO's estimated time of arrival (ETA) and the contact number for the PECO responder.

Whenever PFD arrives on location they are the authority in charge and the PGW person in charge will report to their Incident Commander.



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

**PFD AND PECO ASSISTANCE ON  
LEAK CALLS**

Effective Date: March 25, 2011

Bulletin Number: #285  
Supersedes: N/A

**PGW person in charge on location (Incident Command) will:**

1. Ensure that Distribution Department Bulletin #212 - Leak Response and Investigation procedure is being followed.
2. Document PECO's arrival time.
3. Provide an update to the PECO technician of the gas leak situation; provide the address of the properties where electrical shutoff is necessary.
4. Confirm the electrical shut off requirements with the PECO technician.
5. Instruct the PECO technician to report back with the results of actions taken and the number of premises with electrical outages.
6. Document the approximate number of addresses where the electric was shut off.
7. Document the time electric was shut off.
8. Provide an update of the gas leak situation and, if possible give an estimated time when premise(s) will be clear of atmospheric gas readings
9. Coordinate electric restoration with PECO when it is determined to be safe.
10. Complete form 119 with addresses related to break-ins, evacuations, power outages with times related to disconnection and restoration of power. Notify Risk Management

**IV. Associated Documentation**

**A. Relevant Code**

1. 49 CFR Part 192.605 Procedural Manual for Operations, Maintenance, and Emergencies
2. 49 CFR Part 192.615 Written Emergency Procedures

**B. Related Documents**

1. Distribution Department Bulletin #212 - Leak Response and Investigation Procedure.



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

**PFD AND PECO ASSISTANCE ON  
LEAK CALLS**

Effective Date: March 25, 2011

Bulletin Number: #285  
Supersedes: N/A

2. Actions to be Taken to Protect People & Property - Tip card

**IV. Attachments**

N/A

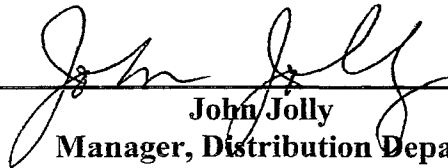
**V. Handbooks**

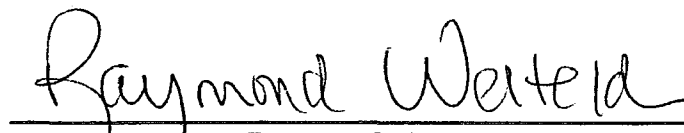
- A. Foreman's Handbook – Section I – Operations
- B. Foreman's Handbook – Section VII – Safety
- C. Dispatchers Handbook
- D. FSD Operations Manual – Section I – Leak & Fire Duty

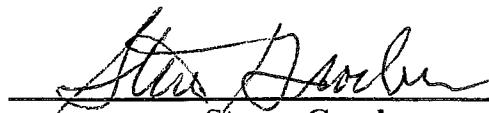
**VI. Transaction Listing**

Prepared by: John Jolly 3/24/11  
JJ/ccm

Approved By:

  
\_\_\_\_\_  
John Jolly  
Manager, Distribution Department

  
\_\_\_\_\_  
Raymond Welte  
Manager, Field Services Department

  
\_\_\_\_\_  
Steven Groeber  
Director, Field Operations & Work Planning

2(b-1)



## **PECO Drill**

### **Summary of test for notifications to PECO**

**On 3/31/2011**

- 7:30 AM Superintendent Steve Lipski called FSD dispatching reporting atmospheric readings to 2815 and 2817 Overington St. Call was taken by FSD Chief Dispatcher Javier Barreto. All data related to the call was collected.
- 7:36 AM Mr. Barreto made the call to PECO Dispatching. The required information was exchanged as expected.
- 7:40AM PECO First Responder was dispatched from PECO with an expected ETA within 30 minutes.
- 7:56 AM PECO arrived

PECO reported to the PGW person in charge (Steve Lipski). Who provided a summary of what needed to be turned off.

PECO responder stated power would be turned off in 5 to 10 minutes and showed Steve Lipski where he would need to turn the power off. This shutoff would have resulted in 27 properties been without power.

PECO stated power could be restored in 5 to 10 minutes.

Ray Welte, Steve Lipski, Javier Barreto, Eric Zekanis and I met to review the test and all agree it was successful.

We discussed the collection of data related to the power outage issue and feel we will get general information (number count) during the event but the final count with addresses will be confirmed by PECO as the event slows down. The issue identified was that street supervision could handle the record keeping if it was a "very small" event. However, if the event lead to a large area that was shutoff, the data collection of all the specific addresses could be to much to handle by the street supervision during the event. PGW's record keeping task could distract from leak work. We need to discuss this with PECO to see if they can supply an E-Mail or fax with affected premise addresses into Dispatching as the event unfolds.

Both Eric and Javier will look to see if we can place the incident report in the same excel file for ease of use during an emergency. In a brief conversation with Nicole Levine from PECO they were satisfied but feel they do not need all of the information related to reading levels. Nicole will set up a conference call. Below is a link to spreadsheet used.

<S:\FieldOps\Dispatching\Common\PFD and PECO assist>

**PECO Conference Call to PECO  
Related to Drill Performed March 31, 2011**

Present:

|                |                      |
|----------------|----------------------|
| Javier Barreto | Nicole LeVine (PECO) |
| Steve Groeber  | Ray Welte            |
| John Jolly     | Eric Zekanis         |
| Steve Lipski   |                      |

The overall assessment was that the drill worked fine. Recommended changes were:

- PECO does not need the information related to atmospheric reading levels nor do they need to know if PFD is on location. We will remove these from the script.
- Restoration will depend on the event, but PGW will call back to PECO Dispatching requesting restoration. PGW will use the same phone numbers as used during the initial notification (215-841-3670; backup number is 215-841-4141).
- PECO will give PGW the information on outages on site to the PGW person in charge. Additionally there will be an e-mail address set up at PGW to receive this information electronically.
- We will perform an annual test for winter preparedness in November. Steve Lipski will add this to our winter check list.
- PECO's current procedure will be updated and both PECO and PGW will share the procedure for review upon final approvals.

JOHN JOLLY

DD/JJJ/dls  
5/4/2011

2(b-2)

## Mondimore, Paul A

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**Subject:** FW: Emergency Testing  
**Location:** PECO Office Colleen 484-238-2199

**Start:** Tue 10/11/2011 8:00 AM  
**End:** Tue 10/11/2011 11:00 AM  
**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

Meet Colleen at 9am to go through another drill.

John;  
PECO requested one of us meet at there office to see what happens on there end when we call for assistance. I am going to meet them about 9am you are more then welcome to attend.

2(d)

| Date     | Leak Heading                       | Number of properties with atmospheric reading. PGW info. Only | Address of affected properties                 | PGW person in charge | PFD Contacted If PFD is already on location state PFD on location. PGW only | Time PFD was contacted PGW only | PGW person contacting PECO | Name of PECO person contacted | Time PECO was contacted | Name and contact information for PECO responder         | PECO arrival time | Time Power was turned off | Time Electric power was restored | AIMS order number | Summary of properties where power is turned off  |
|----------|------------------------------------|---|--|----------------------|---|---------------------------------|----------------------------|-------------------------------|-------------------------|---|-------------------|---------------------------|----------------------------------|-------------------|--|
| 6/22/11  | 1429 Ellsworth St                  | 2   | 1427 (12% LEL basement) 1429 (5% LEL basement) | John Keebler         | PFD 289   | 12:30                           | Barreto                    | Tanya                         | 12:25                   | Jack Driscoll 215-300-7006                              | 12:40             | N/A                       | N/A                              | 3157138           | N/A  |
| 7/8/11   | 9209 Pine Rd                       | 1   | 40% LEL in basement & 60% LEL in Living Room   | Juan Sanchez         | PFD 833   | 11:58                           | Barreto                    | Jerry                         | 12:01                   | Sean Allen  | 12:55             | N/A                       | N/A                              | 3198227           |  |
| 8/23/11  | 760 Smylie Rd                      | 1   | 45% LEL entrance                               | H. Rivera            | 797   | 15:39                           | Barreto                    | Demetrius                     | 15:40                   | Jeff Windsor  | 16:15             | N/A                       | N/A                              | 3198227           |  |
| 9/3/11   | 867 MOYER                          | 1   |  | J KEEBLER            |   | 12:53                           | Weston                     |                               | 13:10                   | WINDSOR   | 14:33             | Not Off                   | Not Off                          | 3310962           | Not Off  |
| 9/3/11   | 6623 W Girard                      | 1   | 20% LEL Basement                               | Rivera               | 792   | 12:13                           | McCoullum                  | Jerry                         | 12:14                   | Rasheed Williams  | 12:30             | Not Off                   | N/A                              | 331571            | N/A  |
| 9/7/11   | 7901 Roosevelt                     | 1   | 5% LEL atmosphere                              | Parzanese            | 851   | 10:24                           | Zekanis                    | Demetrius Fulford             | 10:21                   | Not available   | Called off 10:54  | Not Off                   | N/A                              | 3316747           | PECO was called off per M. Parzanese.  |
| 9/7/11   | 1535 S. 26th St                    | 1   | 15% LEL @ frt door                             | J KEEBLER            | 851   | 11:56                           | Peacock                    | Demetrius Fulford             | 12:10                   | C.Jgallager   | 12:40             | Not Off                   | N/A                              | 3317108           | PECO was released per J. Keebler   |
| 9/7/11   | 7138 Bingham St                    | 1   | 7138 Bingham St                                | Robert Moore         | 797   | 17:08                           | McCoullum                  | Jerry                         | 17:08                   | Not available   | 17:35             |                           |                                  | 3317987           |  |
| 9/8/11   | 5508 Morton                        | 4   | 40% LEL living rm                              | R Reese              | 686   |                                 | Robinson                   | Carol                         |                         | n/a   |                   |                           |                                  | 3319317           |  |
| 9/8/11   | 2403 Cumberland                    | 2   |  | Sullivan             |   |                                 | Robinson                   | Carol                         |                         | n/a   |                   |                           |                                  | 3319338           |  |
| 9/8/11   | 5367 Belfield Ave                  | 1   | 12% LEL basement                               | R. Reese             |   |                                 | Barreto                    | Pat Fennell                   | 8:51                    |   |                   |                           |                                  | 3319607           |  |
| 9/8/11   | 851 E. Locust St                   | 1   | 851 E. Locust St                               | M.Russell            | n/a   | n/a                             | McCoullum                  | Jerry                         | 21:40                   | n/a   | n/a               | Not Off                   | N/A                              | 3321582           | PECO was called off per M. Russell   |
| 9/9/11   | 2539 n 12th                        | 1   | 2% LEL atmosphere                              | T.James              | n/a   | n/a                             | Weston                     | H.Smith                       | 13:26                   | n/a   |                   |                           |                                  | 3323632           | Bypassing gas valve in oven  |
| 9/9/11   | 4526 n 13th St                     | 1   | 7% atmosphere                                  | C. Hoggard           | 922   | 17:44                           | McCoullum                  | Jerry                         | 17:48                   | N/A   | 18:45             | Not Off                   | N/A                              | 3324290           | Pilot lft on @ 4526 affected 4528 N 13th   |
| 9/9/11   | 4528 n 13th St                     | 1   | 5% atmosphere                                  | C. Hoggard           | 922   | 17:44                           | McCoullum                  | Jerry                         | 17:48                   | N/A   | 18:45             | Not Off                   | N/A                              | 3324290           | Pilot lft on @ 4526 affected 4528 N 13th   |
| 9/12/11  | 2637 s 70th St                     | 1   | 20% atmosphere                                 | B. Jefferson         | 842   | 10:02                           | Barreto                    | Ms. Miller                    | 10:04                   | n/a   | 11:01             | Not Off                   |                                  | 3329016           | released 11:15   |
| 9/13/11  | 1701 Shelmire St                   | 1   | 3% atmosphere                                  | J. Shapiro           | 842   | 12:09                           | Barreto                    | Kathy                         | 12:11                   |   |                   |                           |                                  |                   |  |
| 9/16/11  | 1928 Lardner St                    | 1   | 10% atmosphere                                 | M. Drzewicki         | 533   | 17:35                           | McCoullum                  | Carol                         | 17:32                   | Jeff Whitner 215.490.6867                               |                   | N/A                       | N/A                              | 3341750           |  |
| 9/16/11  | 5422 Saul St                       | 1   | 17% atmosphere                                 | T.Fuller             | n/a   | n/a                             | McCoullum                  | Carol                         | 19:10                   | n/a   | n/a               | Not Off                   | N/A                              | 3341603           | Dryer hose leaking PECO called off @ 19:18   |
| 9/17/11  | 604 e wishart                      | 1   | 15% atmosphere                                 | M.Cruz               | 804   |                                 | Weston                     | CAROL                         | 14:38                   |   |                   |                           |                                  | 3342932           | PIPES WHERE STOLEN FROM PROPERTY CALLED OFF BY G.GAYDOS  |
| 9/21/11  | 4700 Tackawanna                    | 1   | 9% atmosphere                                  | F. Macconnell        | 792   | 8:59                            | Barreto                    | Pat Fennell                   | 9:03                    | canceled  | canceled at 9:21  |                           |                                  | 3350078           | Burner on range was left on overnight  |
| 9/22/11  | 2828 Harold St                     | 1   | 3% atmosphere                                  | H. Rivera            | 830   | 15:00                           | Barreto                    | Jerry                         | 15:01                   | canceled  | canceled at 15:29 |                           |                                  | 3353294           | Swivel and pilot tubing at range leaking   |
| 9/30/11  | 4040 Locust St                     | 1   | 10% atmosphere                                 | B. Jefferson         | 806   | 12:36                           | Barreto                    | ivy                           | 12:38                   |   |                   |                           |                                  |                   |  |
| 10/3/11  | 668 E Lippincott St                | 1   | 5% atmosphere                                  | T James              | ENG 25  | 14:30                           | McCoullum                  | Jerry                         | 14:34                   | canceled  | canceled at 15:09 | Not Off                   | N/A                              | 3371142           | Pipes WHERE STOLEN FROM PROPERTY CALLED OFF BY T.James   |
| 10/4/11  | 3899 Richmond                      | 1   | 10% Atmosphere                                 | T.James              | 620   | 11:00                           | Weston                     | Leah                          | 11:00                   |   |                   |                           |                                  | 3373732           |  |
| 10/4/11  | 36 E Seltzer                       | 1   | 20%atmosphere                                  | D.Sheehan            | 793   | 15:27                           | McCoullum                  | Leah                          | 15:26                   | n/a   | 16:00             | Not Off                   | N/A                              | 3374685           | Leak was actually at 33 somerset removed meter after theft   |
| 10/7/11  | 1536 Christian 4406 E Wingahocking | 2   | 15 atmosphere                                  | A. Donaldson         | PFD on location   | PFD on location upon arrival    | Zekanis                    | Demetrius                     | 10:51                   | PECO tech never made contact with PGW person in charge. | 11:28             | Not Off                   | N/A                              | 3381566           | Not Off  |
| 10/7/11  |                                    | 1   | 10% atmosphere                                 | R. Smith             | N/A   | N/A                             | McCoullum                  | Jerry                         | 17:16                   | N/A   | n/a               | Not Off                   | N/A                              | 3382541           | PECO Canceled reading went away Leak was actually at 33 somerset removed meter after theft                 |
| 10/9/11  | 2724 ruth st                       | 1   | 7% atmosphere                                  | j.delgado            | 624   | 19:51                           | Arrington                  | Carol                         | 19:56                   |   | 20:30             | 20:30                     |                                  | 3383771           | leak at range  |
| 10/9/11  | 2722 ruth st                       | 1   | 7% atmosphere                                  | j.delgado            | 624   | 19:51                           | Arrington                  | Carol                         | 19:56                   |   | 20:30             | 20:30                     |                                  | 3383771           | leaks on fuel line   |
| 10/11/11 | 1236 McKinley                      | 1   | test   | J. Delussey          | no  | no                              | Zekanis                    | Jerry                         | 9:15                    | Brian Mangeney  | 10:00             | test                      | test                             |                   |  |
| 10/14/11 | 2617 N Myrtlewood                  | 1   | 40% atmosphere                                 | D.Sheehan            | 792   | 8:04                            | Barreto                    | Lou                           | 8:05                    |   | canceled          |                           |                                  |                   | canceled   |
| 10/17/11 | 3136 French St                     | 1   | 20% atmosphere                                 | T. James             | 843   | 10:47                           | Barreto                    | Cathy                         | 10:49                   | Justin Derule   | 11:13             | Not Off                   |                                  | 3396655           | released 11:25   |
| 10/17/11 | 4264 Reese St                      | 1   | 10% atmosphere                                 | R. Moore             | n/a   | n/a                             | McCoullum                  | Jerry                         | 17:35                   | n/a   | 18:00             | Not Off                   | Not Off                          | 3400447           | Cancelled @ 18:20 per R. Moore   |
| 10/20/11 | 6110 Ludlow St                     | 1   | 50% atmosphere                                 | R. Smith             | 723   | PFD on location upon arrival    | McCoullum                  | Jerry                         | 19:53                   | n/a   | 8:04:00 canceled  | Not Off                   | Not Off                          | 3405423           | 8:04:00 canceled per Distribution stolen piping and meters at 44.46.42 Ludlow 15:22 cancelled, FFW reading |
| 10/21/11 | 1029 Watkins St                    | 1   | 8% atmosphere                                  | J. Feeney            | 854   | 14:36                           | Barreto                    | Pat Fennell                   | 14:40                   |   |                   |                           |                                  |                   |  |
| 10/21/11 | 5413 TORRESDALE                    | 1   | 30% LEL Atmosphere                             | R. SMITH             | 802   | 23:17                           | Arrington                  | JERRY                         | 23:16                   | n/a   | 23:31             | 23:36                     |                                  | 3408201           | reading was result of theft of awl and piping  |
| 10/23/11 | 2818 e Bristol                     | 3   | 40 LEL basement                                | G. Gaydosh           | n/a   |                                 | Uditsky                    | Lou                           | 20:05                   | Tom Domico  | 20:45             | 21:00                     | not off                          | 3408895           | leaking meter  |
| 10/25/11 | 5239 Chester                       | 2   | 34 LEL basement                                | fenny                | 805   | 14:10                           | Uditsky                    | gerry pardon                  | 14:15                   | called off,14:40  |                   |                           |                                  | 3413797           | broken fuel line   |
| 10/25/11 | 6101 N 8th St                      | 1   | 20%atmosphere 19 LEL                           | R. Moore             | 830   | 18:28                           | McCoullum                  | Lou                           | 18:34                   | n/a   | 18:47             | N/A                       | N/A                              | 3414254           | Released at 19:10  |
| 10/28/11 | 4705 knur St                       | 1   | 30% atmosphere                                 | J. Dualerio          | 394   | 16:48                           | McCoullum                  | lou                           | 16:49                   | n/a   | 17:42             | n/a                       | n/a                              | 3423303           | Leak on pilot tubing   |

|          |                      |   |   |              |          |       |           |             |       |                            |             |           |           |              |                                 |
|----------|----------------------|---|---|--------------|----------|-------|-----------|-------------|-------|----------------------------|-------------|-----------|-----------|--------------|---------------------------------|
| 11/1/11  | 1917 E Madison       | 1 | 35% LEL Atmosphere  | Wissman      | 797      | 9:17  | Lopez     | Ivy Vigler  | 9:24  | Janine                     | 9:43        | N/A       | N/A       | 3429967      | services and joint @ main       |
| 11/1/11  | 2313 E Venango       | 1 | 5% atmosphere   | Sheehan      | 685      | 10:20 | Barreto   | Ivy Vigler  | 10:20 | Mike Andrews               | 10:47       | N/A       | N/A       | 3430215      | fry master                      |
| 11/1/11  | 3452 Tampa St        | 1 | 3% atmosphere   | James        | 843      | 11:47 | Lopez     | Ivy Vigler  | 11:50 | Bob Evans                  | 0:51        | N/A       | N/A       | 3430733      | fuel line leak                  |
| 11/2/11  | 2244 W Allegheny Ave | 1 | 10% atmosphere  | H Rivera     | n/a      | n/a   | McCoullum | Tanya       | 16:01 | n/a                        | n/a         | n/a       | n/a       | 3435072      | Released By Rivera              |
| 11/4/11  | 7202 Gillespie St    | 2 | 15% atmosphere  | B.Moore      | 784      | 13:05 | Peacock   | L.Dawes     | 13:10 | Jack Driscoll 215-300-7006 | 13:55       | N/A       | N/A       | 3440774      | N/A                             |
| 11/5/11  | 2657 N 28Th St       | 2 | 30% atmosphere  | Breslin      | 782      | 13:36 | Lopez     | Jerry       | 13:40 |                            |             | N/A       | N/A       | 3442718      | broken flex connector           |
| 11/5/11  | 3633 N Marshall      | 1 | 10% atmosphere  | T James      | 727      | 19:55 | Hughes    | Jerry       | 19:50 | Tom Domico                 | 8:22        | N/A       | N/A       | 3442868      | N/A                             |
| 11/8/11  | 808 n. Broad St      | 1 | 3% atmosphere   | D. Sheehan   | 741      | 9:40  | Peacock   | Tanya       | 9:44  | Aw-Rew                     | 10:15       | N/A       | N/A       | 3448928      | N/A                             |
| 11/8/11  | 218 N. Patton St     | 1 | 3% atmosphere   | H Rivera     | 740      | 12:43 | Peacock   | Tanya       | 12:43 | J.Domico                   | 13:22       | N/A       | N/A       | 3449375      | N/A                             |
| 11/8/11  | 2233 S. Hicks St     | 1 | 5% atmosphere   | J. Keebler   | 830      | 16:43 | Barreto   | Jerry       | 16:47 | Jerry                      | 17:08       | cancelled |           | 3450036      |                                 |
| 11/9/11  | 8214 Rockwell        | 2 | 20% atmosphere  | B. Moore     | 787      | 12:18 | Barreto   | Ms. Miller  | 12:20 | Ms Miller                  | 13:17       | cancelled |           |              |                                 |
| 11/9/11  | 275 E Walnut Park Dr | 1 | 5% atmosphere   | R Herbert    | 802      | 20:16 | McCoullum | Jerry       | 20:18 | n/a                        | n/a         | N/A       | N/A       | 3453629      | Released By R. Herbert 20:50    |
| 11/10/11 | 2107 spring garden   | 1 | 3% atmosphere   | H. Rivera    | 784      | 11:00 | Barreto   | Harry Smith | 11:05 |                            |             |           |           |              |                                 |
| 11/15/11 | 4233 Markland        | 1 | 20 LEL atmosphere   | D. Sheehan   | 845      | 18:23 | Hughes    | Lou         | 18:28 |                            |             |           |           |              |                                 |
| 11/16/11 | 4313 n Darien St     | 1 | 60% atmosphere  | J. Keebler   | 849      | 13:39 | Barreto   | Leah        | 13:43 | Jack Driscoll              | 14:00       | Released  | 14:25     | 3283798      |                                 |
| 11/20/11 | 2425 N BANCROFT      | 2 | 16% LEL Atmosphere  | Jones        | 746      | 17:00 | Lopez     | Karen       | 17:06 |                            | 17:34       | N/A       | N/A       | 3478600      | N/A                             |
| 11/21/11 | 2144 E Orleans       | 1 | 20 LEL atmosphere   | Wissman      | n/a      | n/a   | McCoullum | Carol       | 17:55 | n/a                        | n/a         | n/a       | n/a       | 3481455      | Cancelled Leak on COR Fuel Line |
| 11/23/11 | 2571 Orthodox St     | 1 | 10% atmosphere  | T. Fuller    | n/a      | n/a   | McCoullum | Carol       | 16:44 | Chuck Shaver               | 17:23       | n/a       | n/a       | 3486931      | N/A                             |
| 11/25/11 | 413 413 HOFFNAGLE ST | 1 | 6% atmosphere   | R. Moore     | n/a      | n/a   | McCoullum | Carol       | 17:38 | Hollinger                  | 17:59       | n/a       | n/a       | 3489830      | N/A                             |
| 12/1/11  | 2820 Cedar St        | 1 | 1.9 Atmosphere  | Sheehan      | 842      | 9:41  | Lopez     | Miller      | 9:46  | n/a                        |             | Released  | 0.4527778 | 3500448      |                                 |
| 12/6/11  | 2831 Winchester Ave  | 1 | 8% LEL Atmosphere   | Juan Sanchez | n/a      | n/a   | McCoullum | Lou         | 15:57 | N/A                        | N/A         | N/A       | N/A       | 3509965      | N/A                             |
| 12/14/11 | 2921 N Taney St      | 1 | 6 LEL Atmosphere  | R. Moore     | 851      | 18:01 | McCoullum | Jerry       | 18:03 | Schadler                   | 18:45       | N/A       | N/A       | 3523501      | Released 6:50:00 PM             |
| 12/18/11 | 7227 Vandike         | 1 | 30% LEL Atmosphere  | J Shapiro    | 847      | 21:07 | Lopez     | Lou         | 21:09 | called off                 | N/A         | N/A       | n/a       | 3528424      | Released 21:17                  |
| 12/31/11 | 717 walnut St        | 1 | 40 LEL FFW<br>4 LEL atmosphere bse<br>10 atmosphere 1st floor | H. Rivera    | 620      | 14:50 | Hughes    | Ms. Miller  | 15:00 | n/a                        |             |           |           |              |                                 |
| 1/8/12   | 5645 Hazel           | 3 | 45.47.49  | Feeny        | oper.620 | 12:18 | Uditsky   | Lavon       | 12:20 |                            |             |           |           | 3558053      |                                 |
| 1/12/12  | 2428 S 9th St        | 3 | 2428 2426   | Moore        | Oper#797 | 12:46 | Lopez     | Hill        | 12:48 | Murry                      | 13:04       | N/A       | N/A       | 3567415      | N/A                             |
| 1/16/12  | 2811 Charter Rd      | 1 | 2811  | James        | # 842    | 10:22 | Barreto   | Lavon       | 10:25 | Dave Driscoll              | 10:55       | N/A       | N/A       | 3572063      |                                 |
| 1/24/12  | 2939 N. Reese St     | 1 | 60 LEL atmosphere   | H.Rivera     |          | 9:20  | Peacock   | H.Smith     | 9:45  | Hollinger                  | 0.423611111 | 0.4256944 | 0.15625   | 3493925      |                                 |
| 1/25/12  | 3610 N. Marshall St  | 1 | 10 LEL Atmosphere   | M.Johnson    |          | N/A   | Hughes    | lou         | 8:05  | L.Brown                    | 0.359027778 |           |           | 3590561      |                                 |
| 1/26/12  | 844 Christian St     | 2 | 844 / 840   | Keebler      | # 830    | 10:17 | Lopez     | Miller      | 10:13 |                            |             |           |           |              |                                 |
| 2/5/12   | 802 McKean           | 1 | 2001 s 8th  | Jefferson    | #747     | 17:25 | Weston    | lou         | 17:24 | 47119                      | 18:02       |           |           |              |                                 |
| 2/15/12  | 6115 Woodland Ave    | 1 | 6115  | Jefferson    | #856     | 11:12 | Lopez     | Ive         | 11:23 | N/A                        | N/A         | N/A       | N/A       | 3625708      | N/A                             |
| 2/17/12  | 3808 Lancaster       | 1 | 3808  | Keebler      | #851     | 12:38 | Barreto   | Miller      | 12:39 | cancelled                  | 13:23       |           |           | 3630115      |                                 |
| 2/22/12  | 801 Glenview         | 1 | 801   | Jones        | 830      | 15:31 | Peacock   | Leaha       | 15:33 | Shawn Allen                | N/A         | N/A       | N/A       | 3635832      | N/A                             |
| 2/23/12  | 1325 E Sedgley St    | 1 | 1325  | Givins       | #797     | 15:41 | McCoullum | Pat         | 15:43 | Danny Schavler             | 15:45       | N/A       | N/A       | 3637650      | N/A                             |
| 3/18/12  | 8108 Thouron Ave     | 2 | 8106 & 8108   | Quenzer      | 851      | 17:41 | Barreto   | lou         | 17:45 | Released                   | not needed  | when they | arrived   | released per | Mark Johnson 18:21              |

# Appendix A-3



3. PGW has coordinated a meeting between PGW, PECO Electric, and Philadelphia Fire Department to address the electric power shut off procedure, as set forth in the preceding paragraph.
  - (a) PGW held its first meeting with the Philadelphia Fire Department (PFD) on March 8, 2011 to discuss collaboration during fires, gas leaks and explosions, and incident command procedures. On March 11th, 17th, and 23rd, PGW met with PECO to discuss procedures for PECO intervention during certain emergent situations by terminating electrical service to affected properties in PGW's service area.
  - (b) An additional meeting was held with all three parties at PGW headquarters on March 24, 2011. The topics included (1) incident command structure and procedure; (2) review of procedural guidelines to be used by all parties; (3) sources of ignition; and (4) evacuation and ventilation procedures.
  - (c) On March 31, 2011, a training drill was conducted involving PGW and PECO personnel and was designed to test coordination between the companies should the report of a gas leak require termination of electric service to the affected area. (See Tab 2.)
  - (d) Another drill of PECO response was conducted on October 11, 2011. (See Tab 2.)
  - (e) During PGW's winter operating season of 2011-2012, and pursuant to this procedure, PGW coordinated notifications with PECO to render assistance.
- Supporting Documentation:
  - (a-1) Notes of PECO/PGW Meeting March 8, 2011;
  - (a-2) Notes of PECO/PGW Meeting March 11, 2011;
  - (a-3) Notes of PECO/PGW Meeting March 17, 2011;
  - (a-4) Notes of PECO/PGW Meeting March 23, 2011.
  - (b) Notes of March 24, 2011 Meeting.
  - (c) Dispatch logs showing calls to PECO. (See Item (2-d)).
- Cross-References: Prayer for Relief at ¶ (e);  
Settlement, ¶ 23(c).

3(a-1)

Meeting with Philadelphia Fire Department  
Tuesday, March 8, 2011 – 10:00 a.m.

Attendees:

| <b>PFD</b>    | <b>PGW</b> |
|---------------|------------|
| Lloyd Ayers   | John Jolly |
| Ernie Hargett | Ray Welte  |
| John Devlin   |            |
| James Bonner  |            |

Contact for future meetings is James Bonner (215) 684-1362

1. Can you provide an outline of PFD Incident Command structure?  
Ernie Hargett will provide PGW a diagram of there Incident Command structure.
2. How do we recognize the command center upon arrival or during an incident?  
Any Fire Department employee can point you to the Incident Command Center. Look for the white hat, Battalion Chief car.
3. PGW and PFD have an understanding of how to work together during a fire, gas leak, explosion. Can we improve this relationship? Do we need to put procedures in place?  
The PFD would like to see PGW procedures for emergencies.
4. When properties are evacuated for any reason, how do we insure re-entry does not occur? Rope off the doorways or the area, not allow anyone into the zone unless cleared by PFD?  
Yellow tape and police.
5. At what level is an on site command center set up? Incident command set up?  
Command Center is set up when any Battalion Chief arrives. Incident Command Center is set up once Deputy Chief arrives.
6. When does PFD call for electric to be turned off? (Fire only/gas leaking)  
Fire conditions (electrical, down wires)
7. When responding to a gas leak/fire or underground street trouble situation such as cavity how do you determine the area to be roped off?

They develop an exclusionary zone based on experience and judgment and continuously reevaluate.

8. What opportunities are there for joint meetings with Supervision of PFD and PGW?
9. Can we provide training exercises between PFD and PGW?  
Very open to using PGW training facility and having PGW attend there staff meetings to give presentations (must attend 4).

The PFD had a couple issues regarding the incident at Torresdale Avenue:

- Notification of the Keeley family.
- Not being able to identify hurt employees.
- Not staying at the Incident Command Center.

The PFD did ask how many leaks PGW receives in a day. John gave them an estimate for Distribution and I gave them an estimate for FSD.

FSD/RW/dls  
3/9/2011

$$3(a-2)$$

**PECO/PGW Conference Call**  
**Friday, March 11, 2011**

| <b>PECO</b>   | <b>PGW</b>     |
|---------------|----------------|
| William Clark | Steve Groeber  |
| Nicole Levin  | John Jolly     |
|               | Steve Lipski   |
|               | Paul Mondimore |
|               | Debbi Schroeck |
|               | Ray Welte      |

Looking at PGW's leak procedures to clarify when PGW will request PECO to shut off electric in certain situations.

PECO's gas leak procedures for electric shut off is readings in the atmosphere. They also evacuate and make safe, including getting electric off. For PECO's gas territory, most of the electric meters are outside.

PECO employees are trained in gas and electric. PGW is not trained in electric. In Philadelphia majority of electric meters are not outside and can be underground.

Writing the procedure for PGW to notify PECO what is the best way:

PECO – there are options if meter is inside or go back to the transformer. First responders may need to call in a section person and shut off electric for the development.

Jolly asked if we call PECO they will do what is needed or call whoever is needed to get it done.

PECO – Can call in a trouble man. All electric techs are cross changed in gas.

PECO Procedure:

If outside pull electric meter

General for PECO, meters are outside. For underground electric service area may need to get in a manhole. PECO relies on the experience and situation on what they have to do.

PGW Workload

On average there are 34 jobs for a year with atmospheric readings. Most are in January through March (24 in those months). For gas in one property they may need to drop the electric in one (1) block.

**Mondimore, Paul A**

---

**Subject:** FW: PECO & PGW  
**Location:** 1-800-201-2375 (WHC) PC 7554400 (All) LDC 677004

**Start:** Fri 03/11/2011 1:00 PM  
**End:** Fri 03/11/2011 2:00 PM

**Recurrence:** (none)

**Meeting Status:** Accepted

**Required Attendees:** Mondimore, Paul A; Groeber, Steven A; Welte, Raymond J; Schroeck, Debra L

When: Friday, March 11, 2011 1:00 PM-2:00 PM (GMT-05:00) Eastern Time (US & Canada).  
Where: 1-800-201-2375 (WHC) PC 7554400 (All) LDC 677004

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

This is the call from PECO I assume we will meet in Paul's office

---

From: Clark, William H.:(PECO) [mailto:william.clark@peco-energy.com]  
Sent: Tuesday, March 08, 2011 3:09 PM  
To: Clark, William H.:(PECO); nicole.levine@Peco-Energy.com; Jolly, John J  
Subject: PECO & PGW  
When: Friday, March 11, 2011 1:00 PM-2:00 PM (GMT-05:00) Eastern Time (US & Canada).  
Where: 1-800-201-2375 (WHC) PC 7554400 (All) LDC 677004

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$$3(a-3)$$



**PECO/PGW Meeting**  
**Thursday, March 17, 2011**

| <b>PECO</b>   | <b>PGW</b>     |
|---------------|----------------|
| William Clark | Steve Groeber  |
| Nicole LeVine | John Jolly     |
|               | Steve Lipski   |
|               | Paul Mondimore |
|               | Debbi Schroeck |
|               | Ray Welte      |

Nicole LeVine works in Operations Control Center handles all dispatching for PECO gas and electric.

Bill Clarke is Manager, PECO. His crews fix leaks and put pipe in the ground.

**Gas and Electric Procedures**

Nicole stated that she could contact People's Gas to get the wording that they have in their procedure in dealing with gas and electric. Paul mentioned that PGW would appreciate any assistance provided from other utilities.

**PECO Police/Fire Calls**

Nicole stated if PGW has atmospheric readings to contact PECO. For the first six (6) months we can meet monthly and review each individual incident and fine-tune the procedure.

Paul questioned what information PECO would need from the PGW serviceperson, PECO's response time and what PGW should do while waiting for PECO.

Nicole explained there are three (3) grades of Police/Fire calls and PGW may need a different rating.

- PF 1 - Dispatched within 5 minutes, on site within 30 minutes. Life and limb endangered; energized wires down.
- PF 2 – Dispatched within 15 minutes, on site within 60 minutes. Most calls fall in this category.
- PF 3 - Response time is four (4) hours.

PGW has dual services in buildings for emergency generators and we try to identify those services. Most generators are battery back-up.

John Jolly will be the point of contact for PGW. Once PGW gets the procedure finalized a copy will be forwarded to PECO and any concerns will be addressed.

DEBBI SCHROECK

/dls  
3/17/2011

## Mondimore, Paul A

---

**Subject:** Updated: PECO/PGW Meeting  
**Location:** 1800-205

**Start:** Thu 03/17/2011 9:00 AM  
**End:** Thu 03/17/2011 11:00 AM

**Recurrence:** (none)

**Meeting Status:** Accepted

**Required Attendees:** Mondimore, Paul A; ConfRm 1800-2 Room 205; Jolly, John J; Welte, Raymond J; Groeber, Steven A; Lipski, Stephen L; nicole.levine@Peco-Energy.com; 'william.clark@peco-energy.com'

When: Thursday, March 17, 2011 9:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).

Where: 1800-205

\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

Bill and Nicole -

Meeting will be held at PGW Headquarters located at 9th and Montgomery. Please have the guard in the lobby call me and I'll escort you to the conference room.

obi Schroeck  
tribution Department  
(215) 684-6373

$3(a-4)$

**Mondimore, Paul A**

---

**Subject:** Updated: Mtg w/ PECO Energy and PGW  
**Location:** Nicole Levine's office, 680 Ridge Pike, Plymouth Meeting, PA 19462

**Start:** Wed 03/23/2011 1:00 PM  
**End:** Wed 03/23/2011 3:00 PM  
**Show Time As:** Tentative

**Recurrence:** (none)

**Meeting Status:** Not yet responded

Please call me when you arrive.

**Kelly A. Murray**  
Distribution System Operations  
PECO  
610.941.1425  
[kelly.murray@exeloncorp.com](mailto:kelly.murray@exeloncorp.com)

Please consider the environment before printing this e-mail. Thank you!

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3(b)

**Meeting at PGW with PUC, PFD, PECO Representatives**  
**Thursday, March 24, 2011**

Attendees:

|             |               |                |
|-------------|---------------|----------------|
| <b>PECO</b> | William Clark | Jack Garfunkle |
|             | Tim Flanagan  | Nicole LeVine  |
|             | Brian Focht   | Ray Pugh       |

|            |              |                |
|------------|--------------|----------------|
| <b>PFD</b> | James Bonner | Ernest Hargett |
|            | John Devlin  |                |

|            |               |             |
|------------|---------------|-------------|
| <b>PUC</b> | Andrew Geibel | Mike Nguyen |
|            | Paul Metro    |             |

|            |                |                 |
|------------|----------------|-----------------|
| <b>PGW</b> | C. Joey Grant  | Howard Lebofsky |
|            | Steven Groeber | Paul Mondimore  |
|            | Randall Gyory  | Debbi Schroeck  |
|            | Steven Hershey | Ray Welte       |
|            | John Jolly     | Craig White     |

**PECO Guidelines**

Distribution Department Manager John Jolly and Field Services Manager Ray Welte have met with PECO to establish guidelines for any situation where there is a reading in the general atmosphere in a building. There is a process in place for PECO to respond as a PF 1 priority call. The procedure is in draft form and we believe we can go forward. We will need to test this procedure and have tentative plans to do that next week.

Monthly meetings will be scheduled to review the process and make sure performance and response time levels are adequate.

**PFD Incident Command**

Ray Welte has forwarded PGW's Leak Investigation Procedure (Distribution Department Bulletin #212) to PFD and the structure of incident command has been made clear. From now on, the highest ranking PGW person or his designee will be standing by with the PFD Incident Commander and communicate with the field supervisors from that location.

PGW will be at the incident command and will maintain that presence so there is an exchange of communication. PGW currently has mobile radios that are mounted in the trucks and personnel carry Nextel's limited to one-to-one

communication. PFD has radios that can be heard by all people simultaneously. PGW will investigate improving our communications equipment further; possibly a portable mobile radio system, at least, at incident locations with the PFD.

### **Atmospheric Readings**

Paul Metro questioned atmospheric readings and when PECO would respond. It was stated that when PGW detects any reading in the general atmosphere of a property PECO will be contacted. PGW procedures will be revised that any atmosphere readings will require PGW to call PECO. PECO will dispatch according to the situation as either a priority PF 1 or PF 2. There are underground and aerial electrical services in Philadelphia and PECO will determine the best way to cut off the electric, it could be one house, a block or a development. PECO is the experts on how the electric system is configured and how best to cut off the power. PGW will supply PECO with all the information that is available concerning the gas leak and affected premises.

Paul Metro questioned the number of atmospheric readings PGW encounters and John Jolly stated that last year, PGW had 35 job locations with approximately 77 houses/properties affected. Most readings are found during January and February.

In Center City PECO may need to cut electric to an entire block. It was noted that some hospitals and other similar buildings may have a dual service. It was also stated that if electric is cut out to a premise where the resident has critical health conditions and needs the power, an ambulance will be called to take them to a hospital, per PECO procedure. When it is cold and power goes out for an extended period of time PECO will move residents to a community center. PGW will request electric outage numbers so we are aware of how many properties are involved.

Deputy Commissioner Hargett stated that displaced residents will be handled by the Office of Emergency Management. If that type of situation should arise the Incident Commander should be notified. Paul Mondimore mentioned that PGW will notify PFD of any evacuations. PFD will contact all outside services as they are needed on job locations.

### **Evacuations**

PGW's evacuation procedures have been clarified that when a property is evacuated it also means that PGW personnel must also evacuate. Once a building has been evacuated it will not be re-entered.

PFD has final say on who does/does not go into a building. Once a building has been evacuated, PGW will not re-enter the building to shut the gas off or recheck



for readings, PGW will evacuate, ventilate, get out and attempt to shut off gas from the outside.

### **Ventilation**

Discussion was held on ventilation. If no ventilation is done the property stays in the explosive range for a longer period of time. Reviewing procedures from other PA gas utilities, other utilities also ventilate to get the readings down through LEL as quickly as possible.

### **Source of Ignition**

By shutting of curb valves and cutting off electric we are reducing possible sources of ignition. PGW has approximately 65% plastic services which all have outside curb valves. Our current policy for new services is to install meters outside so there will be less of a need to go inside of properties to attempt shut off as time goes on. In cooperation with PECO using PF 1 priority, there will be a 30 minute response time to cut off electrical service to the premise. There are plans to test this procedure with follow-up meetings scheduled to work out what we are doing right, wrong, response time, sufficient personnel, etc. We invite PFD to attend those meetings as it will only make all agencies better in the long-run.

The subject of emergency generators was discussed. It was stated that there are installations in several larger commercial and industrial buildings that have natural gas fired emergency generators. This equipment usually has battery back-up as a source of ignition. Even with the gas and electric shut off, these battery back-up systems will try to start the engine.

### **Monthly Meetings**

Deputy Commissioner Hargett stated that PGW will be attending the PFD monthly staff meetings to give some instructions to the PFD first responders and update them on PGW/PECO procedures. This presentation will be given to all the different platoons. PGW would like to know the responders on a name-to-name basis. PGW will also provide PFD with a copy of our Operation's Manual.

### **Communication**

Paul Mondimore stated that PGW needs to increase communication within PGW between FSD and Distribution. On the Torresdale Avenue incident FSD worked with PFD on the evacuation while Distribution was working on investigating the gas leak. There was not a clear path of communication between the two (2) PGW departments.

PFD is familiar with PGW's two (2) miles of transmission lines and know if there is a problem that PGW needs to respond.

PFD will be visiting the PGW Gas Processing facilities starting in April for tours that will help them recognize the danger that they can encounter.

PGW will continue to respond to second alarm and higher fires and will report in to the Incident Command Center.

DEBBI SCHROECK

/dls  
3/28/2011

# Appendix A-4

PGW has revised its written procedures by reflecting in a bulletin existing minimum training criteria and operator qualifications for work crew members that respond to emergency situations, which had formerly been reflected in its Operator Qualification training materials.

4.

- (a) The procedures are designed to train work crew members and ensure that they are fully qualified to respond to emergency situations.
- (b) PGW now has more than 50 operator qualification modules for emergency responders under PGW's Operator Qualification Plan.

- Supporting Documentation:

- (a) Bulletin 284.
- (b) Operator Qualification Plan (w/modules).

- Cross-References: Prayer for Relief at ¶ (f);  
Settlement, ¶ 23(d).

4(a)



## FIELD OPERATIONS

### DISTRIBUTION DEPARTMENT

## TRAINING REQUIREMENTS

Effective Date: 3/30/2011

Bulletin Number #284

Supersedes: NEW

### I. Purpose

To provide an overview of Field Operations employee training requirements that maintains a qualified workforce.

### II. Definition

**Abnormal Operating Condition** - A condition identified by PGW that may indicate a malfunction of a component or deviation from normal operations that may result in a condition exceeding design limits or hazard(s) to persons, property, or the environment.

**Covered Task** - Any task that:

- Is performed on a pipeline facility;
- Is an operations or maintenance task;
- Is performed as a requirement of 49 CFR Part 192; and
- Could affect the operation or integrity of the pipeline.

**Qualified** - An individual has been evaluated and can (a) perform assigned covered tasks and (b) recognize and react to abnormal operating conditions.

### III. Procedure

#### A. Initial Training

1. Provide initial classroom, simulated and or field training for each promotional job title. Each employee is tested on their ability to perform each task assigned within the associated job title.

#### B. Operator Qualification Plan

1. PGW's Operator Qualification Plan prescribes requirements for evaluating the qualifications of all persons performing certain operating and maintenance tasks listed in the OQ plan on Philadelphia Gas Works' natural gas pipeline system.
2. The purpose of this plan is to ensure safe and efficient natural gas service.
  - Establish objective criteria of required qualifications for all persons performing safety-sensitive operations and maintenance tasks on PGW's gas piping system,



## FIELD OPERATIONS

### DISTRIBUTION DEPARTMENT

## TRAINING REQUIREMENTS

Effective Date: 3/30/2011

Bulletin Number #284

Supersedes: NEW

- Ensure through evaluation that each person performing safety sensitive tasks on PGW's pipeline system is able to perform these tasks and recognize and respond appropriately to abnormal operating conditions they may encounter.

3. Employees are evaluated on their knowledge, skills and abilities on the assigned covered tasks as well as their ability to react to abnormal operating conditions.

#### **C. Annual Schools**

1. **PGW reviews the following tasks on an annual basis:**

- a. Shoring of trenches
- b. Leak Investigation
- c. Leak migration
- d. Barhole Investigation
- e. Damage Prevention
- f. Gas Detection Instrument
- g. Plastic Fusion Qualification
- h. Respirator Use and Fit Test

#### **D. Communication of Changes in Procedures, Equipment, Regulations, Training Topics, Safety Topics, etc.**

1. PGW utilizes the following means of communication as appropriate:
  - Annual Schools
  - Tailboard meetings
  - Department Newsletters
  - Memory Joggers
  - Reminders via computer in vehicles
  - Specific Tool/Material Training classes
  - Vendor Demonstrations
2. The exact message to be communicated and the method of communication will be determined on a case by case basis.



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

**TRAINING REQUIREMENTS**

Effective Date: 3/30/2011

Bulletin Number #284

Supersedes: NEW

**E. Certifications**

1. All certifications are maintained as required:
  - HVAC
  - NACE
  - FUSION
  - WELDING
  - CSST

**F. Re-Training**

1. PGW supervisors visit jobsites and are instructed to seek additional training for any individual who is not performing a task correctly.
2. When warranted training shall be available for individuals who need refresher training in order to complete routine, for cause or post accident re-evaluations.

**IV. Associated Documentation**

**Relevant Code**

49CFR Part 192, Subpart N, Fusion Code  
49CFR Part 192, Subpart E, Welding Code,  
International (IFGC) Fuel Code  
49CFR Part 192, Subpart I, Corrosion Code

**Associated Bulletin**

N/A

**Attachments**

N/A

**V. Handbooks**

PGW's Operator Qualification Plan

**VI. Transaction Listing**





FIELD OPERATIONS

DISTRIBUTION DEPARTMENT

TRAINING REQUIREMENTS

Effective Date: 3/30/2011

Bulletin Number #284

Supersedes: NEW

**VI. Transaction Listing**  
TR-2011-17

Approved by:

\_\_\_\_\_  
**John Zuk**  
Director, Employee Relations

\_\_\_\_\_  
**Steven A. Groeber**  
Director, Field Operations & Work Planning

4(b)



## **PGW FIELD OPERATIONS LEAK RESPONDER**

All employees assigned to the listed job titles below have demonstrated the knowledge, skills and abilities to perform the covered tasks associated with a leak responder under PGW's Operator Qualification plan. A three (3) year re-evaluation has been established with this plan.

- A. Distribution Foreman
- B. Distribution Field Supervisor
- C. Field Service Supervisor
- D. Field Service Specialist
- E. Field Service Technician
- F. Field Service Cadet

In addition to PGW's OQ Plan the department provides initial training:

- Distribution Foreman, 4 weeks of class room training and 4 weeks of hands on training in the field under the direction of a training or field supervisor
- Distribution Field Supervisor, combination of office and field training for 13 weeks under the direction of a field supervisor and a general supervisor
- Field Service Supervisor, 4 weeks in the field with station supervisors, 5 days with General Supervisor:
- Field Service Specialist, 5 days classroom, 5 days field training with a Specialist, Air Condition Training 10 days classroom training:
- Field Service Technician, (Meter & Piping Training-4 Days in the classroom, 3 Days in the field or 20 Meter & Piping jobs with FSD Specialist).(House Heaters & Auto-Water-Heaters-5 Days in the classroom, 5 Days in the field with FSD Specialist.

- Field Service Cadet, 15-Day field training with a FSD Specialist. 6 Days in class room training.

PGW reviews the following covered tasks on an annual basis. Employees are not tested annually however a thorough review of the task is presented annually:

- A. Shoring of trenches
- B. Leak Investigation
- C. Leak migration
- D. Introduce New Tools and Fittings
- E. Personal Protective Equipment
- F. Barhole Investigation
- G. Damage Prevention
- H. Gas Detection Instrument

BB3/2010



# Philadelphia Gas Works

## *Natural Gas Pipeline System Operator Qualification Plan*

*Effective Date  
April 26, 2001*

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## Part One: Purpose and Scope

### 1.1 Scope

This Operator Qualification Plan (OQ Plan) prescribes requirements for evaluating the qualifications of all persons performing certain operating and maintenance tasks listed in this OQ Plan on Philadelphia Gas Works' natural gas pipeline system. It is adopted to comply with minimum pipeline safety regulations at 49 CFR Part 192, Subpart N.

After October 28, 2002, no company employee, employee of a contractor or any other person may perform any covered task identified in this Plan unless the requirements of this Plan have been satisfied. It is our responsibility to 1) ensure that all our employees and employees of our contractors are qualified in accordance with this Plan and 2) to maintain adequate records to document these qualifications.

In addition to qualifications for covered tasks, this Plan may include qualification, training and/or testing that is not required or regulated under 49 CFR 192 Subpart N. These qualification requirements are included here for the convenience of PGW in order to consolidate all qualification requirements into one plan. **Pursuant to determinations made during the rulemaking process, these non-regulated training and evaluation procedures, voluntarily added to this Plan by PGW, are NOT subject to review or enforcement by federal or state regulators under 49 CFR 192 Subpart N.**<sup>1</sup>

### 1.2 Purpose

The purpose of this plan is to ensure safe and efficient natural gas service by:

- Establishing objective criteria of required qualifications for all persons performing safety-sensitive operations and maintenance tasks on PGW's gas piping system,
- Ensuring through evaluation that each person performing safety sensitive tasks on PGW's pipeline system is able to perform these tasks and recognize and respond appropriately to abnormal operating conditions they may encounter, and
- Maintaining necessary records to administer this plan.

### 1.3 Definitions

Unless another meaning is specifically indicated, when used in this plan:

1. *Abnormal operating condition* means a condition identified by PGW that may indicate a malfunction of a component or deviation from normal operations that may result in a condition exceeding design limits or hazard(s) to persons, property, or the environment.

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<sup>1</sup>"The operator may expand any of the seven required elements and add additional elements to their program but will only be held accountable to meet the requirements of this Subpart." 63 Fed Reg 57275

2. *Covered task* means any task that:
  - Is performed on a pipeline facility;
  - Is an operations or maintenance task;
  - Is performed as a requirement of 49 CFR Part 192; and
  - Could affect the operation or integrity of the pipeline.
3. *Evaluation* means a process, established and documented by PGW, to determine an individual's ability to perform a covered task by any of the following: written examination; oral examination; work performance history review; observation during (a) performance on the job, (b) on the job training, (c) simulations; or other forms of assessment.
4. *Operator* means Philadelphia Gas Works.
5. *Person* means any individual, firm, joint venture, partnership, corporation, association, State, municipality, cooperative association, or joint stock association, and including any trustee, receiver, assignee, or personal representative thereof.
6. *Pipe* means any pipe or tubing used in the transportation of gas, including pipe-type holders.
7. *Pipeline* means all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.
8. *Pipeline facility* means new and existing pipelines, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation.
9. *Qualified* means that an individual has been evaluated and can (a) perform assigned covered tasks and (b) recognize and react to abnormal operating conditions.

## **Part Two: Administrative and Employee Responsibilities**

### **2.1 Plan Administration**

The Senior Vice President, Operations is designated Plan Administrator and is responsible for the administration of this plan:

Plan administration includes: maintenance of the complete OQ Plan, including material incorporated by reference; distribution of up-to-date copies of the Plan to appropriate personnel; making the Plan available for inspection by authorized agents of regulatory agencies; ensuring that all milestones, periodic evaluation intervals, etc. are conducted as specified in this Plan; notifying all company employees in advance of the date that an employee's current qualification will expire; scheduling evaluations; recording the results of evaluations; maintaining a current list of qualified employees; monitoring federal and state regulations that affect this Plan; and such other activities as are necessary to carry out the scope and purpose of this Plan.

*PGW has established a process to review the effectiveness of the OQ Program to identify areas where improvements should be made.*



- *The OQ Administrator will collect and maintain records of supervisor's field observations, pass/fail rates for re-evaluations, incident investigation reports and other measures of program effectiveness and periodically review these to identify any covered tasks showing up in a disproportionately high number of occurrences.*
- *A task group comprised of OQ, training and operations will review the identified tasks to recommend improvements to the procedures, training and/or evaluations for these task(s).*

## **2.2 General Employee Responsibilities**

All employees are expected to be aware that covered tasks (listed in Attachment A to this Plan) may only be performed by persons qualified under this Plan. Any employee observing any of these covered tasks being performed on PGW's pipeline facilities by a non-qualified person must immediately report this condition to the Plan Administrator, in addition to any specific responsibilities listed below.

### **EXCEPTION:**

A non-qualified person(s) may perform a covered task if that person(s) is directed and observed by an individual that is qualified under this plan to perform that covered task. For the purpose of this Plan, directed and observed means that the qualified person is at the site where the covered task is being performed by the person(s) not qualified for this task and is closely watching each step of the work to ensure it is performed correctly. It is not sufficient that the qualified person be in the general vicinity, but not observing each step of the task. One qualified person may direct and observe more than one non-qualified person at one time performing one or more covered tasks, however the number of non-qualified persons watched by one qualified persons should be kept to a minimum consistent with the ability of the qualified person to observe and direct the performance of the covered task(s).

*Due to the critical nature of the task or existing regulatory requirements, PGW will not allow a non-qualified individual to perform plastic pipe joining, welding or hot tapping a high pressure pipe even under the observation of a qualified person. All other covered tasks may be performed by non-qualified persons under the observation and direction of a qualified person.*

At present time PGW has 3 to 4-person crews in which the foreman, pipe mechanic and compressor operator positions are qualified and observe and direct the one non qualified crew member. PGW has determined that the covered tasks performed by any non qualified crew member perform can be safely directed and observed by one qualified individual. Revised 2-21-06

## **2.3 Specific Responsibilities**

- 2.3.1 In all cases when PGW does elect to contract out covered tasks PGW will be responsible to ensure that all contracts for the performance of operations and maintenance tasks on company facilities incorporate the list of covered tasks in Attachment A and stipulate that no contractor employee may perform any of these tasks unless the contractor has first provided the company with evidence that these employees are qualified in accordance with the requirements of this Plan. See Part Seven of this Plan for more details on contractor qualification.
- 2.3.2 Area Supervisors are responsible to ensure that on all the job sites for which they are responsible that PGW and contractor personnel are aware of those tasks in Attachment A for which qualification is required and that non-qualified persons may not perform these tasks unless directed and observed by a qualified person. Work must be immediately stopped on any job where it is discovered that non-qualified workers are performing covered tasks listed in Attachment A unless that person is directed and observed by a person who is qualified for that task. Routine inspection procedures should include a review of the qualifications of personnel.
- 2.3.3 Area Supervisors are responsible to ensure that their subordinates are aware of the current list of covered tasks in Attachment A and that they are not to perform these tasks unless they possess current qualifications from the company to perform these tasks or are directed and observed by a qualified person. Supervisors should obtain an up-to-date list of the qualifications of their subordinates from the plan administrator. Supervisors are to immediately report to the plan administrator if they have reason to believe that any of their subordinates are no longer qualified. Reasons to believe a person is no longer qualified may include observations of errors made by that employee while performing a task or other reasons.
- 2.3.4 Department Managers are responsible for monitoring pipeline safety regulations and notify the plan administrator when regulatory changes require modifications to this plan or communication of changes to persons performing covered tasks affected by the change.

## **Part Three: Identification of Covered Tasks**

### **3.1 Responsibility**

The Plan Administrator is responsible for maintaining an up-to-date listing of covered tasks and must approve modifications or additions to the covered task list. The rationale for any changes to the covered task list shall be recorded.

### **3.2 Identifying covered tasks**

Covered tasks are those tasks that:

- Are performed on a pipeline facility;
- Are an operations or maintenance task;
- Are performed as a requirement of 49 CFR Part 192; and
- Could affect the operation or integrity of the pipeline.

Tasks that have been evaluated against the four-part tests are listed in Attachment A to this Plan. The Plan Administrator shall apply the four-part test to determine whether any new activities not addressed in Attachment A are or are not covered tasks when performed on PGW facilities.

*Whenever OPS amends its regulations or PGW amends its procedures, PGW will review the covered task list to determine 1) whether the change creates a new activity not addressed in the original SCE analysis, or 2) whether the rationale for classifying an activity as a covered or non-covered task has changed. The covered task list and evaluations will be modified as appropriate.*

### **3.3 Records**

The current list of covered tasks is shown as Attachment A to this Plan. The rationale for the determination whether any task is covered or not covered is maintained by the Plan Administrator.

## **Part Four: Evaluation methods**

### **4.1 Responsibility**

Selection of evaluation methods and the re-evaluation interval for each covered task listed in Attachment A is the responsibility of Plan Administrator.

### **4.2 Specified evaluation methods**

The required evaluation(s) for each covered task will be maintained by the Plan Administrator.

### **4.3 Re-evaluation intervals**

- The time period at which each person's qualifications to perform a covered task shall be re-evaluated will be specified for each evaluation [or task]. PGW may establish a re-evaluation interval for each evaluation rather than for each task. PGW has established a 3 calendar year re-evaluation interval for most evaluations and a 1 calendar year interval for other evaluations.
- Example- If an employee's evaluation date for a particular evaluation is 9/23/03 and there is a three (3) calendar year interval then the employee must be re-evaluated by 12/31/06.

*To date there are no industry standard re-evaluation intervals. Justification for the evaluation intervals are as follows:*

- 1) *The report in OPS Docket RSPA-03-1448 titled Comparative Analysis of Personnel Qualification indicates that a three (3) year interval is consistent with other industries.*
- 2) *PGW supervisors visit in excess of 80% of jobsites and are instructed to seek additional training for any individual who is not performing a task correctly.*
- 3) *PGW reviews the following covered tasks on an annual basis. Employees are not tested annually however a thorough review of the task is presented annually.*
  - A. *Shoring of trenches*
  - B. *Leak Investigation*
  - C. *Leak migration*
  - D. *Barhole Investigation*
  - E. *Damage Prevention*
  1. *Gas Detection Instrument*

Re-evaluation intervals for evaluations will be recorded by the Plan Administrator.

#### **4.4 Work Performance History Review**

Work performance history review may be used to evaluate the qualifications of persons who have regularly performed one or more covered tasks for PGW prior to August 27, 1999. Form OQ 4 shall be completed for each task and person for which work performance history review is to be used as the transitional evaluation method. Work performance history review will not be used as the sole evaluation method after October 28, 2002.

## **Part Five: Identification of persons performing covered tasks**

### **5.1 Responsibility**

The Plan Administrator is responsible for identifying those employees who perform covered tasks during the course of their work on PGW's system and shall schedule each employee for evaluation of his/her qualifications to perform each covered task. Evaluation shall be done using one of the evaluation methods identified in Part Four of this Plan. The Plan Administrator shall maintain a list of persons and the covered tasks they are qualified to perform.

### **5.2 Recordkeeping**

The Plan Administrator shall maintain an up-to-date list of qualified employees.

The following minimum records will be maintained:

- Identification of qualified individual(s)
- Identification of the covered task(s) each individual is qualified to perform;
- Date(s) of current qualification; and

- Qualification method(s).

The Plan Administrator shall also maintain records of all actions performed as requirements of this OQ Plan:

- Processes for identification of covered tasks,
- Evaluation records
- Investigations of incidents
- Re-evaluation on reasonable suspicion
- Communication of changes

### **5.3 Record Retention**

All records required by this plan must be retained for 5 years after the record is no longer required to document the qualification of any person to perform a covered task. An evaluation record may be discarded five years after:

- A person ceases to perform a covered task on PGW's system, or
- A person has successfully retaken the evaluation

## **Part Six: Re-evaluation of a person's qualifications**

### **6.1 Responsibility**

The Plan Administrator is responsible for tracking the expiration dates of the qualifications for each company employee and notifying the employee before any required evaluation will expire. The Plan Administrator is responsible for scheduling re-evaluation activities prior to the expiration date of qualifications for each employee.

#### **6.1.1 Re-evaluation upon reason to believe that the individual is no longer qualified**

Each employee is responsible for notifying the Plan Administrator whenever he/she has reason to believe that any person working on the PGW system is no longer qualified to perform a covered task. Reasons may include, but are not limited to, observation that an employee or employee of a contractor is improperly performing a task, observable loss of motor skills or other reasons that indicate a person may no longer be able to perform a task. The Plan Administrator shall investigate and, if necessary, require re-evaluation in the covered task. The results of the investigation shall be recorded.

*Criteria for "For cause" re-evaluation includes extended period without performing the task as one reason to re-evaluate an individual.*

#### **6.1.2 Re-evaluation of persons implicated in a reportable incident**

Investigation of reportable incidents as defined in Part 191 shall include assessment of whether any person's performance of a covered task may have caused or contributed to the severity of the incident. If the Plan Administrator determines that a PGW employee's or contractor employee's performance of a covered task contributed to a reportable incident, qualifications related to the incident shall be re-evaluated. Qualifications in

other covered tasks unrelated to the incident need not be re-evaluated. The results of the investigation shall be recorded in **OQManager™**.

*If a PGW incident investigation identifies an abnormal operating condition for a task that was not included in PGW's existing evaluations for that task, PGW will define the AOC, determine how the AOC can be recognized and the appropriate reaction to it and create an evaluation for this AOC to the evaluation requirements for the task. Information on how to recognize and react to the AOC will be added to the training for the task.*

### 6.1.3 Communication of changes in procedures, equipment, regulations, etc.

The Plan Administrator shall monitor changes in regulations, procedures, technology, new equipment, etc. that may affect the performance of a covered task and shall determine if these changes are so substantial as to require re-evaluation of the qualifications of each person qualified to perform each covered task affected by the change. The Plan Administrator shall determine whether the evaluation method(s) must be changed as a result of the changes. Evaluation methods should be modified if the new equipment, technology or procedure requires different knowledge, skills and abilities than those measured by the current evaluation method(s). Individuals should be re-evaluated in the new procedures or equipment before the new procedures or equipment are implemented.

The exact message to be communicated and the method of communication will be determined on a case by case basis by the Plan Administrator. In most cases changes will be communicated via supervisors through written memos and/or face to face meetings.

## 6.2 Re-evaluation

As soon as possible after determining that re-evaluation is necessary under section 6.1 of this Plan, the Plan Administrator shall schedule a re-evaluation of qualifications. Until such re-evaluation is successfully completed, the affected person shall be considered non-qualified for any task that requires successful completion of the evaluation(s) in question and may not perform the covered task unless directed and observed by a person who is qualified to perform the covered task. The person may, however, continue to be qualified for other covered tasks that do not require the evaluation(s) in question.

## 6.3 Re-Training

Based on the results of the re-evaluation of an employee's qualifications, the Plan Administrator shall determine if the employee warrants re-training or a reduction in title. If it is decided that a reduction in title is warranted the employee will be re-trained and evaluated in all tasks assigned to that job title.

When warranted training shall be available for individuals who need refresher training in order to complete routine, for cause or post accident re-evaluations. Training shall

include all knowledge, skills and abilities and AOC's required for each covered task that is in question.

## **Part Seven: Qualification of contractor employees to perform covered tasks**

### ***7.1 Responsibility***

PGW is responsible for assuring that contractor employees and employees of their subcontractors are qualified if they are to perform covered tasks on PGW's piping system. The Plan Administrator is responsible to transmit with the request for proposals and other contract specifications PGW's qualification requirements.

### ***7.2 Evaluation of contractor employees***

Contractors and other non-PGW employees who perform covered tasks on PGW facilities must be qualified if they perform any of the covered tasks listed in Attachment A. Qualification may be accomplished by any one of the following:

The PGW may evaluate the contractor employees using the evaluations required of PGW employees performing the same task(s), or

Contractors and other non-PGW employees who perform covered tasks on PGW facilities may provide evidence that all personnel have completed the evaluations specified in Attachment A or Attachment B for the covered tasks they will perform. PGW has reviewed and adopted the evaluation methods used by contractors listed in Attachment B as approved methods for qualifying contractors or as an accepted equivalent alternative method to that found in Attachment A, or

PGW has reviewed and adopted certain 3<sup>rd</sup> party certification/qualification programs as accepted evaluation methods for certain covered tasks. These qualification criteria are listed in Attachment B. Contractor personnel possessing current qualifications from these 3<sup>rd</sup> parties will be accepted by PGW as evidence of qualification.

### ***7.3 Notification of substandard performance of a covered task by a contractor***

The Plan Administrator should be notified immediately if any PGW employee has reason to suspect that a contractor employee is not qualified to perform a covered task. Such reason could include, but is not limited to, observation of significant failure to follow procedures. In cases where a 3<sup>rd</sup> party has qualified the contractor employee, the Plan Administrator should also notify the 3<sup>rd</sup> party qualification agency.

**Part Eight: Incorporation by reference of operator qualification plans of companies with which PGW has mutual assistance plans.**

In the event of major natural disasters or other emergencies, PGW may utilize employees of other gas companies to restore natural gas service to PGW customers. These individuals may be required to perform certain covered tasks on PGW's facilities. In order to allow this mutual assistance to occur without violating 49 CFR 192 Subpart N, PGW has incorporated by reference in Attachment C to this Plan the qualification requirements of companies whose employees PGW might utilize for certain covered tasks.

**8.1 Responsibility**

The Plan Administrator is responsible to identify covered tasks in Attachment A of this Plan that PGW might utilize borrowed employees to perform under mutual assistance arrangements. The Plan Administrator shall also identify companies with whom PGW would be likely to rely upon for emergency assistance and request a copy of the qualification requirements these companies have established for these covered tasks. These qualification requirements, found in Attachment C of this Plan have been evaluated and are incorporated by reference into this Plan as acceptable alternative methods of qualification for the covered tasks listed.

In all cases, PGW shall conduct training classes to address and explain any procedures that are specific to PGW for the tasks assigned to them. This training shall be conducted prior to sending the borrowed employees to the field.

Reference: Foreman's Handbook – Telephone Numbers

Foreman's Handbook – pages 1 through 5a – Street Leak Procedure

In the event PGW is offered and accepts assistance from a company not listed in Attachment C, the Plan Administrator shall obtain and incorporate the qualification requirements of that company into Attachment C as soon as possible.

**Part Nine: Initial Training**

PGW has a comprehensive in-house training program for each job title. All new hires receive 2-3 days of training before entering the field under the direct supervision of a foreman. When job openings occur, the Distribution Worker will return to training for a combination of classroom, classroom simulation, hands-on and on the job training. This training includes all knowledge, skills and abilities and AOC's required for each covered task that the individual is expected to perform. Training will include evaluations in the relevant knowledge, skills and abilities and AOC's.



|            |             |       |
|------------|-------------|-------|
| Last Name: | First Name: | ID #: |
| Task:      |             |       |

**Form OQ-4 - Work Performance History Review**

This form is to be used to qualify persons to perform covered task by use of a work performance history review.

NOTE: This may be used for qualification only under the following conditions:

1. The person being qualified has regularly performed this covered task prior to August 27, 1999.
2. Today's date is on or before October 28, 2002.

***Results of records review***

What evidence proves that this person has regularly performed this task?

# PGW Operator Qualification Plan

Revised 02/21/2006

|   | Yes | No | N/A |
|---|-----|----|-----|
| Review performance reviews for past 5 years. Do these include statements about how this person performs this task? If yes, describe on a separate page and attach to this form. Attach copies if possible.  |     |    |     |
|   |     |    |     |
| Implicated in accidents/poor performance. Has this person been cited for poor performance of this task or ever been implicated in an accident or near-miss caused by performance of this task? If yes, describe on a separate page and attach to this form. Attach copies if possible.                        |     |    |     |
|   |     |    |     |
| Evidence of prior training or certification. Are there records that this person attended and successfully completed training programs directly related to this task? Attended seminars? Does the person possess certification in relevant skills (e.g. NACE certification)? Attach copies of relevant records |     |    |     |

Reviewers:

Date:

**Attachment A: Covered Tasks**

The following tasks performed on PGW's pipelines have been evaluated and found to pass the four part test to be covered tasks subject to the Operator Qualification Rule:

NOTE: For tasks performed on a regular basis, an evaluation curriculum and re-evaluation intervals are specified (alternative qualification curricula for some tasks may appear in Attachments B and/or C). For tasks performed infrequently company may establish evaluation criteria and evaluate individuals just prior to conducting the infrequently-performed task (e.g. Upgrading -- company may choose not to maintain qualifications of personnel to conduct an upgrading but rather may establish upgrading qualification requirements as part of the upgrading plan development process and qualify personnel involved just prior to beginning the upgrading process.)

**CORROSION CONTROL COVERED TASKS**

Inspecting for shorted casings  
Jacking pipe to clear a shorted casing  
Repair coating on existing steel mains  
Measuring pipe-to-soil potential  
Conduct a soil resistivity survey  
Remove coupons/sample gas or liquids for analysis and evaluation for internal corrosion  
Conducting interference testing  
Cleaning and either coating or jacketing pipe for atmospheric corrosion  
Electrically checking for proper performance reverse current switches, diodes, and interference bonds  
Installing, replacing and testing electrical isolation couplings on an existing pipeline  
Inspecting for atmospheric corrosion  
Inspecting the condition of exposed pipe or pipe coating  
Installing/replacing a rectifier on an existing pipeline  
Installing/replacing an anode on an existing line  
Ensure operation of a rectifier  
Visually inspecting for internal corrosion  
Install/replace a corrosion test station on an existing pipeline

**CUSTOMER SERVICE COVERED TASKS**

Investigating leak/odor complaints on company piping

**DAMAGE PREVENTION COVERED TASKS**

Locating and marking lines  
Inspection of 3<sup>rd</sup> party excavations for damage prevention

**ENGINEERING/OPERATIONS/ADMINISTRATION COVERED TASKS**

Upgrading the MAOP of a pipe

**GAS CONTROL COVERED TASKS**

Controlling and monitoring gas pressures and flows.

**LEAK REPAIR COVERED TASKS**

Repair distribution line leaks

Lining pipe

Repair transmission line leaks

**MAINTENANCE COVERED TASKS**

Mechanically joining pipe other than plastic during maintenance

Repair a non-leaking damaged pipe

Backfilling a trench following maintenance

Installing a pipe by live insertion

Purging air from a pipeline

Purging gas from a pipeline

Performing a pressure test on existing pipe

Stopping gas flow

**MEASUREMENT & REGULATION COVERED TASKS**

Inspect and test pressure regulator station

Testing overpressure protection

Field interpretation of pressure recording charts

Change/repair chart recorders at pressure regulator stations

**ODORIZATION COVERED TASKS**

Operating an odorizer.

Monitor natural gas odorization levels

**OPERATIONS COVERED TASKS**

Abandonment or deactivation of facilities

Tapping pipelines under low pressure

Tapping pipelines under Intermediate and High pressure

**PATROLLING AND INSPECTION COVERED TASKS**

Conducting gas leakage surveys

Patrolling

**PLASTIC PIPE COVERED TASKS**

Joining plastic pipe for maintenance

Inspect plastic pipe fusion joint - maintenance

Replacing a section of existing tracer wire

**VALVE COVERED TASKS**

Inspect valves

Repair and maintain valves

**WELDING COVERED TASKS**

Welding on a pipeline for maintenance

Non-destructive testing of maintenance welds

**Attachment B: Evaluation Methods Incorporated by Reference**

PGW does not currently utilize contractors to perform covered tasks. In the event PGW elects to use contractors for covered tasks, accepted contractor qualification requirements will be listed below and in OQ Manager™.

| Covered Tasks: | Accepted 3 <sup>rd</sup> Party Evaluation Methods: |
|----------------|--|
|                |  |

**Attachment C: Incorporation by Reference of Qualification Requirements of Companies for Performing Certain Covered Tasks in Emergencies**

PGW has identified the following companies upon whom it might call for emergency assistance. PGW has reviewed the evaluation methods used by these companies to qualify persons in the following tasks and has determined that these qualification requirements are acceptable alternative methods for evaluating qualifications to perform these tasks on PGW's piping system:

| Covered Tasks: | Company Evaluation Methods<br>incorporated by reference |
|----------------|---|
|                |   |
|                |   |



- + : **11. Inspecting for atmospheric corrosion - SOC: 1 : 1** Deactivate
- + : **11. Inspecting for atmospheric corrosion--Gas Processing - SOC: 1 : 1** Deactivate
- + : **12. Inspecting the condition of exposed pipe or pipe coating - SOC: 1 : 1** Deactivate
- + : **12. Inspecting the condition of exposed pipe or pipe coating -- Dist.Foreman/SR. pipe mech./Pm/Co - SOC: 1 : 1** Deactivate
- + : **12. Inspecting the condition of exposed pipe or pipe coating -- Gas Processing - SOC: 1 : 1** Deactivate
- + : **13. Installing/replacing a rectifier on an existing pipeline - SOC: 1 : 1** Deactivate
- + : **13. Installing/replacing a rectifier on an existing pipeline --- Pressure Force - SOC: 1 : 1** Deactivate
- + : **13. Installing/replacing a rectifier on an existing pipeline--Gas Processing - SOC: 1 : 1** Deactivate
- + : **13. Installing/replacing a rectifier on an existing pipeline--Gas Processing Electricians - SOC: 1 : 1** Deactivate
- + : **14. Installing/replacing an anode or test station on an existing line - SOC: 1 : 1** Deactivate
- + : **14. Installing/replacing an anode or test station on an existing line --- Compressor Operator - SOC: 1 : 1** Deactivate
- + : **14. Installing/replacing an anode or test station on an existing line --- Dist.Street Force - SOC: 1 : 1** Deactivate
- + : **14. Installing/replacing an anode or test station on an existing line--G P.Worker/Mech. Services - SOC: 1 : 1** Deactivate
- + : **14. Installing/replacing an anode or test station on an existing line--Gas Processing - SOC: 1 : 1** Deactivate
- + : **14. Installing/replacing an anode or test station on an existing line--Gas Processing- Electricians - SOC: 1 : 1** Deactivate
- + : **15. Ensure operation of a rectifier - SOC: 1 : 1** Deactivate
- + : **16. Visually inspecting for internal corrosion - SOC: 1 : 1** Deactivate
- + : **17. Install/replace a corrosion test station on an existing pipeline - SOC: 1 : 1** Deactivate
- + : **17. Install/replace a corrosion test station on an existing pipeline-- Street Force - SOC: 1 : 1** Deactivate
- + : **18. Investigating leak/odor complaint on company piping - Dist. General 2 - SOC: 3 : 3** Deactivate
- : **18. Investigating leak/odor complaints on company piping - SOC: 1 : 1** Deactivate

| Type | Qualification Type: Evaluation  | Interval | Verifiable | Delete | Status | Eval |
|------|---|----------|------------|--------|--------|------|
| G    | PGW Evaluation-Written & Performance: SCE A22. Ability to Conduct Leakage Survey with Available Openings and Pinpoint Leak Sources<br>--- AND --- | 36       | NV         | X      |        |      |
| G    | PGW Evaluation-Written & Performance: K01 Properties of Natural Gas<br>--- AND ---  | 36       | NV         | X      |        |      |
| G    | PGW Evaluation-Written & Performance: K02 Ignition sources<br>--- AND ---   | 36       | NV         | X      |        |      |
| G    | PGW Evaluation-Written & Performance: K03 Natural Gas Migration<br>--- AND ---  | 36       | NV         | X      |        |      |
| G    | PGW Evaluation-Written & Performance: K21 Leak classification criteria<br>--- AND ---   | 36       | NV         | X      |        |      |
| G    | PGW Evaluation-Written & Performance: K22 Gas leak investigation and make safe procedures   | 36       | NV         | X      |        |      |



































|   |  |    |    |   |                                    |                     |
|---|--|----|----|---|------------------------------------|---------------------|
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: SCE A20. Skills and Abilities in Leak Classification (Grading)                   | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: SCE A02 Ability to Use a Combustible Gas Indicator                               | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: SCE A14 Skills in Inspecting for Small Leakage                                   | 36 | NV | X | <a href="#">Deactivate Section</a> | <a href="#">Add</a> |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: SCE A21. Ability to Conduct a Barhole Leak Investigation                         | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: AOC07. Flammable atmosphere  | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: AOC08. Blowing gas/grade one leak  | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: AOC09. Fire on a pipeline  | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: AOC13. Under pressure  | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: AOC14. Under odorization   | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: AOC16. Unplanned shut off of service to one or more customers                    | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: AOC20. Odor complaint  | 36 | NV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW Evaluation-Written & Performance: AOC21. Water or other liquids in the pipeline                                    | 36 | NV | X |                                    |                     |
|   | OR   |    |    |   |                                    |                     |
| G | PGW-Performance: A02 Ability to Use a Combustible Gas Indicator - 12380  | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Performance: A14 Skills in Inspecting for Small Leakage - 12399  | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Performance: A20 Skills and Abilities in Leak Classification (Grading) - 12414                                     | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Performance: A21 Ability to Conduct a Barhole Leak Investigation - 12416   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Performance: A22 Ability to Conduct a Leakage Survey Utilizing Available Openings & Determine Leak Sources - 12417 | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: K01 - Properties of Natural Gas - 11681   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: K03 - Natural Gas Migration - 11683   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: K02 - Ignition Sources - 11684  | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: AOC 07 - Flammable Gas Atmosphere - 11697   | 36 | OV | X | <a href="#">Deactivate Section</a> | <a href="#">Add</a> |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: AOC 08 - Blowing Gas/Grade One Leak - 11698   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: AOC 09 - Fire on a Pipeline - 11699   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: AOC 13 - Under Pressure - 11713   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: AOC 14 - Under Odorization - 11714  | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: AOC 16 - Unplanned Shut off of Service to One or More Customers - 11716                                   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: AOC 20 - Gas Odor Complaint - 11720   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: K21 - Leak Classification Criteria - 11750  | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: K22 - Gas Leak Investigation and Make Safe Procedures - 11753   | 36 | OV | X |                                    |                     |
|   | --- AND ---  |    |    |   |                                    |                     |
| G | PGW-Written: AOC 21b - (Distribution) Water and Other Liquids in the Pipeline - 11802                                  | 36 | OV | X |                                    |                     |















**+ : 18. Investigating leak/odor complaints on company piping - Dist. Inspectors - SOC: 1 :**

**1** [Deactivate](#)

**+ : 18. Investigating leak/odor complaints on company piping - FSD Specialists/Supervisors**

**- SOC: 1 : 1** [Deactivate](#)

- + : [30. Installing a pipe by live insertion - SOC: 1 : 1](#) Deactivate 
- + : [31. Purging air from a pipeline - SOC: 1 : 1](#) Deactivate 
- + : [31. Purging air from a pipeline-- Compressor Operator - SOC: 1 : 1](#) Deactivate 
- + : [31. Purging air from a pipeline--Gas Processing - SOC: 1 : 1](#) Deactivate 
- + : [31a. Pumping water or other liquors from a pipeline-Drip Truck Operators - SOC: 1 : 1](#) Deactivate 
- + : [32. Purging gas from a pipeline - SOC: 1 : 1](#) Deactivate 
- + : [32. Purging gas from a pipeline-- Compressor Operator - SOC: 1 : 1](#) Deactivate 
- + : [32. Purging gas from a pipeline--Gas Processing - SOC: 1 : 1](#) Deactivate 
- + : [33. Performing a pressure test on existing pipe - SOC: 1 : 1](#) Deactivate 
- + : [33. Performing a pressure test on existing pipe--Gas Processing Maintenance - SOC: 1 : 1](#) Deactivate 
- + : [33. Performing a pressure test on existing pipe--Gas Processing Operations - SOC: 1 : 1](#) Deactivate 
- + : [34. Stopping gas flow - SOC: 1 : 1](#) Deactivate 
- + : [34. Stopping gas flow--Gas Processing - SOC: 1 : 1](#) Deactivate 
- + : [35. Inspect and test pressure regulator station - SOC: 1 : 1](#) Deactivate 
- + : [35. Inspect and test pressure regulator station -- Gas Processing Iron Pipe - SOC: 1 : 1](#) Deactivate 
- + : [35. Inspect and test pressure regulator station-- Gas Processing Operations - SOC: 1 : 1](#) Deactivate 
- + : [35. Inspect and test pressure regulator station-- Gas Processing Operations \(Telemetry\) - SOC: 1 : 1](#) Deactivate 
- + : [35. Inspect and test pressure regulator station--Gas Proc. Machinist - SOC: 1 : 1](#) Deactivate 
- + : [35. Inspect and test pressure regulator station--Gas Processing - SOC: 1 : 1](#) Deactivate 
- + : [35. Inspect and test pressure regulator station--Gas Processing Instr. Spec. - SOC: 1 : 1](#) Deactivate 
- + : [35a Confined Space Training - SOC: 1 : 1](#) Deactivate 
- + : [36. Testing overpressure protection - SOC: 1 : 1](#) Deactivate 
- + : [36. Testing overpressure protection - Distribution - SOC: 1 : 1](#) Deactivate 
- + : [36. Testing overpressure protection --Gas Processing - SOC: 1 : 1](#) Deactivate 
- + : [37. Field interpretation of pressure recording charts - SOC: 1 : 1](#) Deactivate 
- + : [37. Field interpretation of pressure recording charts--Gas Processing - SOC: 1 : 1](#) Deactivate 
- + : [38. Change/repair chart recorders at pressure regulator stations - SOC: 1 : 1](#) Deactivate 
- + : [38. Change/repair chart recorders at pressure regulator stations--Gas Processing - SOC: 1 : 1](#) Deactivate 
- + : [39. Operating an odorizer - SOC: 1 : 1](#) Deactivate 
- + : [40. Monitor natural gas odorization levels - SOC: 1 : 1](#) Deactivate 

- [+ : 50. Welding on a pipeline for maintenance - SOC: 1 : 1](#) Deactivate 
- [+ : 50. Welding on a pipeline for maintenance -- Gas Processing - SOC: 1 : 1](#) Deactivate 
- [+ : 50. Welding on a pipeline for maintenance -- Gas Processing Welder/Mechanic - SOC: 1 :](#)  
[1](#) Deactivate 
- [+ : 51. Non-destructive testing of maintenance welds - SOC: 1 : 1](#) Deactivate 
- [+ : 51. Non-destructive testing of maintenance welds--Gas Processing - SOC: 1 :](#)  
[1](#) Deactivate 
- [+ : 52 Power Excavation Gas Processing - SOC: 1 : 1](#) Deactivate 
- [+ : 52. Power Excavation - SOC: 1 : 1](#) Deactivate 
- [+ : 52a Power Excavation - Distribution Contractor- Excavation - SOC: : 1](#) Deactivate 
- [+ : 53a. Gas Processing Operations Misc Tasks Supervisors Titles - SOC: 1 : 1](#) Deactivate 
- [+ : 53b. Gas Processing Operations Misc Tasks Fire and Safety Titles - SOC: 1 :](#)  
[1](#) Deactivate 
- [+ : 53c. Gas Processing Operations Misc Tasks Foreman Titles - SOC: 1 : 1](#) Deactivate 
- [+ : 53d. Gas Processing Operations Misc Tasks Process Operator Titles - SOC: 1 :](#)  
[1](#) Deactivate 
- [+ : 53e. Gas Processing Operations Misc Tasks Engineer & Plant Manager Titles - SOC: 1 :](#)  
[1](#) Deactivate 
- [+ : 53f. Gas Processing Maintenance Misc Tasks Maint Supervisor & Maint Engineer - SOC:](#)  
[1 : 1](#) Deactivate 

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# Appendix A-5

5. PGW has retrained and requalified all work crews as to personal protection equipment needed to be worn and equipment required at an excavation site and for emergency response.
  - (a) In order to emphasize PGW's requirement that PGW employees use personal protection equipment at excavation sites and during emergency responses, the following language has been added to Bulletin 212 at section III.A: "Employees must wear all required personal protection equipment per PGW Policies." Additionally, a Table of Contents has been added to the Foreman's Handbook for ease of reference.
- Supporting Documentation:
  - (a-1) Excerpts from Bulletin 212.
  - (a-2) Foreman's Handbook, Table of Contents.
  - (a-3) Excerpts from Foreman's Handbook regarding use of personal protection equipment.
- Cross-References: Prayer for Relief at ¶ (g);  
Settlement, ¶ 23(e).

5(a-1)



FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS

**LEAK RESPONSE AND INVESTIGATION  
PROCEDURE**

Effective April 21, 2011

Bulletin Number #212  
Dated September 15, 2008

### III. Procedure

#### A. General Requirements

- **ACTION MUST ALWAYS BE TAKEN TOWARD PROTECTING PEOPLE FIRST AND THEN PROPERTY.**
- **All requirements listed throughout this procedure represent minimum requirements and are not meant to limit the Operator in making decisions where experience, safety and common sense indicates otherwise.**
- **All employees responsible for conducting leak investigations must be qualified per PGW Operator Qualification Plan.**
- **Employees must wear all required personal protection equipment per PGW Policies.**
- Odor complaints are to be dispatched promptly regardless of their source.
- Any delay in arrival to the location of the complaint must be reported to the Dispatcher immediately.
- Conduct all odor complaint investigations as if a hazard exists until it is determined otherwise. Determine the extent of the hazard (leak) by making appropriate GDI checks, observations and tests.
- Review all information given on the order.
- If possible, enter all buildings through the main entrance.
- If available, interview the caller for relevant information.
- If during the initial leak investigation it is determined that a hazard exists, call the Dispatcher immediately providing details of the existing hazard.
- **Mobile phones must be turned off before entering properties for the leak investigation.** All communications must be conducted outside in a natural gas free atmosphere.
- If you suspect that the source of the leak involves any portion of PGW's system that would require a Pressure Operation, notify Dispatching immediately.
- Foreign Odors - on a wide spread foreign odor incident, when instructed by a Dispatcher or Supervisor, the leak investigation can be limited to one premise and a check of structures (boxes) directly outside that premise ("one house check", see definitions). If gas readings are discovered follow the complete leak investigation procedure.
- Leak indications may come from sources other than natural gas (marsh gas, gasoline spills, etc.).
- If there are other "First Responders" agencies (PFD, PPD) on location, discuss with them as to their actions already completed and any findings of their investigation.
- Immediately establish a communications chain to share pertinent information with all PGW Fire Responders and any other First Responder agencies.

$$5(a-2)$$



# **SAFETY**

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## SAFETY

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$$5(a-3)$$

**SAFETY**

**Accidents caused as a result of violating any safety rules can result in disciplinary action to the injured employee and his Foreman.**

**A. General Safety Practices**

1. Personal Protective-Equipment (PPE): All Employees, Supervisors and Visitors shall wear head, eye and foot protection while on the job site. Work gloves shall be worn when performing physical work. Employees, Supervisors and Visitors on the job site shall wear Flame Resistant Clothing when in a trench, responding to gas emergencies, and anytime they may encounter or be exposed to natural gas where there is a chance of ignition. In addition all Distribution Department employees shall wear Flame Resistant Clothing anytime they enter an operations building at the gas plants or M&R (Gate) Stations. **This Flame Resistant clothing must be the outer garment.** These requirements are not all inclusive and good judgment should dictate the use of additional eye protection. (See items #10 and #17.) **NOTE:** The proper use of personal protection equipment can and will greatly reduce your exposure to severe injuries.

Welders shall wear the Flame Resistant Clothing while welding, cutting or grinding in a trench. Appropriate welding clothing, such as a welding jacket, shall be worn in other welding areas.

- a. Each employee is responsible for the prudent use of flame resistant clothing. PGW will replace flame resistant clothing due to wear and tear, or if the employee has outgrown them. However, all employees must return the garment to be replaced to their Supervisor or departmental Safety Coordinator.
  - b. It is the responsibility of the PGW employee to replace lost or stolen flame resistant clothing.
  - c. All flame resistant clothing is to be laundered according to the manufacturer's instructions found on the clothing label.
  - d. Any alterations to flame resistant clothing, such as removing the sleeves or part of the sleeves, will eliminate the protection provided and is a violation of this policy.
  - e. Any employee found with altered flame resistant clothing will be considered out of uniform, and will be subject to disciplinary action, including being sent home without pay until new flame resistant clothing is supplied at the employee's expense.
2. Fire extinguishers shall be available and ready for use where, in the normal course of work, a fitting or plug is removed from an active main permitting the escape of

gas to the atmosphere or where a gas leak has the potential for ignition, such as a broken main.

- a. The Foreman will take appropriate action if there is any deficiency with the fire extinguisher, 1. exchange the existing one for a new one 2. fill out a Material Defect ticket noting the deficiency and report the defect to Material Management. In addition, the foreman shall record his initials in the appropriate block of the metal inspection tag located on the Fire Extinguisher after completing each monthly inspection (See example below). At a minimum, the foreman must observe the following:

- Is the Fire Extinguisher present?
- Is the Fire Extinguisher tag present?
- Is there is any obstruction to access or sight of the extinguisher?
- Is the red stem indicator down?
- Has the extinguisher been hefted (lifted) and does it feels like it is full?
- Is the fire extinguisher seal in place and not broken?
- Is the extinguisher intact, with no evidence of physical damage, corrosion or other impairments, and there are no indication that it has been discharged.
- When is the next required bi-annual inspection/maintenance to be conducted through Material Management Department:
- Exchange the extinguisher for a new one before the service expiration date:
- Extinguisher is serviced on a 6 months basic:
- Do not remove tags from extinguisher:
- See example tags below:

**Expiration Tag (B-Annual)**

**Inspection Tag (Monthly)**

**FIRE EXTINGUISHER  
MAINTENANCE RECORD**

EXTINGUISHER NO. \_\_\_\_\_

|       |    |  |  |  |
|-------|----|--|--|--|
| YEAR  | 07 |  |  |  |
| JAN   |    |  |  |  |
| FEB   |    |  |  |  |
| MAR   |    |  |  |  |
| APRIL |    |  |  |  |
| MAY   |    |  |  |  |
| JUNE  | CF |  |  |  |
| JULY  |    |  |  |  |
| AUG   |    |  |  |  |
| SEPT  |    |  |  |  |
| OCT   |    |  |  |  |
| NOV   |    |  |  |  |
| DEC   |    |  |  |  |

**ANSUL**

Forman Sign      Date Inspected

DO NOT REMOVE  
By Order Of  
The State  
Fire Marshal

FOR  
CITY, STATE,  
AND  
FIRE INSURANCE  
INSPECTION

FULL WT. 53  
D.O.T. CERT. # \_\_\_\_\_

**General**  
Fire Equipment Co. Inc

220 Broadway Ave. Aston, PA 19014  
**(800) 293-6641**

LICENSE NO. PL04 62019 NJ 12-06867 DEL 02-21-01 10

SERVICED BY TW

|   |  |
|---|--|
| <input type="checkbox"/> ABC (DRY CHEM) | <input type="checkbox"/> WATER         |
| <input type="checkbox"/> BC (DRY CHEM)  | <input type="checkbox"/> LOADED STREAM |
| <input type="checkbox"/> CARBON DIOXIDE | <input type="checkbox"/> PURPLE K OX   |
| <input type="checkbox"/> AFFF/FFFP      | <input type="checkbox"/> HALON 101     |
| <input type="checkbox"/> FE-35          | <input type="checkbox"/> HALON 120     |
| <input type="checkbox"/> CLASS D        | <input type="checkbox"/> WET CHEM      |
| <input type="checkbox"/> WATER MIST     | <input type="checkbox"/> W/GEN         |
| <input type="checkbox"/> HALON 1301     | <input type="checkbox"/> CLEAN AGENT   |
| <input type="checkbox"/> FE-13          | <input type="checkbox"/> FM200         |

SYSTEM

2007      2008   
 2009      2010

VOID 1 YR FROM MO PUNCHED, SYSTEM 6 & 13

|          |     |     |      |     |      |           |     |     |
|----------|-----|-----|------|-----|------|-----------|-----|-----|
| SERVICED |     |     | NEW  |     |      | RECHARGED |     |     |
| DEC      | NOV | OCT | SEPT | AUG | JULY | JUNE      | MAY | APR |
|          |     |     |      |     |      |           |     |     |

Year Serviced      Month Serviced

- Entry into confined spaces, such as PGW manholes, other utility manholes and cavities are restricted to qualified and properly equipped personnel. In addition, an entry permit must be acquired in accordance with the "Distribution Department Permit - Required Confined Space Program (PF Handbook - 40B)".
- No entry is permitted without communication equipment available and in working order to summon rescue personnel (Distribution's two-way radio and/or mobile phone). In the event of an emergency, the attendant is to immediately notify the Distribution Department Dispatcher by radio and request the assistance of the Philadelphia Fire Department and the Philadelphia Police Department. The same can be accomplished by dialing 911 (mobile phones must dial \*911). DO NOT ATTEMPT a rescue without Fire Department assistance. PREVENT any unauthorized or untrained personnel from attempting a rescue.

- Keep the forced air ventilator in place to supply air to the confined space. Assist the Fire Department with Distribution Department rescue equipment.
5. No individual should be left to work alone where s/he will expose him/herself to escaping gas or where a trench is more than four (4) feet in depth.
  6. Thoroughly ventilate any manhole, excavation, cellar, room, building, cavity or structure into which gas escapes.
  7. Smoking is not permitted on job sites where PGW is responsible for work on mains and services, nor on sites where we make inspections or perform gas operations involving the distribution systems.
  8. All open flames and sources of ignition shall be kept a safe distance, at least 50 feet, from any location where live gas is or may be present.
  9. Suitable warning signs, fences and barricades shall be posted at the approaches to work areas which present hazards to pedestrians or vehicles.
  10. When arc-welding is being done, proper eye protection must be used. If in an area where pedestrians or motorists eyes may be exposed to injury, the area must be roped or fenced off to afford the protection of distance or shields or tarpaulins should be erected.
  11. Tools and materials shall not be placed where they create a fire hazard, tripping hazard or unnecessary inconvenience to the customer or public.
  12. No fitting or plug shall be removed from a high pressure main without first consulting a Supervisor.
  13. For your safety use only PGW approved and supplied tools while performing work on PGW job locations and/or working on live gas. Use of unapproved tools or materials will be considered a work rule violation.
  14. While working a gas leak surface terrain, direction and velocity of winds and proximity to possible sources of ignition should be considered.
  15. When working a combination gas-water leak and there are customers affected - DO NOT PUMP the water or drips until all affected customer are shut off by Field Services Department.
  16. All services stoppers must be installed with an extension rod 12" or longer.
  17. When engaged in activities that may create flying particles, supplemental protection such as face shields or goggles must be used over your safety glasses.

18. Tools and material are to be removed from walk-in trucks by laying same by the rear doors and then the employee must exit by the front door and remove these items from off the rear of the truck.
19. Employees are prohibited from growing facial hair which may impede the seal of their assigned respirator masks. An air tight seal between the respirator mask and the employee's face is required as a matter of safety.

## **B. Respirator Use and Maintenance**

### **1. Scott's Cartridge Respirator**

#### Use

- A cartridge respirator shall be used when scaling pipe, reaming the steel carrier pipe, etc.
- Use only in atmospheres having adequate oxygen to sustain life (19.5%) and should not be used for protection in closed and/or poorly ventilated areas.
- Use only Type 642-H cartridges which are high efficiency filters approved for dusts, fumes and mists including asbestos, radon-daughters and radionuclides.

#### Maintenance

- Before each use, carefully inspect facepiece and head harness for aging rubber parts and also for worn, damaged, missing or loose components. (If facepiece needs repair, red tag with your name, payroll number and what is damaged and send to Transportation for repair.)
- For normal cleaning use mild soap or detergent.
- For disinfecting use 70% solution of ethyl or isopropyl alcohol.
- Remember to use protective lens covers for the facepiece.
- Do not polish the lens with paper towels, most paper towels contain abrasives and will scratch the lens.
- Replace cartridge filters.

### **2. Bullard's 88 Series Airline Respirator System**

#### Use

- This system will be used for sandblasting and will provide a continuous flow of air to the respirator wearer and will provide protection from airborne contaminants that are not immediately dangerous to life or health.

#### Components

- Respirator helmet assembly
- Breathing tube assembly
- Air supply hose
- ADP-20 free-air pump (supplies grade "D" breathing air)

#### **NOTE:**



See Bullard's instruction manual supplied with unit for operating procedures and maintenance of the respirator system. Contact the Safety/Training Section for additional copies of manuals, when needed.

### 3. Air Line Respirators

#### Use

An air line respirator is mandatory and fire retardant clothing shall be worn in every case where:

- A fitting or plug 2-1/2 inches or larger is removed from an active main or service.
- A fitting or plug of any size is removed from a high or intermediate pressure main.
- The unavoidable escape of gas is in an unventilated area or in a deep excavation.
- When working in a trench that is deeper than 4 feet and an air line respirator is required, the respirator system must have a five (5) minute escape bottle. This system is not a standard issue and will be stored in the Materials management Storeroom for your use when the conditions warrant.

#### Instructions for Air Line Respirators

- Carefully remove air cylinder from truck. Never transport cylinders without safety caps.
- Locate air cylinder as close as possible to excavation.
- Make sure cylinders are secure. (Never leave cylinders standing alone.) Secure cylinders to utility poles or lay down flat, protect cylinder valves from possible damage.
- Attach pressure reducing regulator with low pressure alarm on to cylinder valve. Use adjustable wrench, never use pipe wrenches on brass fittings.
- Attach air supply hose to outlet of pressure reducing regulator. Do not exceed 300 feet in length.
- If using two (2) face masks, attached 2-man manifold to regulator.
- Mount E-Z Flo Regulator to AV-2000 face pieces and fit respirator harness on your waist.
- Slowly turn on valve on cylinder making sure low pressure alarm works. (Alarm will stop sounding after pressure rises above 500 psig.)
- Adjust outlet pressure on regulator between 90 psig to 110 psig. Regulator has relief valve to release pressure above 125 psig.
- Attach air supply hose to supply line to face piece regulator, checking air flow to face piece. (See Figure #1A and B.)
- Install AV-2000 face piece on face. Adjust mask making sure there are no leaks. Breathe at a normal rate of 12 to 15 breaths a minute.

#### **NOTE:**

At normal breathing a man will consume air at a rate of 1 cfm. PGW cylinders are 110 cubic feet and 300 cubic feet.

To Use Cascade System for Breathing Air

Attach two (2) cylinders using pigtail connection and tee-block assembly.

Safety Precautions for Operating Bottled Breathing Air Respirators

1. Always transport cylinders with safety caps secured on valves.
  2. Never transport cylinders unless they are secured in truck rack with straps and drawer is locked in place. (Cylinder weight full is approximately 65 pounds for a 110 cubic foot cylinder.) Use proper lifting methods to prevent back injuries.
  3. Never use any cylinders that are not marked “Breathing Air Grade D” painted in yellow.
  4. Always have an employee on top of excavation to observe cylinder pressure and to monitor the operation.
  5. When low pressure alarm sounds at approximately 500 psi, have employee exit trench and replace with a fully charged cylinder.
  6. If for any reasons a “top man” must leave, all employees must exit trench at once.
  7. Never change or try to adapt CGA connections for breathing air. CGA fittings are CGA #346.
  8. Never interchange respirator equipment by different manufacturers.
  9. Always open valves slowly.
- 4. Respirator Inspection**
- Inspect and clean all respirator equipment before and after each use.
  - All respirator equipment must be inspected annually. Fill out and submit a “Respirator Inspection Record” to the Safety/Training Section.
  - All respirators equipped with a five (5) minute escape bottle must be inspected monthly.
- 5. Respirator Equipment Codes:**
- 10642753 - Scott AV2000 Full Face Mask with nose clip. Size – small, color – green: \*
- 10642754 - Scott AV 2000 Full Face Mask with nose clip. Size – large, color – black:\*
- 10642755 - Scott AV 2000 Full Face Mask with nose clip. Size – x-large, color – red: \*
- 10-66-0401 - (c) Scott air hose: 50 ft. length, with Hansen fitting:
- 10-66-0402 - (c) Egress kit: Scott 80423101 ska pak ez flo AV2000, Hansen fitting (brass) std. body harness with Scott hardcase:

10-66-0403 - (c) Scott flexible manifold, pigtail (with tee assembly):

10-66-0404 - (c) Scott manifold 2 way outlet with Hansen fittings:

10-66-0405 - (c) Scott E-Z airline facepiece regulator Poly Hansen:

10-66-0406 - (c) Pressure reducing regulator: with alarm. Hagemeyer Company (Vallen):

\* Respirator Mask used for supplied air and particle.

*6/1/2007DD/BB/gf*

6. RESPIRATOR INSPECTION RECORD

Section VII - 8

RESPIRATOR INSPECTION RECORD

Name ( Print ) : \_\_\_\_\_

P.R. # \_\_\_\_\_

Truck # \_\_\_\_\_

Date : \_\_\_\_\_

Manufacturer : Scott \_\_\_\_\_  
Bullard \_\_\_\_\_

|                                    | Good<br>Condition | Defective |
|------------------------------------|-------------------|-----------|
| a. Facepiece( Truck Stock )        | _____             | _____     |
| Facepiece( Individual ) P.R# _____ | _____             | _____     |
| Facepiece( Individual ) P.R# _____ | _____             | _____     |
| Facepiece( Individual ) P.R# _____ | _____             | _____     |
| Facepiece( Individual ) P.R# _____ | _____             | _____     |
| b. Inhalation valve                | _____             | _____     |
| c. Exhalation valve assembly       | _____             | _____     |
| d. Headbands/Cradle                | _____             | _____     |
| e. Filter Holder                   | _____             | _____     |
| f. Filters                         | _____             | _____     |
| g. Harness assembly                | _____             | _____     |
| h Hose assembly                    | _____             | _____     |
| I Speaking Diaphragm               | _____             | _____     |
| J Gaskets                          | _____             | _____     |
| k Connections                      | _____             | _____     |
| l Cylinder pressure                | _____             | _____     |
| m Regulator                        | _____             | _____     |
| n Alarm                            | _____             | _____     |
| o Other                            | _____             | _____     |

Comments : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*\*\*\*\* If any part is found to be defective, unit is to be removed from service immediately. Send defective part to the Transportation Dept. for repair. A Defective tag describing the defect must be attached with each part to be repaired

Inspected by : \_\_\_\_\_

P.R.# \_\_\_\_\_



**C. Handling and Storage of Volatile Liquids**

To minimize the dangers of the use, handling and storage of highly volatile and flammable liquids and also to comply with certain sections of the Philadelphia Fire Code, the following regulators must be followed:

**Gasoline**

- Gasoline should never be left on job in excess of that which is contained in the standard fuel tanks of the equipment when a service station is within four (4) city squares of work location.
- Gasoline in excess (or in portable containers) must be stored in approved safety cans.
- Never more than one 5-gallon can may be left on job in excess of equipment tank supply.
- Container must be painted red and marked “Dangerous - Keep Lights and Fire Away”.
- Container must also be labeled “Gasoline”.
- The gasoline must be poured from safety can into equipment fuel tank as soon as the fuel tank will hold the volume. (To minimize storage time.)

**SAFE EXCAVATION & WORK AREA****D. Excavation and Shoring of Trenches**

The following are regulations for excavations and construction extracted from the Occupational Safety and Health Administration (OSHA), Standard 1926.65, effective as of August 9, 1994. Where necessary modifications have been made to assure consistency with PGW practices.

**1. Definitions**

For the application of these regulations:

**a) Competent Person**

One who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous or dangerous to employees and who have authorization to take prompt corrective measure to eliminate them.

**b) Cave-In**

The separation of a mass of soil or rock material from the side of an excavation or the loss of soil from under a trench shield or support system and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury or otherwise injure and immobilize a person.

- c) Excavation  
Any man-made cut, cavity, trench or depression in an earth surface, formed by earth removal.
- d) Failure  
The breakage, displacement or permanent deformation of a structural member or connection so as to reduce its structural integrity and its supportive capabilities.
- e) Hazardous Atmosphere  
An Atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic or otherwise harmful, may cause death, illness or injury.
- f) Kickout  
The accidental release or failure of a cross brace.
- g) Protective System  
A method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation or from the collapse of adjacent structures. Protective systems include support systems, sloping and bending systems, shield systems and other systems that provide the necessary protection.
- h) Trench  
A narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width.
- i) Unconfined Compression Strength  
The load per unit area at which a soil will fail in compression. This will be estimated in the field using a pocket penetrometer.
- j) Pocket Penetrometer  
A small measuring instrument used for classifying cohesive soils in terms of consistency, determining the approximate unconfined compression strength using the penetration principle. A small diameter shaft is pushed into the soil and the amount of resistance or force required to make penetration is marked on a graduated scale measured in tons per square foot (tsf).

## 2. General

- a) Trees, boulders and other surface encumbrances located so as to create a hazard to persons or property in, on or in the vicinity of excavation work at any time during operations, shall be removed or made safe before excavating is started.
- b) If the stability of adjoining buildings or walls is endangered by excavations, shoring, bracing or underpinning of a type approved by a supervisor shall be provided as necessary to ensure their safety.
- c) If it is necessary to place or operate power shovels, derricks, trucks, materials or other heavy objects on a level above and near an excavation, the side of the

excavation shall be sheet-piled, shored and braced as necessary to resist the extra pressure due to such superimposed loads.

- d) Whenever any part of an excavation is protected by a masonry wall, such wall shall be braced to ensure stability. This shall not include reinforced concrete walls or similar walls of ample strength.
- e) Except in hard rock, excavations below the level of the base or footing of any foundation or retaining wall shall not be permitted unless the wall is underpinned and all other precautions taken to ensure the stability of the adjacent walls for the protection of persons or property in, on or in the vicinity of the excavation work.
- f) Any persons excavating at the location of underground utility facilities shall notify the utility company involved.

### **3. Protection Requirements**

- a) All public walkways, sidewalks and thoroughfares bordering on or running through any construction site shall be provided with substantial guardrails or board fences. In addition, temporary footwalks beyond the curb shall be substantially constructed and provided with protection on both sides.
- b) If planks are used for sidewalks or raised walkway protection, they shall be laid parallel to the length of the walk and fastened together against displacement.
- c) Planks shall be uniform in thickness and all exposed ends shall be provided with beveled cleats to prevent tripping.
- d) During the hours of darkness, all public sidewalks and walkways bordering on or running through a construction site, shall be adequately protected by warning lights which shall be placed about the property to insure safety for pedestrians and vehicular traffic.
- e) No person shall be required or permitted to travel under loads handled by power shovels, derricks or hoists, unless ample side barricades and overhead protection are provided.
- f) Employees shall not remain in the seat or cab of a truck while the truck is being loaded by power shovel, clam shell or other overhead means.

### **4. Sheet Piling, Shoring and Bracing**

- a) All materials used for shoring, bracing and sheet piling shall be sound straight-grained timber equal to long leaf yellow pine, Douglas fir, or other materials of equal strength. All timber shall be free from splits, shakes, large or loose knots and shall be of the required dimensions throughout.



**5. Jacks**

- a) Pipe used as part of a screwjack or crossbrace on excavations not exceeding 42" shall be a minimum 2" diameter. Pipe used as crossbraces or stronger in excavation greater than 42" shall be equivalent in stiffness and strength to the timbers specified in tables in G.S. Standard 15.0.

**6. Excavations**

- a) All excavations deeper than four (4) feet shall have a protective system installed.
- b) In excavations four (4) feet and less where a protective system in not installed, the competent person must examine the ground to be sure there is no indication of potential cave-in.
- c) In all excavation operations, where men are at work, or where they must pass to and from their work, sufficient light, either natural or artificial, shall be provided at all times.
- d) Pick and shovel men working in excavations shall be required to be a sufficient distance apart to prevent injury to one another.
- e) All excavations four (4) feet or more in depth, shall at all times be supplied with at least one (1) ladder for each 25 feet in length. The ladder shall extend from the bottom of the excavation to at least three (3) feet above the surface of the ground.  
**Code Number 10-66-5206: Fiberglass Ladder Top & Bottom 6' Sections:**  
**Code Number 10-66-5204: Fiberglass Ladder Middle 6' Section:**
- f) Approved blinker barricades shall be placed along the exposed sides of all excavations at night as required for necessary warning to the public.
- g) Guardrailings or barricades shall be provided at or near the sides of all excavations at night as required for necessary warning to the public.
- h) The sides of all excavations where the earth is not sloped, the angle of slope shall be securely held by adequate bracing. The bracing shall be carried along with the excavation and must in no case be omitted unless the excavation is cut in solid rock or hard shale.
- i) Where a mechanical digger is used, the bracing shall be placed as close as possible (a maximum of six (6) feet if physically possible) to the lower end of the bucket.
- j) The bracing shall be held in place by screw jacks or by crossbraces cleated and wedged in place. Where the width of the excavation prevents this, the lower end of the crossbrace shall bear against a footing in the earth at the bottom of the excavation provided adequate means are taken to keep it from kicking out.

- k) When the sloping of excavations to the angle of scope does not extend to the bottom of the excavation, the timbering shall be as required to support the vertical part of the excavation. The sheeting shall extend not less than 18 inches above the bottom of the scope, and, if necessary two (2) boards shall be placed behind the timbering to prevent material from sliding into the excavation. The surface of the slope shall be cleaned of boulders, stumps or other hard masses of earth to eliminate the danger of their sliding into the excavation.
- l) Excavated material and superimposed loads shall not be placed nearer than 24 inches from the sides of the excavation unless bracing has been installed and designed to withstand the load.
- m) When excavations are undercut, they shall be shored to safely support the overhanging material.
- n) If an excavation is cut alongside an existing structure and the footings of the structure are nearer to the excavation than the plane of repose for the soil, they shall be underpinned or the side wall of the excavation rigidly supported.
- o) In excavation, cleats shall be spiked or bolted to join the ends of the braces to stringers to prevent the braces from being knocked out of place. Cleats bolted shall have a minimum nominal thickness of 1" and shall be the same width as the crossbraces to which they are fastened. The size of bolts shall be ¼" minimum diameter.
- p) When crossbraces are 6" x 6" or larger in cross section, the cleats shall have a minimum nominal thickness of 2".

## 7. Inspections

- a) Daily inspections of excavations, the adjacent areas and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indication of failure of a protective systems, hazardous atmospheres or other hazardous conditions.
- b) An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift.
- c) Inspections shall also be made after every rainstorm or other hazard increasing occurrence, such as the freezing and thawing of the ground.
- d) Where the competent person finds evidence of a situation that could result in a possible cave-in, indication of failure of protective systems, hazardous atmospheres or other hazardous conditions, exposed employee shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

- e) An Excavation Inspection Checklist shall be filled out and submitted to a Supervisor for each inspection.
- 8. Competent Person**
- a) Except for the classification of the soil the Foreman on the job is the competent person.
  - b) The Supervisor is the competent person for all soil classifications
  - c) If a Supervisor is unavailable the Foreman shall consider all excavations in Type “C” soil and install the proper protective system associated with this classification.
- 9. Water Control**
- a) If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to ensure proper operation.
- 10. Hazardous Atmosphere**
- a) Atmospheric testing must be conducted in excavations over four (4) feet deep where hazardous atmospheres could reasonably be expected to exist (i.e., landfill areas, near hazardous substance storage, gas pipelines).
  - b) Adequate precautions will be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen or other hazardous atmospheres. These precautions include the use of appropriate respirator protection or forced ventilation.
  - c) Notify Pressure Force for the use of a forced air ventilator.
  - d) When using a forced air ventilator and the atmosphere still contains in excess of 20 LEL for natural gas, a respirator must be worn by all employees entering the excavation.
  - e) Respirators must be equipped with a five (5) minute escape bottle and a harness and life line must be worn.
- 
- 11. Soil Classification**
- a) In all cases soil is considered Type “C” unless analysis by a Supervisor.
  - b) There are four (4) types of soil classifications:
    - 1) Stable Rock,
    - 2) Type “A”
    - 3) Type “B”
    - 4) Type “C”
  - c) The classification of soil shall be made based on the results of at least one (1) visual and at least one (1) manual analysis.

d) Definitions1. Cemented Soil

Soil in which the particles are held together by a chemical agent, such as calcium carbonate, such that a hand-size sample can not be crushed into powder or individual soil particles by finger pressure.

2. Cohesive Soil

Clay (fine grained soil) or soil with a high clay content, which has cohesive strength. Cohesive soil does not crumble, can be excavated with vertical sideslopes, and is plastic when moist. Cohesive soil is hard to break up when dry, and exhibits significant cohesion when submerged. Cohesive soils include clayey silt, sandy clay, silty clay, clay and organic clay.

3. Dry Soil

Soil that does not exhibit visible signs of moisture content.

4. Fissured

Soil material that has a tendency to break along definite planes of fracture with little resistance, or a material that exhibits open cracks, such as tension cracks, in an exposed surface.

5. Granular Soil

Gravel, sand or silt (coarse grained soil) with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil can not be molded when moist and crumbles easily when dry.

6. Layers System

Two (2) or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layers.

7. Moist Soil

Condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains some cohesive material will exhibit signs of cohesion between particles.

8. Plastic

Property of a soil which allows the soil to be deformed or molded without cracking or appreciable volume change.

9. Saturated Soil

Soil in which the voids are filled with water. Saturation does not require flow. Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or shear vane.

10. Soil Classification System

For the purpose of this subpart, a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits

and the characteristics of the deposits and the environmental conditions of exposure.

11. Stable Rock

Natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

12. Submerged Soil

Soil which is underwater or is free seeping.

12. **Protective Systems**

There are four (4) types of protective systems:

- A. Sloping is to slant the sides of an excavation away from the bottom.
- B. Benching is cutting the excavating sides to form a series of steps
- C. Shielding uses a partially open structure, known as a shield or “trench box” placed directly in the excavation.
  - When using Sloping or Benching or a combination of Sloping and Shielding as a protective system, use the following diagram to determine the angle of the slope.
- D. Shoring is a protective system that prevents cave-in by supporting the sides of the excavation with a framework of structural components including,
  - Vertical members called upright
  - Horizontal members, called wales and
  - Crossbars

NOTE: All protective systems are to be designed for Class “C” Soil unless the soil is classified by a supervisor.

13. **Type A**

Cohesive soils with an unconfined, compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A.

However, no soil is Type A if:

- The soil is fissured; or
- The soil is subject to vibration from heavy traffic, pile driving or similar effects, or
- The Soil has been previously disturbed; or
- The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater, or
- The material is subject to other factors that would require it to be classified as a less stable material.

14. **Type B**

- Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa) but less than 1.5 tsf (144 kPa); or

- Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.
- Previously disturbed soils except those which would otherwise be classes as Type C soil. Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
- Dry rock that is not stable, or
- Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.

**15. Type C**

- Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less; or
- Granular soils including gravel, sand and loamy sand; or
- Submerged soil or soil from which water is freely seeping; or
- Submerged rock that is not stable, or
- Material in a sloped, layered system where the layers dip into the excavation or a slope of four horizontal to one vertical (4H:1V) or steeper.

**13. Unconfined Compressive Strength**

Load per unit area at which a soil will fail in compression. It can be determined by laboratory testing or estimated in the field using a pocket penetrometer, by thumb penetration tests and other methods.

**14. Wet Soil**

Soil that contains significantly more moisture than moist soil, but in such a range of values that cohesive material will slump or begin to flow when vibrated. Granular material that would exhibit cohesive properties when moist will lose those cohesive properties when wet.

**16. Visual Analysis**

To help determine soil classification and excavation safety in general, visually observe these areas:

1. Excavation site in general, including adjacent area
2. Soil adjacent to the excavation
3. Soil forming sides of open excavation
4. Soil taken as samples from excavated material (spoils)

Look for the following conditions:

1. Particle Size (spoils and sides of excavation)
  - Estimate range of particle sizes and relative amounts of particle sizes.
  - Primarily fine grained = cohesive material
  - Primarily coarse-grained sand or gravel = granular material
2. Cohesion (spoils)
  - Remains in clumps = cohesive

- Breaks up easily and doesn't remain in clumps = granular
3. Fissures (sides of excavation and adjacent surface areas)
    - Look for pre-existing cracks or blocks of soil in sides of excavation. Does the soil come loose in blocks or chunks during excavation? If so, it could be fissured.
    - Look for cracks in surface adjacent to and parallel to the excavation. These could be tension cracks, indicating fissured material and potential collapse.
    - If chunks of soil spall off a vertical side, soil could be fissured.
    - Small spalls are evidence of moving ground and are indications of potentially hazardous situations.
  4. Disturbed Soil (spoils and open sides)
    - Are there underground installations nearby?
    - Examine spoil material and sides of excavation for other clues to disturbed soil:
      - Buried wood, topsoil or man-made objects
      - Random mixture of different soil materials
      - Other indications of past disturbances
  5. Submerged Soil (spoils, excavation sides and adjacent area)
    - Evidence of surface water
    - Water seeping from sides of excavation
    - Water table level
    - Wet soil below water table is usually softer, stickier and less likely to crumble than moist soil above water table.
    - Gray soil color is common indicator of year-round water table
  6. Underground Installations (excavation and adjacent areas)
    - Evidence of existing utility and other underground structures
    - Identify previously disturbed soil
  7. Vibration (within and adjacent to excavation)
    - Sources of vibration that may affect stability

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**17. Manual Analysis**

The manual test will be made by a Supervisor with a pocket soil penetrometer.

*DD/JJP/dls*  
*10/3/2003*

**E. The Effective Practice of Work Area Protection**

Certain principles have been learned that must, wherever possible, be applied.

- Put the first warning far enough ahead so that drivers can react in time without the following cars crashing into them. Minimums of 100 to 200 feet are recommended.
- Try to divert the traffic using a wedge if the work is at the side of the road or a “V” if the work is in the center.
- Place the first warning light in a position so that it can be passed. If working along the side of the road, place the light within two (2) feet of the edge. If working in the center, place the first light so that it will form the point of a “V”.
- Place the warning devices so that vehicles will not have to stop and force their way into the adjacent lane. Wherever possible, using a wedging to fold the traffic into smooth flowing lines. Remember that even though your warning system may be adequate, a collision of two (2) vehicles may force them into the work area.
- If you are working on one side of an undivided highway, warn the traffic in the opposite direction of the need for caution.
- The first warning sign must be a “Work Zone – Turn On Headlights” sign on all PGW work zones that do not fall into the following exceptions:
  1. Work zones where the duration of the construction, maintenance or utility operation is less than two (2) hours.
  2. Work zones on roadways with a posted speed limit of 25 mph or less.
  3. Work zones on roadways with a posted speed limit of 35 mph or less, when all traffic control devices are removed at the end of the day.
  4. Work zones where the length of highway where the actual construction, maintenance or utility work operation is occurring is less than 250 feet and all traffic control devices are removed at the end of the day.

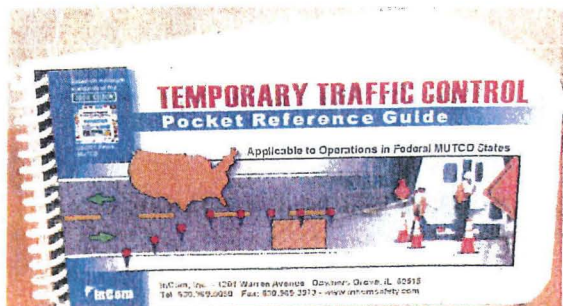
DD/JJP/dls  
Revised 4/10/2003



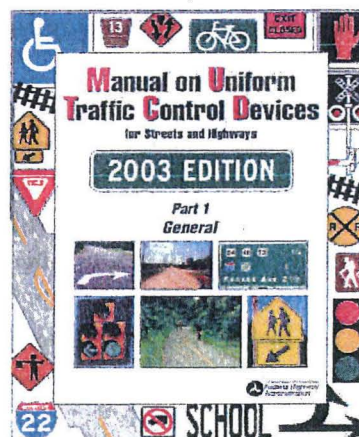
## F. Field Operations Traffic Control Safety

It is the Crew Leaders responsibility to adhere to the following traffic control guidelines derived from the DOT Manual on Uniform Traffic Control Devices for streets and Highways as well as the State of Pennsylvania's traffic control guidelines. The primary function of Traffic Control is to provide safe and efficient movement of road users through or around PGW jobsites while providing protection for PGW employees, vehicular traffic, pedestrians, bicyclists, persons with disabilities and equipment.

Each Foreman is required to reference their "Temporary Traffic Control Pocket Reference Guide" (shown below) and establish a safe work zone. This guide contains typical applications for adhering to State and Federal requirements in relation to traffic/work zone safety. Safe traffic control must be established on every PGW jobsite. A Supervisor must be consulted to reference the Manual of Uniform Traffic Control Devices and State of Pennsylvania's publication #213 (traffic control guidelines) when situations can't be identified in the "Pocket Reference Guide".



Issued to crew leaders



Issued to Supervisors

**Plan For Safety-** Place your PGW vehicle between vehicular traffic and PGW activity whenever possible. Consider closing streets when safety is compromised. Notification to Septa is required on bus and trolley car transit routes. Consider the points of view of motorist, pedestrians and bicyclists. Take every step possible to prevent errant vehicles from leaving the roadway and impacting the work zone including PGW employees and equipment.

**Communicate-** Motorists, bicyclists, and pedestrians should be guided in a clear positive manner while approaching and traversing PGW jobsites.

**Monitor-** Routinely inspect traffic control zone and make adjustments when necessary.

**Installation of Temporary Traffic Control Devices-** With PGW vehicle beacon and caution lights on, start by placing the advanced warning signs beginning with the "Utility Work Ahead" sign. "Utility Work Ahead" signs are to be utilized on every PGW

**jobsite.** This sign is normally placed in the footway and is not designed to stop traffic. When merging traffic, work back towards the jobsite, tapering traffic cones and or barricades while watching upstream traffic. Continue back and provide a safe “Buffer Space” around entire work area, see the “Buffer Space Guidelines “on the next page. Observe traffic flow and adjust as needed. Refer to pocket reference guide for required taper lengths and spacing. As soon as practical, order any additional traffic control devices required from the Materials Management Department and place accordingly. See F.H. VII-47e for sign descriptions and code numbers.

**Note:** Two (2) “Utility Work Ahead” signs are required as stock on each truck. See F.H. VII-47c for common scenarios.

| <b>Suggested Taper Lengths:</b> | <b>Minimum # of cones/barricades</b> |
|---------------------------------|--------------------------------------|
| 40 mph and below: 270 feet      | 8                                    |
| 45 mph and above: 550 feet      | 11                                   |

Taper lengths based on standard 10’ traffic lane width. All distances may be adjusted slightly to fit field conditions. Reference the pocket guide for specific acceptable variances.

**Pedestrian Considerations-** Traffic control devices should not be placed in a manner which leads pedestrians into conflict with job activities and or equipment. Do not park PGW vehicles or mobile equipment in the paths of pedestrians. Barriers and channeling devices should be detectable by pedestrians who have visual disabilities. See F.H. VII-11 for additional protection requirements.

**Removal of Temporary Traffic Control Devices-** Remove vehicles and equipment from the work zone into a safe area. Next, move traffic cones and barricades to the curb beginning at the activity zone and working back to the advanced warning zone. This will provide protection from oncoming traffic during the removal of cones and barricades. Remove advance warning signs.

#### **Definitions-**

**Advance Warning Area-** Tells traffic what to expect ahead

**Transition Area-** Moves traffic out of its normal path i.e. lane change

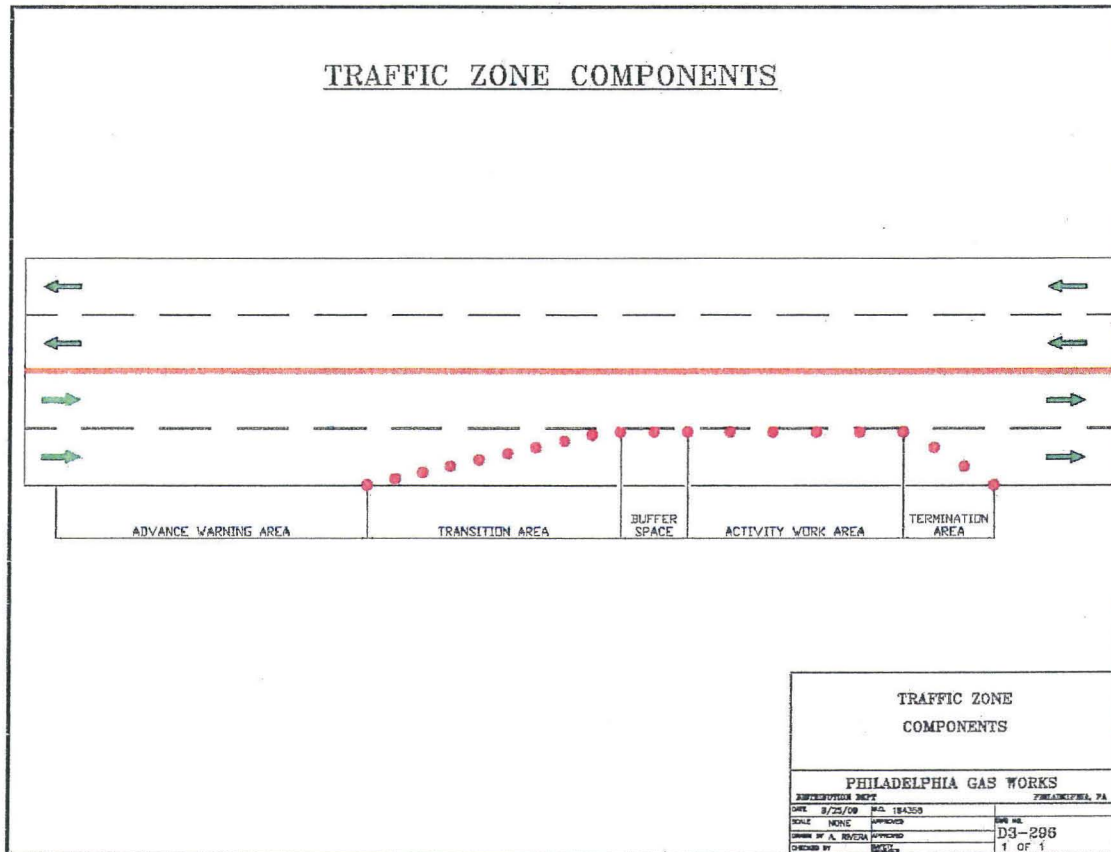
**Buffer Space-** Space between traffic control devices and activity area or equipment which provides protection for workers and traffic

**Activity Area-** Where work takes place

**Termination Area-** Lets traffic resume normally

**Taper-** An alignment of traffic control devices to merge drivers into common road space

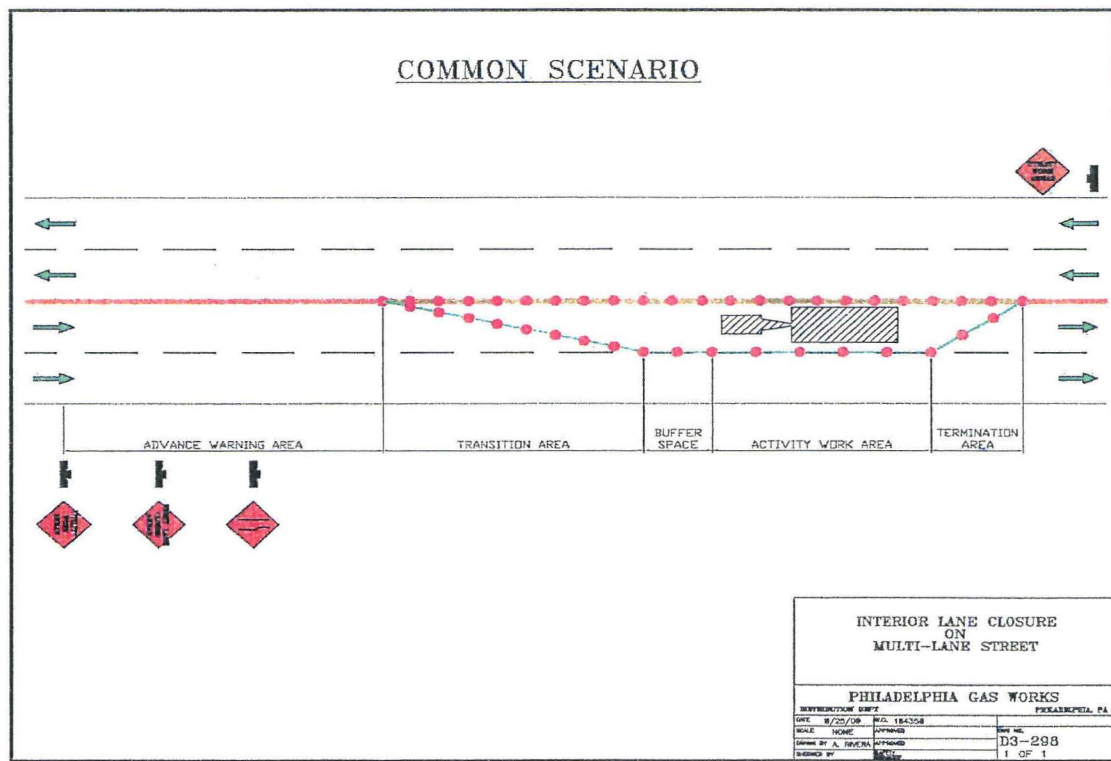
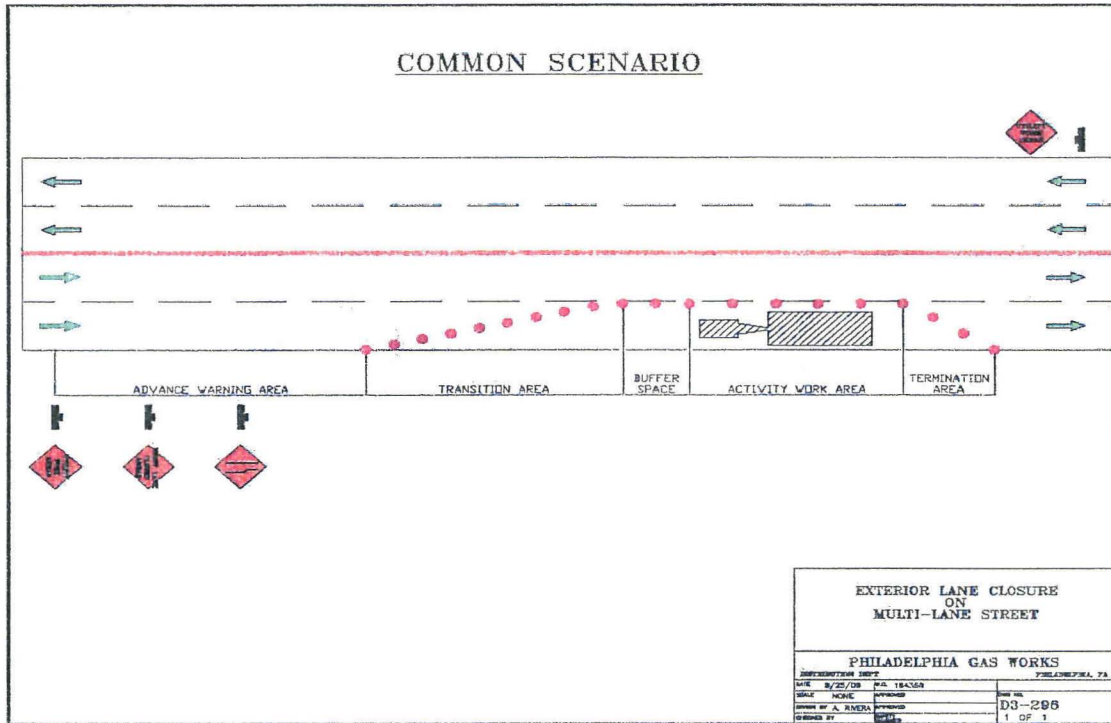
1. Traffic Control Zone Components



**Buffer Space Guidelines**

| Speed (mph) | Length (ft) |
|-------------|-------------|
| 20          | 35          |
| 25          | 55          |
| 30          | 85          |
| 35          | 120         |
| 40          | 170         |
| 45          | 220         |
| 50          | 280         |
| 55          | 335         |

2. Common Scenarios-



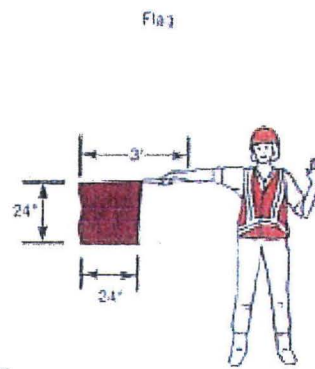
**3. Flagging Procedures**

Refer to the Temporary Traffic Control Pocket Reference Guide pages 14 through 17 when the use of Flagger(s) is required. Below are some common Flagging methods.

**PREFERRED METHOD**



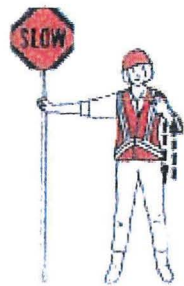
**EMERGENCY USE ONLY**



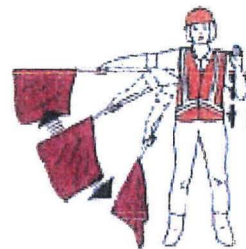
To Stop Traffic



Traffic Proceed



To Alert and Slow Traffic



**NOTE:** Flaggers are also required to wear class two reflective safety vests (064-4623).

See PDF for F.H. Section VII-47e &

## **G. Procedure for Use of Steel Plates (That Carry Vehicular Traffic)**

### **Installation of Steel Plates**

- All steel plates must be anchored to the street surface,  $\frac{3}{4}$ " by 8" expansion bolts will be set in the concrete roadway base.
- Plates must conform as near as possible to the contour of the street to prevent tilting when loads are imposed on their edges. This will be accomplished by the use of temporary cold patch under the plates.
- When a trench is 3'0" in depth or less, where shoring is not required, the plate must have an overlay on the street surface equal to the width of the trench.
- Where steel plates are used to cover trenches more than 3'0" in depth, the Supervisor in charge of the job shall determine whether additional supports are required and shall specify the type of such supports.

### **Reporting Location of Steel Plates**

- The installation of all steel plates must be reported on a 537 order issued in duplicate. This reporting will include PGW steel plates, as well as those installed by others on foreign construction work where PGW structures are involved. This 537 order should contain the following:
  - Location in feet and inches from the nearest intersecting curbs.
  - Size of steel plate.
  - Date installed.
  - Foreman or Inspector and Supervisor's name.
  - Number of plates, if PGW steel.

### **Removal of Steel Plates**

- A 537 order will be issued by the Foreman or Inspector when steel plates are removed and trenches backfilled.

### **Out-of-Hours Inspection of Steel Plates**

- Each Foreman must consider the need to inspect steel plates out-of-hours and issue a 537 ordering such planned inspections, if he considers it necessary.

## **H. Safe Handling of Pipe**

A knowledge of the approximate weight of pipe and fittings is necessary to safety, especially when handling or lifting the large sizes in construction of distribution mains.

In supervising the handling of pipe, the job Foreman considers the weight involved, then determines what means may be used to lift it without risking injury to his men. He knows that one (1) man may not lift and carry more than 75 to 100 lbs. without the risk of a hernia or back strain. With this in mind, he is able to calculate whether a piece may be lifted safely by hand or whether mechanical equipment should be used.

Pipe porters may be used with reasonable safety for moving a short distance by hand, pipe sections weighing up to 600 lbs., provided the number of men on each porter is such that the average lift per man does not exceed 100 lbs. For example, standard lengths of 6" cast iron main or 20 foot lengths of 6" coated steel pipe may be lifted safely by hand with two (2) or three (3) men on porters at each end of the pipe. Pipe over 6" diameter in lengths of 12 feet or more is usually heavier than 500 lbs. and should, whenever possible, be moved with mechanical equipment.

Fittings may be heavier than they appear. The standard 6" cast iron drip weights 655 lbs. a 24" cast iron end cap weighs 416 lbs, and a 30" steel short-radius elbow weighs 490 lbs. Safe handling of such fittings usually requires mechanical equipment.

Knowing the weight of the pipe or fittings, the Foremen will select a wire rope or sling of suitable strength to make a lift. (The use of fiber rope or baling wire is avoided in routine hoisting of pipe or fittings.) He knows that a 5/8" steel sling in good condition may safely carry up to 5,300 pounds provided it is not rigged around a sharp edge. He should know that a 5/8" steel sliding choker hook has a rated strength of 4,300 lbs. or that a good piece of 1" manila rope will sustain about 1,800 lbs., while a 3/4" manila rope will carry about 1,000 lbs.

When pipe is being rolled down skids from the bed of a truck, the holding ropes must be of such strength and must be cinched in such manner to withstand a pull equal to approximately one-half the weight of the pipe.

Thus, we may appreciate that there are many reasons why accurate estimates of the weight of pipe are important to safety.

The table which follows shows the weights per foot and the weights of common lengths for steel and ductile iron of sizes in current use.

**Weight of Medium Density (2406) Plastic Pipe 3" and Higher**

| <b><u>Nominal<br/>Diameter</u></b> | <b><u>SDR</u></b> | <b><u>O.D.</u></b> | <b><u>Wall<br/>Thickness</u></b> | <b><u>Weight Per Foot<br/>(Lbs.)</u></b> | <b><u>Weight Per 40'<br/>Length (Pounds)</u></b> |
|------------------------------------|-------------------|--------------------|----------------------------------|--|--|
| 3"                                 | 11.5              | 3.5"               | 0.31"                            | 1.4                                      | 56   |
| 4"                                 | 11.5              | 4.5"               | 0.39"                            | 2.2                                      | 88   |
| 6"                                 | 11.5              | 6.625"             | 0.58"                            | 4.7                                      | 188  |
| 8"                                 | 13.5              | 8.625"             | 0.64"                            | 7  | 280  |
| 12"                                | 11.5              | 12.75"             | 1.11"                            | 17.4                                     | 696  |

**Weight of High Density (3408) Plastic Pipe 3" and Higher**

| <b><u>Nominal<br/>Diameter</u></b> | <b><u>SDR</u></b> | <b><u>O.D.</u></b> | <b><u>Wall<br/>Thickness</u></b> | <b><u>Weight Per Foot<br/>(Lbs.)</u></b> | <b><u>Weight Per 40'<br/>Length (Pounds)</u></b> |
|------------------------------------|-------------------|--------------------|----------------------------------|--|--|
| 3"                                 | 11                | 3.5"               | 0.32"                            | 1.4                                      | 56   |
| 4"                                 | 11                | 4.5"               | 0.41"                            | 2.3                                      | 92   |
| 6"                                 | 11                | 6.625"             | 0.60"                            | 5  | 200  |
| 8"                                 | 13.5              | 8.625"             | 0.64"                            | 7  | 280  |
| 12"                                | 11                | 12.75"             | 1.16"                            | 19                                       | 760  |

DD/MJB/dls  
10/14/98





FIELD OPERATIONS  
Distribution Department

Identification and Safe Handling of  
Coal Tar Coated -Asbestos Wrapped  
Gas Pipe

Effective Date: December 15, 2008

Bulletin Number 254  
Supersedes: N/A

## **I. Procedure for Service Renewal on Customer's Premises Where Suspected Asbestos is Encountered**

### **1. What is Asbestos**

Asbestos is a naturally occurring mineral that is usually excavated from open-pit mines. The asbestos rock is then crushed to free the fibers. It is usually mixed with a material that binds the fibers together so they can be used in many different products. There are two (2) forms of asbestos you should be aware of: friable and non-friable asbestos.

#### Friable Asbestos

Friable asbestos can be crumbled, pulverized or reduced to a powder by hand pressure. Because it is easily crumbled, friable asbestos is more likely to release fibers into the air. Examples include: sprayed-on materials used for fireproofing insulation or soundproofing.

### **2. Where Asbestos is Located**

Asbestos fibers have been used for centuries for the same reasons that hold true in today's industrial applications.

- Fibers are almost indestructible by common agents.
- Heat and chemical resistance.
- Thermal and noise insulator

Common locations and uses for asbestos in public and commercial buildings have included the following:

- Added to some vinyl floor tiles to strengthen them and no the backing of some vinyl sheet flooring.
- Patching compounds manufactured before 1977 used to patch some walls and ceiling joints.
- Wall and ceiling insulation.
- Fluffy, friable asbestos sprayed on ceiling tiles for fireproofing protection.
- Asbestos containing material has been sprayed or troweled onto ceilings or walls as an acoustical or decorative treatment.
- Insulation around pipes, heating ducts, furnaces and boilers.
- Some roofing shingles, siding shingles and sheets have been manufactured with asbestos.

**3. General**

- A. Concerning asbestos, The Consumer Product Safety Commission states:  
“In order to be a health risk, asbestos fibers must be released from the material and be present in the air for people to breathe. In most cases, asbestos containing materials are best left alone. When it is necessary to use or work with asbestos containing materials, reduce exposure to fibers as much as possible.”
- B. In most cases, Distribution’s work at the head of service will not disturb any suspected asbestos in the building. However, if any suspected asbestos must be disturbed in the course of your work, notify you Supervisor immediately. At this time, the Supervisor will determine if work is to continue or be halted and if clean-up is necessary. If the customer questions you about asbestos, refer the customer to the City of Philadelphia Air Management Services for a list of contractors approved to remove asbestos and give certification of removal. Their phone number is (215) 823-7576.

*DD/JJP/dls*

*Revised 6/26/98*

**J. Coal Tar Coated -Asbestos wrapped Gas Pipe**

(Bulletin Number 254, Effective Date: December 15, 2008)

**1. Purpose**

To make all personnel aware of locations identified as coal tar coated – asbestos wrapped gas pipe. To insure the safety of all employees when working around coal tar coated – asbestos wrapped gas pipe.

**2. Informational Announcement**

Coal tar coated –asbestos wrapped gas pipe was installed at specific locations by PGW (See Attachments for locations). The coal tar coated –asbestos wrapped gas pipe has been identified as having asbestos within the coating materials.

**3. Associated Procedure**

Coal tar coated – asbestos wrapped gas pipe shall be marked on the detail main maps as (COAL TAR COATED). When encountering coal tar coated gas pipe or if the coating material on an underground pipe can not be positively identified, a Supervisor shall be notified. The Supervisor will contact Corrosion Control and Chemical Services who will inspect the coating material and make a determination on the proper handling procedure.

**4. Handbooks**

Distribution Foreman’s Handbook (Section VII, pages 63-76)

**5. Attachments**

1. Known Locations of Coal Tar Coated –Asbestos Wrapped Gas Pipe
2. Maps of Known Locations of Coal Tar Coated- Asbestos Wrapped Gas Pipe

**6. Transaction Listing**

- A. TR 2008-36

M Jones/ccm  
12/02/2008

**Approved**

Date

**Steven Groeber**  
**Director, Field Operations & Work Planning**

Date

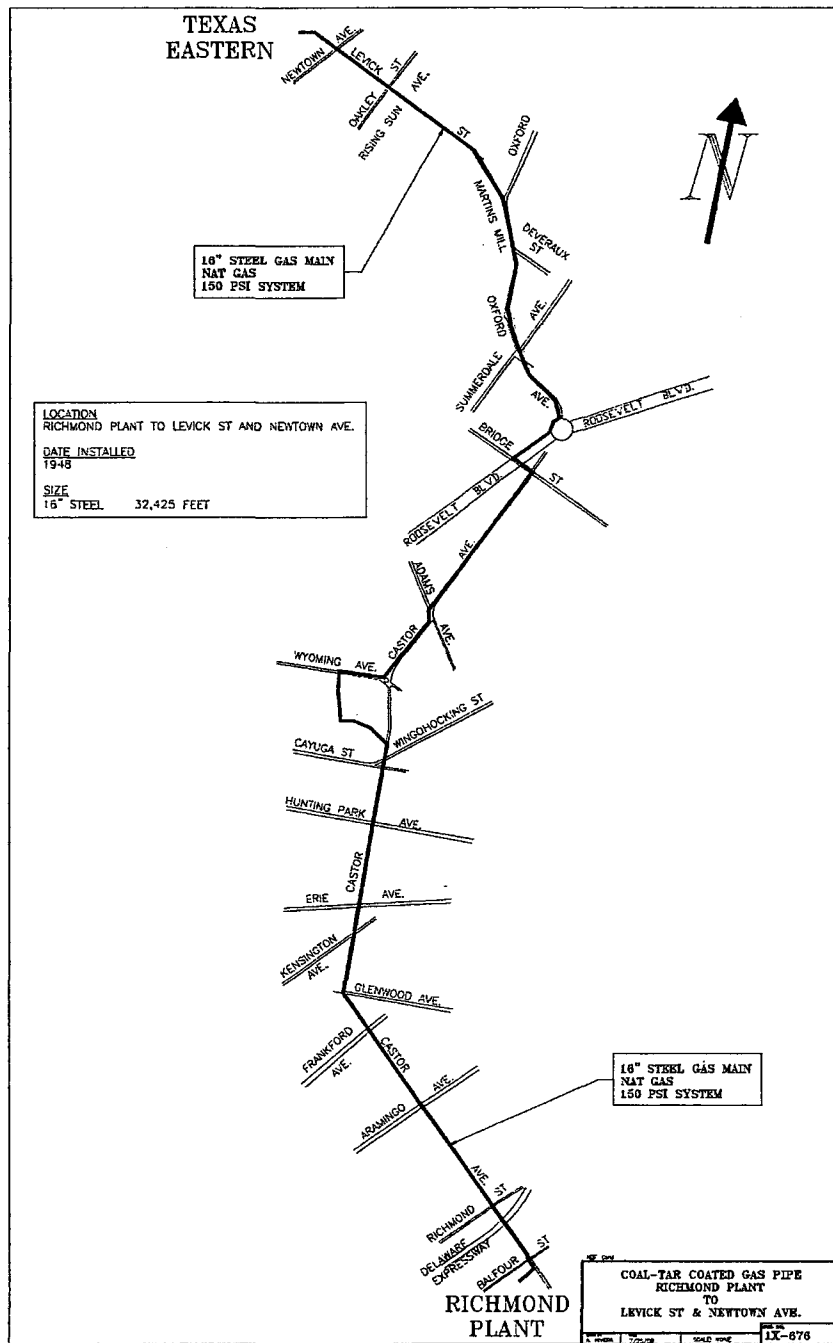
**Michael W. Handwerk**  
**Vice President – Technical Compliance**

**K. Known Locations of Coal Tar Coated Gas and Water Pipes**

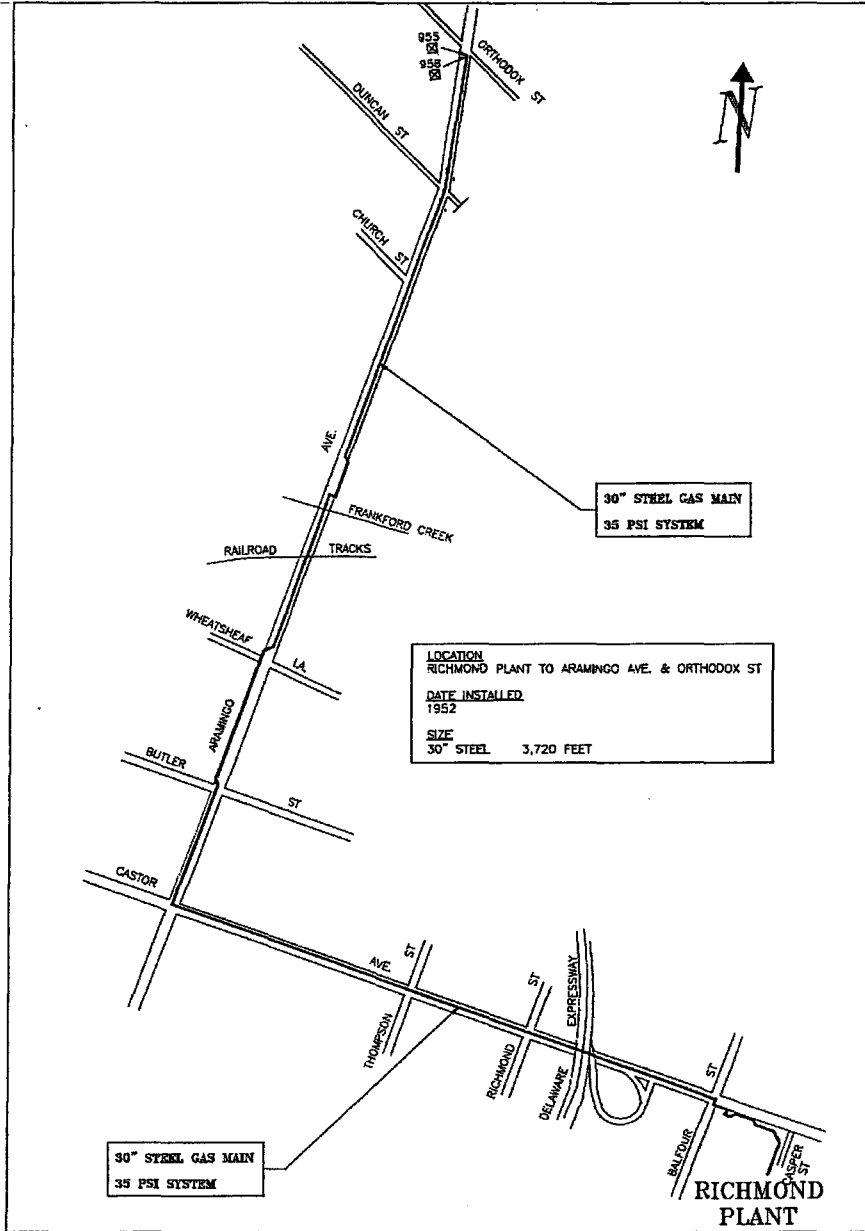
- Richmond Plant to Levick Street and Newtown Avenue
- Richmond Plant to Aramingo Avenue and Orthodox Street
- Richmond Plant to Delaware Avenue and Lewis Street
- 24<sup>th</sup> Street and Catherine Street to 22<sup>nd</sup> Street and Arch Street
- 17<sup>th</sup> Street and Oregon Avenue to Stocker Street
- Bridge Street and Melrose to Sun Oil Company (formerly Rohm and Haas)
- Richmond Plant, Fixture No. 31-N.G. Laterals
- Richmond Plant, Fixture No. 29 –N.G. Mains
- Richmond Plant, Fixture No. 54 – N.G. Main
- Richmond Plant, Fixture No. 42 – N.G. Main
- Richmond Plant, Fixture No. 94 – N.G. Main
- Passyunk Plant, Fixture No. 98 – Water Main

NOTE:Piping systems within Passyunk and Richmond Plants are identified by fixture numbers.

Attachment # 1  
9/08

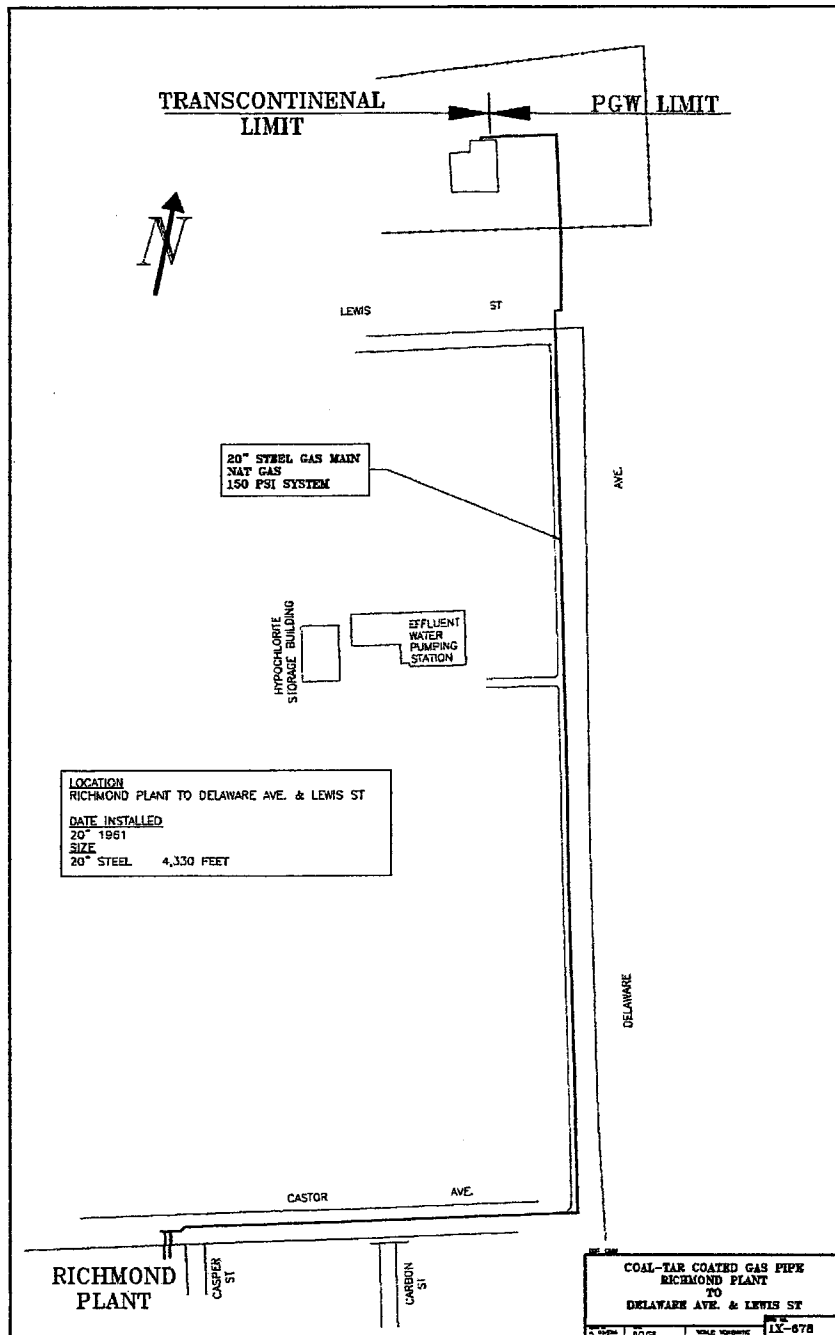


Attachment 2a  
9/08

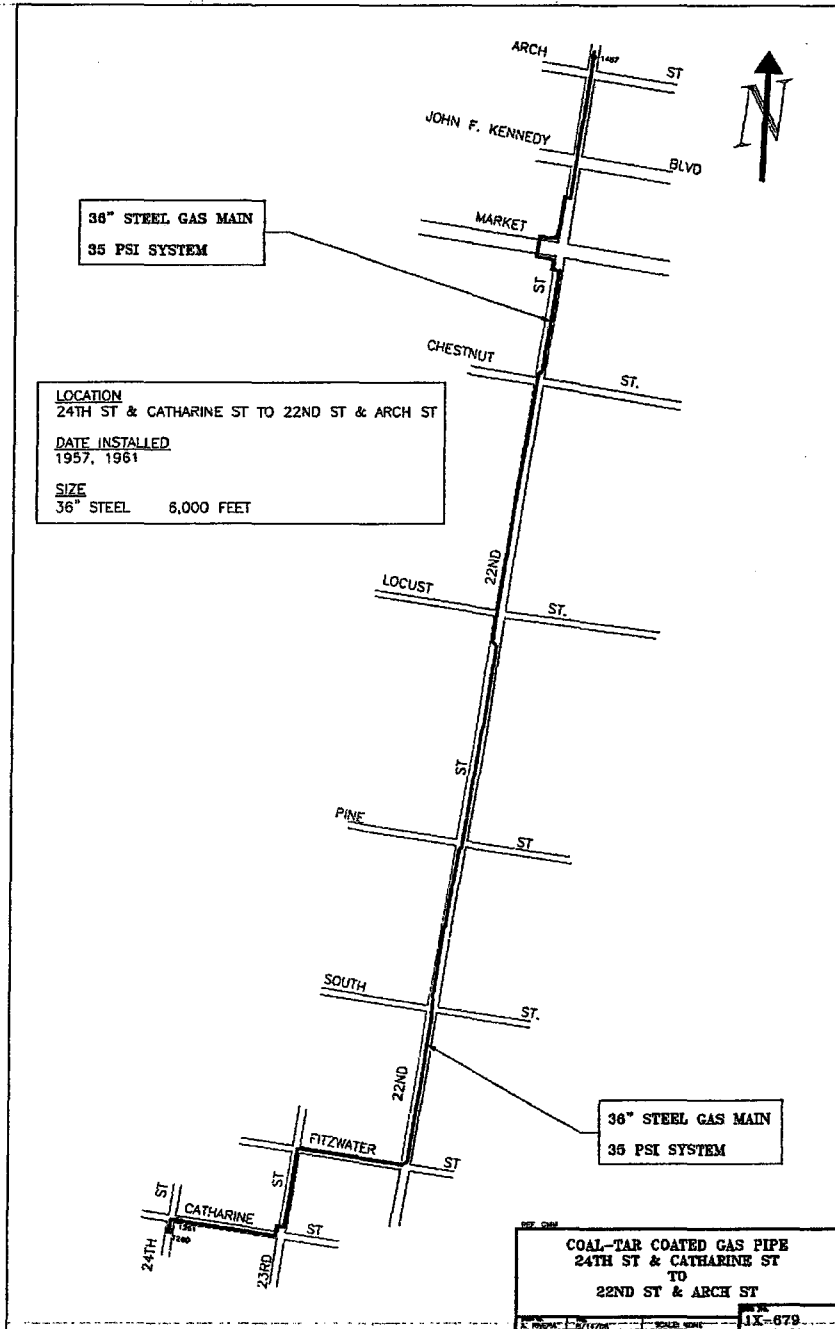


COAL-TAR COATED GAS PIPE  
RICHMOND PLANT  
TO  
ARAMINGO AVE. & ORTHODOX ST  
IX-877

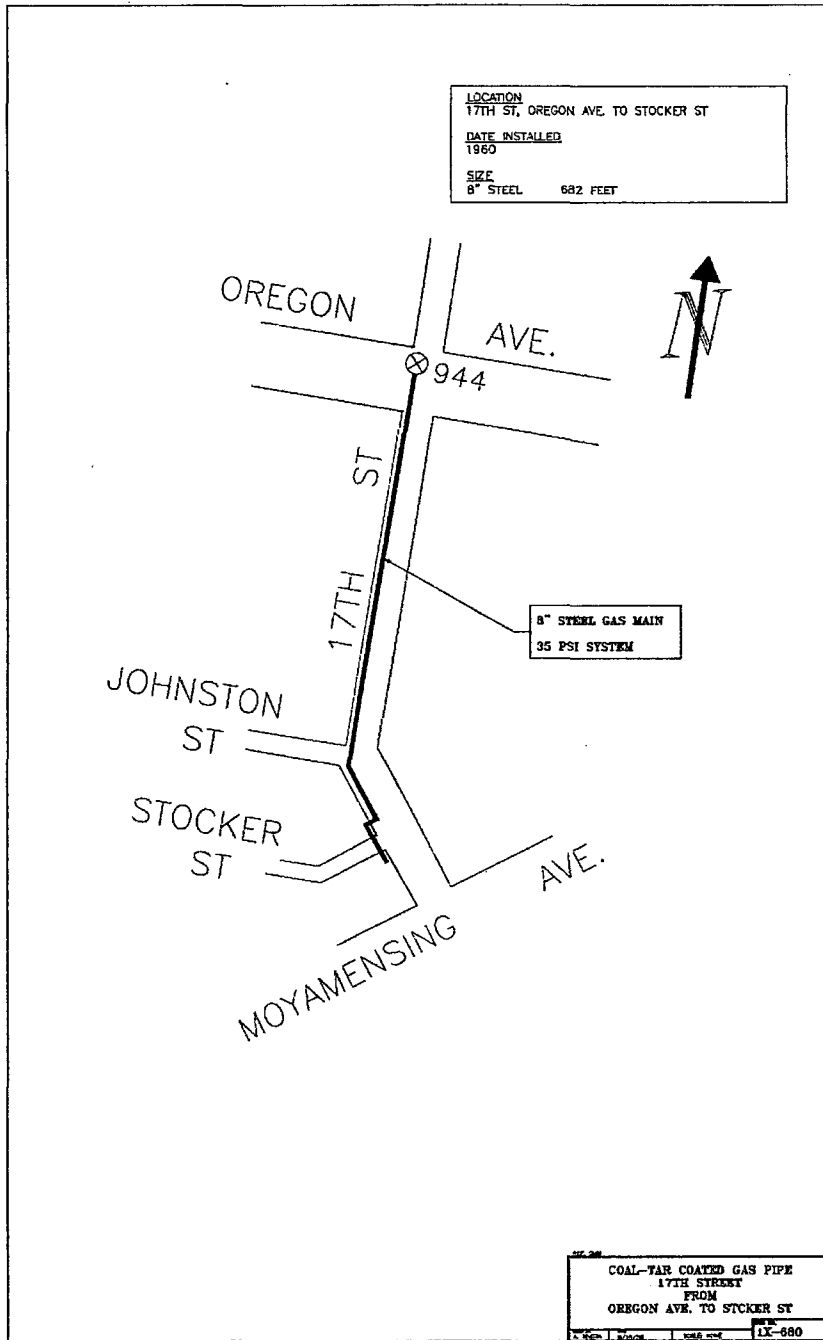
Attachment 2b  
9/08



Attachment 2c  
9/08

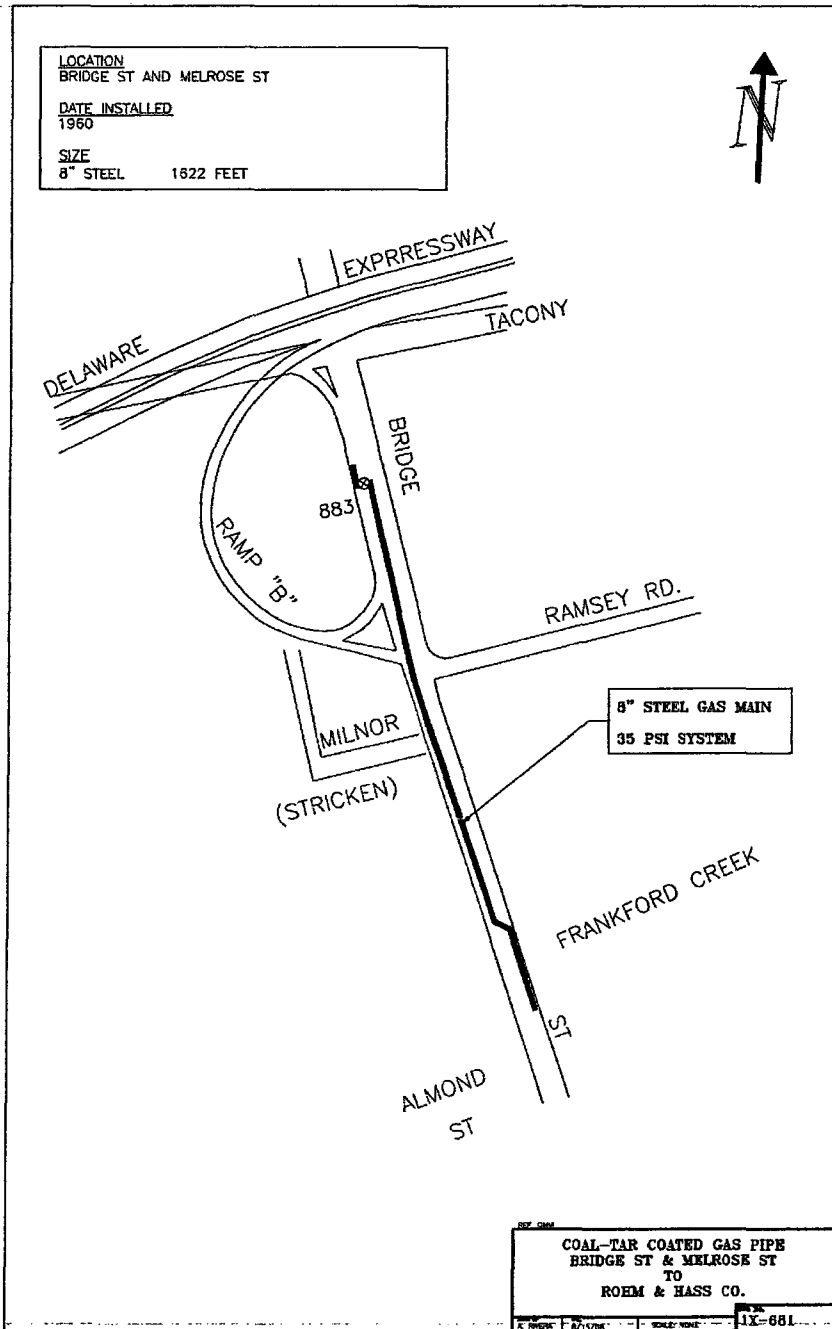


**Attachment 2d**  
9/08

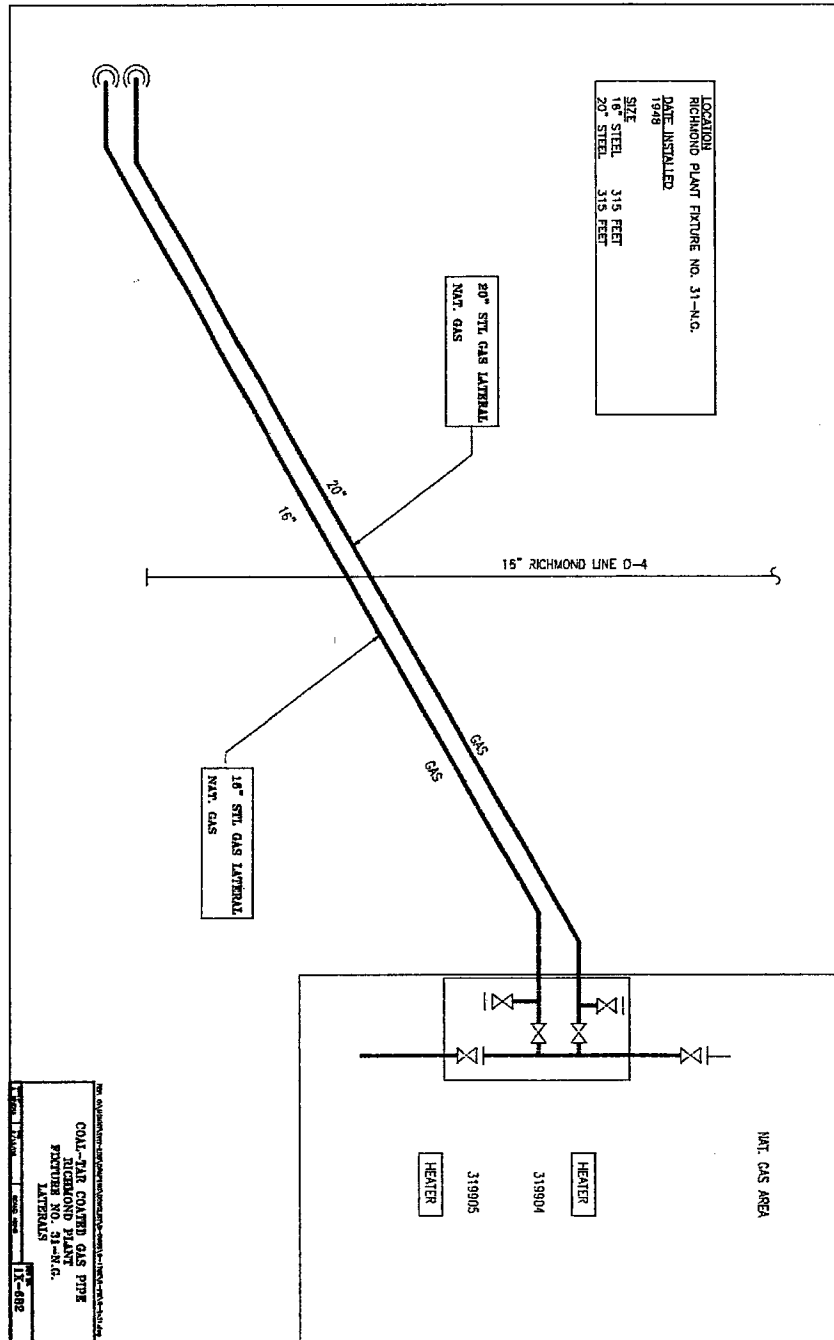


Attachment 2e  
9/08





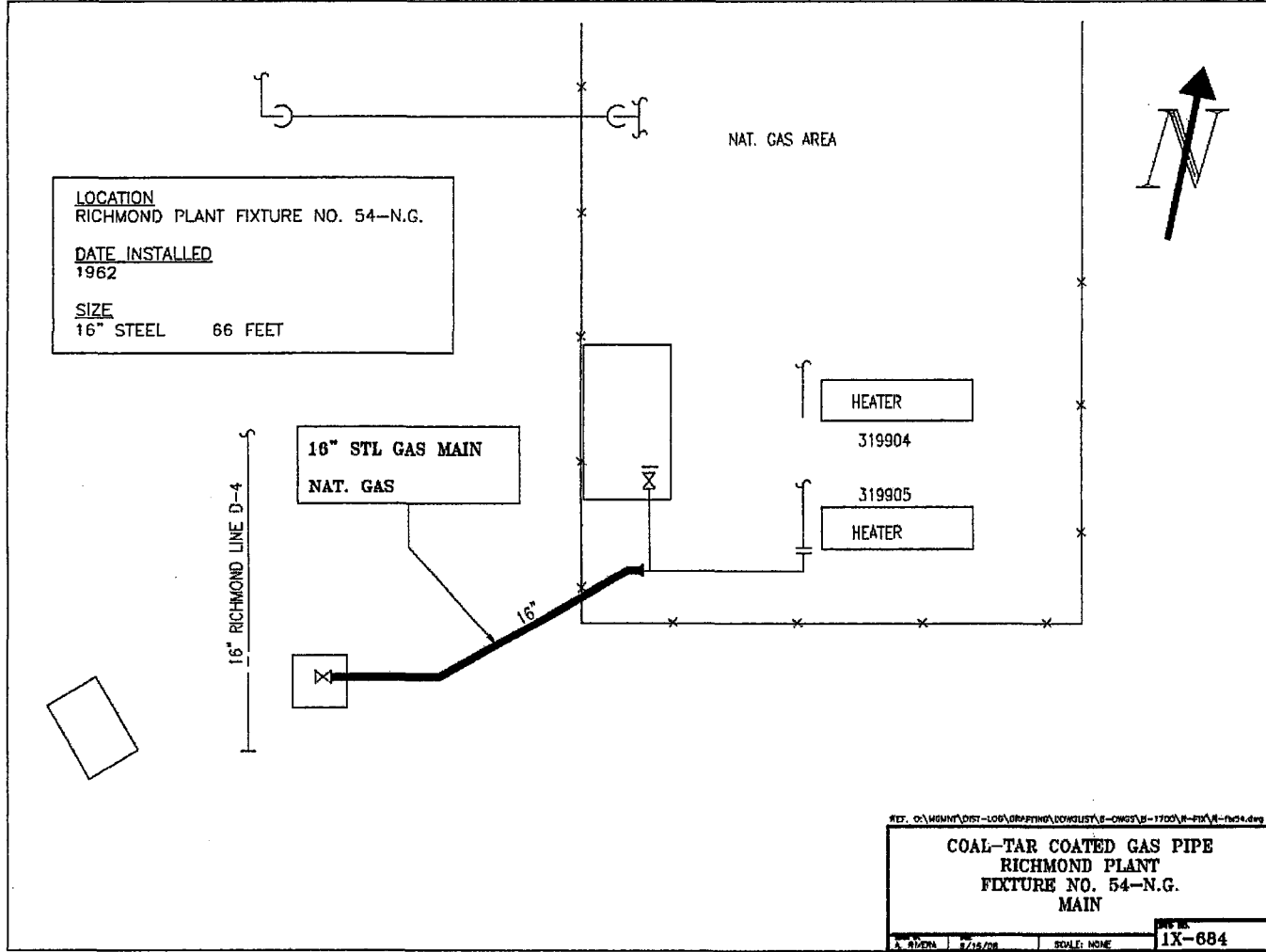
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9/08



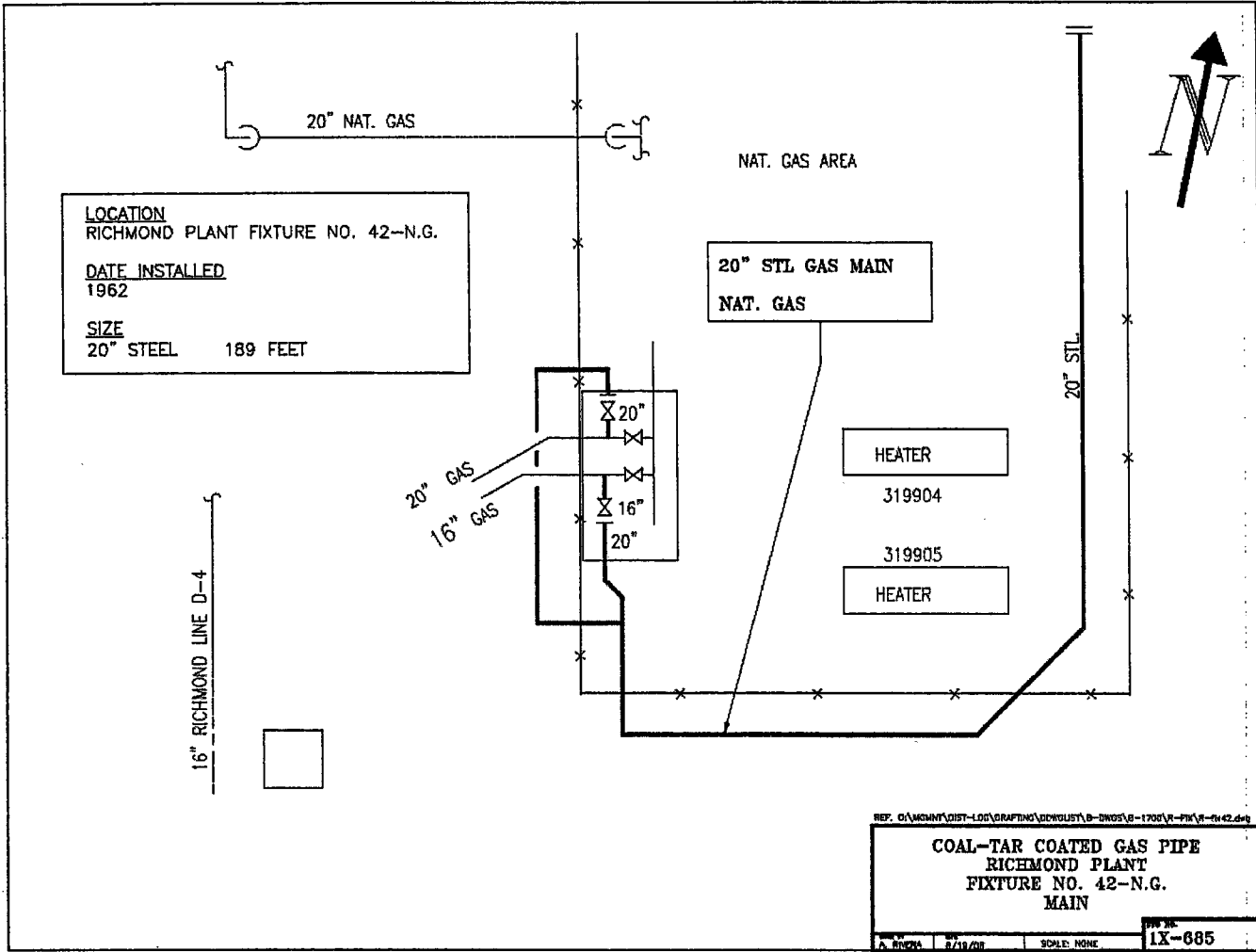
Attachment 2g

9/08

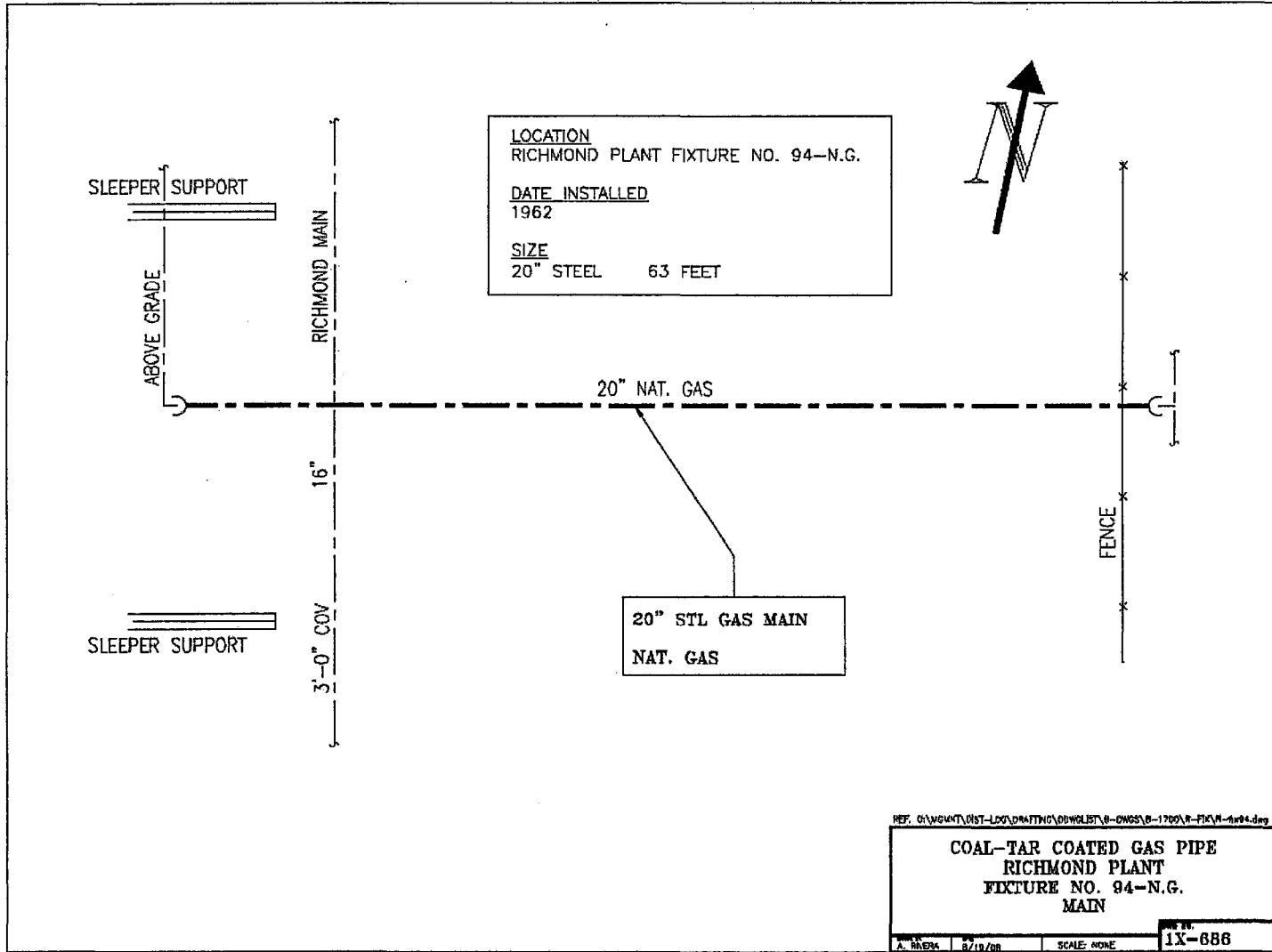




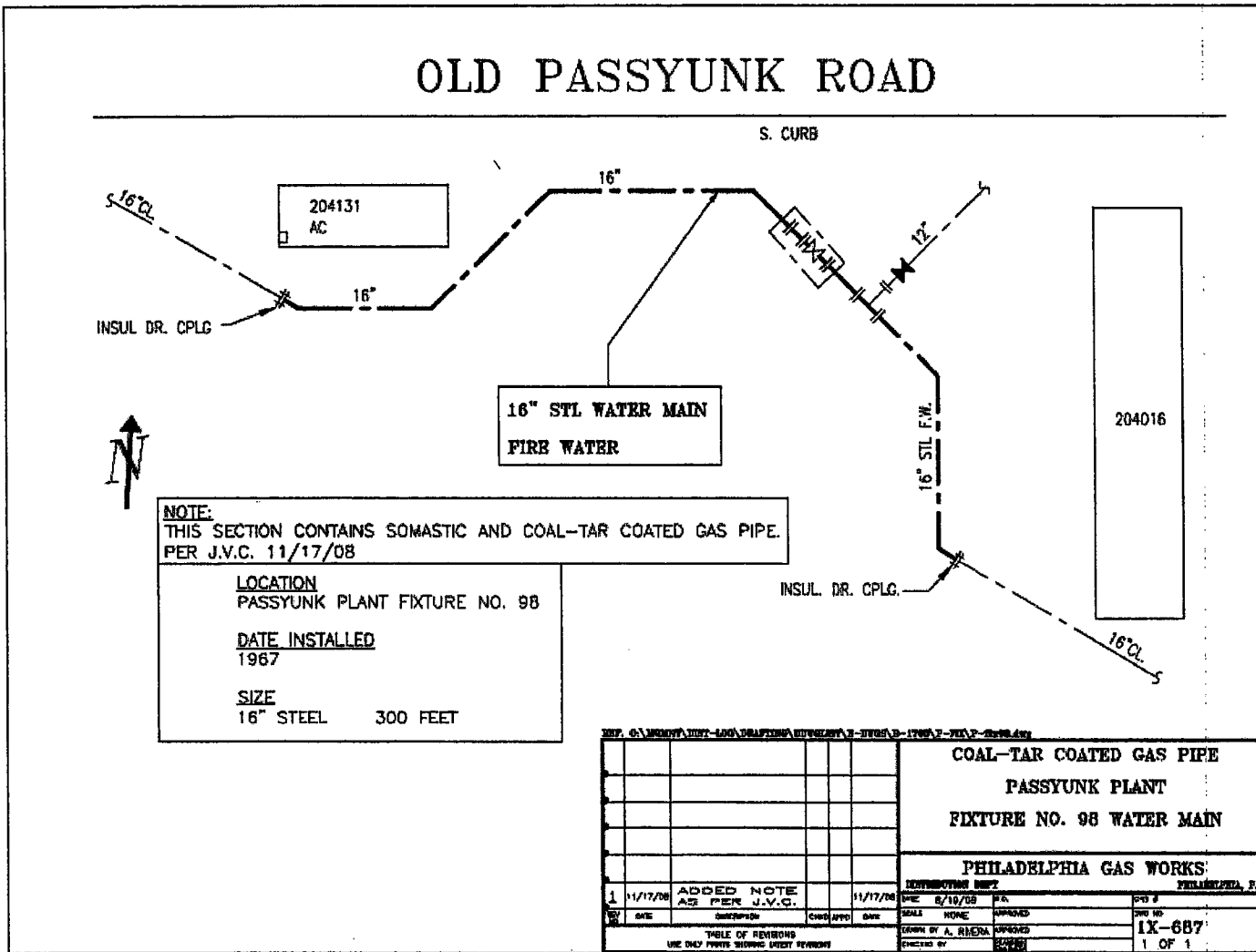
Attachment 2i  
9/08



Attachment 2j  
9/08



Attachment 2k  
9/08



Attachment 21  
9/08

MHJ 08/18/08  
JfC 8/19/08  
Sag 8/27/08

SAG 8/12/08  
MHJ 8/13/08  
JRK 8/13/08  
JJP 8/15/08

## **ACCIDENTS, INJURIES, INCIDENTS**

### ***Actions Immediately Following Injuries Help Save Lives - Know What To Do!***

#### **L. Emergency Care Guide for Adults**

CPR and first aid are often required in emergencies. Contact the Safety and Training Section at 684-6351 for information about training.

#### **Immediate Actions**

1. **Breathing and Circulation**  
If adult victim is not breathing have someone phone Emergency Medical System (911) from a cellular phone (\*911) while you begin rescue breathing. However, if you are alone with an unresponsive, unconscious adult victim, phone for help before beginning rescue breathing. Begin CPR only if there is no pulse and you are trained.
2. **Bleeding**  
Apply direct pressure at the wound and elevate it to stop persistent bleeding.
3. **Shock**  
Lay the victim on his/her back and give assurance. Position the feet above the head. Monitor breathing and circulation. If neck or spinal injuries are evident or suspected, move the victim only if: a) it is necessary to establish or maintain a vital function, such as breathing or b) it must be done to avoid further injury.
4. **Chest Pain**  
Help a conscious victim into a comfortable position with the head raised. Loosen tight clothing.
5. **Help the victim take prescribed medication, if necessary**  
If the victim loses consciousness and is not breathing, proceed with the ABC's of rescue breathing. If victim has no pulse begin CPR only if you are trained.

#### **Follow-Up Actions**

1. Stay calm yourself!
2. Professional Medical Help - Have someone summon professional help, unless you are alone with an unresponsive, unconscious adult victim. Then activate Emergency Medical System (911) on a cellular phone (\*911) before beginning rescue breathing.
3. Other Health Problems - Check the victim for emergency medical ID tags and medications.
4. Foods and Liquids - never give liquids to victims who are unconscious, semi-conscious, nauseated or severely injured.



**M. When Calling for Help give the Following Information**

1. Your name and the number from which you are calling.
2. Location of the emergency. Give additional details, such as the nearest intersection, landmark, etc.
3. Describe what happened and number of people needing help - i.e., fall, auto accident, heart attack, etc.
4. Describe care being given.
5. Do Not Hang Up First - the person you called may need more information.
6. If indoors, post a bystander outside to wait for the arrival of the rescuers and guide them to the person needing medical assistance.

**N. On Duty Injury/Automobile Accident Reporting and Treatment**

1. All employees must report all injuries and/or accidents the same day that it occurs to their immediate supervisor or the Dispatcher on duty.
2. The employee's Supervisor must issue a medical care referral authorization form to injured employee.\* Supervisor must instruct injured employee to visit one of the panel medical providers for treatment (facility chosen by the injured employee must be listed on the "Designated Health Care Providers for Work-Related Injury", F.H. Section VII-30b).
3. Injured employee should no longer visit PGW's Medical Department for initial medical care or medical referral to an outside medical provider. The injured employee is to report directly to panel medical provider with referral authorization form.
4. The Supervisor must immediately notify the following for all reported injury claims:

Risk Management Department (215) 684-6533 or  
(215) 684-6539

CompServices, Inc. 1-800-248-9252 \*

**\* EXCEPTIONS:**

Any claim involving a psychological or stress-related condition will not be subject to the Referral Authorization process, nor should these type claims be reported by any supervisor direct to CompServices, Inc. These claims should be reported to PGW's Risk Management Department only.

All supervisory personnel will be required to supply detailed information when reporting a work-related injury claim, i.e., all information contained on the "Employer's Report of Occupational Injury or Disease" form.

5. After an injured employee has received the necessary medical care and attention, the employee will then be required to report to the PGW Medical Department. Medical recommendations by PGW's in-house medical personnel will then be conveyed to the employee's supervisor and/or department manager via normal PGW documentation procedures. Follow-up visits to the PGW Medical Department should continue, as necessary, after the injured employee has received further medical attention with a designated panel physician facility.
6. The Foreman shall promptly prepare Worker's Compensation Form #344.
7. Supervisory employees must investigate all injuries immediately and promptly prepare PGW Accident Investigation Form #1024 and present the injured employee with a Right and Duties Form.
8. The Foreman/Supervisor shall notify the Risk Management Department of all automobile accidents.

8:00 a.m. - 4:30 p.m.  
Out-of-Hours

(215) 684-6535  
Notify Dispatcher on Duty

An Accident and Claim Report (Form 119) must be filled out in all cases and submitted to the Safety Section.

**NOTE:**

If an employee is injured due to an automobile accident, all the proper injury reports must be completed in addition to Form 119 (Accident and Claim Report.)

DD/JJP/dls  
5/18/99

**FIELD OPERATIONS****Distribution and Field Services  
Personnel**

Effective Date: April 15, 2008

**REPORTING OF SECURITY  
RELATED EVENTS**Bulletin Number # 190  
Supersedes: DD Bulletin # 190 dated  
11/04/1996**To: All Field Operations Personnel****II. Purpose**

The purpose of this bulletin is to insure that all incidents and security related events are reported to the proper PGW personnel as soon as possible.

**III. Definition – N/A****IV. Informational Announcement**

In the event of an act that causes, or threatens to cause, harm to PGW personnel and/or property, or where an actual or suspected criminal act is committed against PGW, its personnel or property, PGW personnel should report the circumstances as quickly as possible to their immediate Supervisor and Dispatcher who will in turn immediately notify the Security Department at 215-684-6555, 24 hours a day, 365 days a year.

The remarks section of the incident report (Form # M-1006 See attachment) should record the time and date that the Security Department was notified as well as the individual contacted in the Security Department.

Every effort should be made to expedite submission of the incident report in accordance with PGW's Procedures 796 through 799. The responsible Supervisor and/or Dispatcher will continue to notify additional Emergency Officials as required.

**V. Associated Documents**

PGW Procedure # 796  
PGW Procedure # 797  
PGW Procedure # 798  
PGW Procedure # 799

**VI. Handbooks**

Distribution Foreman's Handbook Section VII – pages 77-78  
Field Operations Supervisor's Handbook Section VII – page 46-47

Field Service Operations Manual Section II – page 32a

**VII. Attachments**

Incident Report (Form # M-1006) located:  
FSD Operations Manual (Section II, Appendix D)  
Distribution Foreman's Handbook (Section VII)  
Field Operations Supervisors Handbook (Section VII)

**VIII. Transaction Listing**

TR- 2008-#39

J Kelly/jrk

**Signature on File**

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**Steven Groeber**  
**Director, Field Operations & Work Planning**

**Signature on File**

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**Michael W. Handwerk**  
**Vice President – Technical Compliance**

**PHILADELPHIA GAS WORKS**  
**WORKERS' COMPENSATION PROGRAM: DESIGNATED HEALTH CARE PROVIDERS**

THE FOLLOWING PROCEDURE MUST BE FOLLOWED IN CASE OF WORK RELATED INJURY OR ILLNESS:

**A. IMMEDIATELY REPORT THE INJURY TO YOUR SUPERVISOR.**

Any injury you sustain at work must be reported immediately to your supervisor. Failure to do so may delay your benefits or cause you to lose your rights to benefits.

**Supervisors must promptly report injuries to the appropriate personnel office.**

**B. OBTAIN MEDICAL CARE FROM A PROVIDER LISTED BELOW.**

| <i>Provider</i>   | <i>Address</i>   | <i>Phone Number</i> | <i>Specialty</i> |
|---|--|---------------------|------------------|
| 1. Stephanie Y. Kao, MD   | BusinessHealth @ Jeanes, Jeanes Phys Office Bldg, 7500 Central Avenue, Suite 100 Philadelphia. PA 19111        | 215-728-2020        | OCCUPATIONAL     |
| 2. Francis X. Burke III, MD   | U S Regional Occupational Health II DBA Worknet, Broad & Vine Street, Philadelphia. PA 19102                   | 215-762-8525        | OCCUPATIONAL     |
| 3. Ruben H. Zabaleta, MD  | Philadelphia Occupational Health, PC dba Worknet, 5800 Ridge Avenue, Suite 234 Philadelphia. PA 19128          | 215-487-4540        | OCCUPATIONAL     |
| 4. Gabriel B. Rosales, MD<br>William F. Bonner, MD                      | Industrial Health Services at Episcopal Hospital,<br>100 E Lehigh Ave Philadelphia. PA 19125                   | 215-707-0485        | OCCUPATIONAL     |
| 5. Wayne R. Hentschel, DO   | Sister Marie Lenahan Wellness Center<br>1503 Lansdowne Ave, Suite 2004, Darby PA 19023                         | 610-237-5701        | OCCUPATIONAL     |
| 6. Brian Shinkle, DO  | Mercy Hospital of Philadelphia/Work Care,<br>501 South 54th Street Philadelphia. PA 19143                      | 215-748-9327        | OCCUPATIONAL     |
| 7. Robert N. Kessler, DC  | 9987 Verree Road Philadelphia. PA 19115  | 215-698-5800        | CHIROPRA         |
| 8. James J. Demarino, DC  | Demarino Chiropractic Center, 2505 South Broad Street Philadelphia. PA 19148                                   | 215- 551-3340       | CHIROPRA         |
| 9. Mark D. Lazarus, MD  | Rothman Institute, 925 Chestnut Street 5th floor Philadelphia. PA 19107  | 267-339-3776        | ORTHOPEDIC S     |
| 10. Armando Mendez, MD<br>Jeffrey Malumed, MD<br>Gregory T. Tadduni, MD | Liberty Orthopedic Sports Medical Associates,<br>1 Bartol Avenue, Suite 100 Ridley Park. PA 19078              | 610-521-8970        | ORTHOPEDIC       |
| 11. Richard A. Cautilli, Jr., MD  | Cautilli Orthopaedic, 115 Floral Vale Blvd, Yardley PA 19067   | 215-504-6101        | ORTHOPEDIC       |
| 12. Donald F. Leatherwood, MD   | 60 E.Township Line Rd. Moss Rehab @ Elkins Park Hosp. Elkins Park. PA 19027                                    | 215- 663-6620       | ORTHOPEDIC       |
| 13. Doug Radant, RPH  | DirectCompRx, For the nearest location, please call the toll free number                                       | 866-515-5535        | PHARM            |
| 14. Dean Hutchinson, MSPT   | CITYWIDE Physical Therapy Solutions, 8019 Frankford Avenue Philadelphia. PA 19136 PremierComp                  | 888-594-4001        | PHYSICAL T       |
| 15. Lewis M. Caldwell, MSPT   | Pro Physical Therapy Grant One Shopping Center, 9475 East Roosevelt Boulevard, Suite B4 Philadelphia. PA 19114 | 215-464-6200        | PHYSICAL T       |
| 16. Carmen Rivera, PT   | LaFortaleza Physical Therapy, 3300 Aramingo Avenue Philadelphia. PA 19134                                      | 215-427-2242        | PHYSICAL T       |
| 17. Luis Hincapie, MPT  | La Fortaleza Physical Therapy, 4231 North 5th Street Philadelphia. PA 19140                                    | 215-455-5370        | PHYSICAL T       |
| 18. Joel Roth, PT   | Novacare Rehabilitation, 511 N Broad St Philadelphia. PA 19123   | 800-739-6682        | PHYSICAL T       |
| 19. Michael R. Clair, MD  | 1705 Rittenhouse Square, Philadelphia PA 19145   | 800-453-0574        | RADIOL           |
| 20. Edward L. Chairman, DPM   | 1840 South Street Philadelphia. PA 19146   | 215-732-0200        | PODIAT           |
| 21. Michael Pries   | Cherry Hill Medical, Inc 225 Executive Drive Moorestown NJ 08087   | 800-238-8181        | DURABLE MEDICA   |

**C. MEDICAL EMERGENCY:**

If you are faced with a medical emergency, you may secure initial emergency treatment from the closest emergency facility.

However, any follow-up care to the emergency treatment must be with a designated health care provider.

**D. IF YOU CHOOSE TO TREAT WITH AN OUT OF STATE PROVIDER, YOU MAY BE SUBJECT TO BALANCE BILLING.**

**E. FOR MEDICAL TREATMENT TO BE PAID BY YOUR EMPLOYER:**

1. You must select one of the physicians or physician groups listed above.
2. You must continue to visit one of the physicians listed above or any specialist to which that provider refers you, if you need treatment, for **Ninety (90) days from the date of your first visit.** This requirement is in conformance with the Pennsylvania Workers' Compensation Act, Section 306 (F)(1)(i)
3. **After Ninety (90) days,** if you still need treatment, you may continue with the same physician or you may choose to go to another physician or health care provider for treatment. **If you decide to go to another provider, you must notify your employer of this action within five (5) days of your visit.**
4. Your bills will be paid if your physician or health care provider reports as required (within ten days after your first visit and at least once a month as long as treatment continues). **You** must call (800-393-7196) and notify the new provider that these reports are to be submitted to the following address:

SAFETY

F.H. tion VII - 53

PHILADELPHIA OFFICE  
CompServices, Inc.  
P.O.Box 59059  
Philadelphia, PA 19102



## INCIDENT REPORT

|   |   |   |   |
|---|---|---|---|
| DAY, DATE, TIME OF INCIDENT   |   | REPORTING DEPARTMENT/LOCATION             | INITIAL CLASSIFICATION  |
| LOCATION OF INCIDENT  | <input type="checkbox"/> INSIDE<br><input type="checkbox"/> OUTSIDE | EMPLOYEE INVOLVED (NAME & PAYROLL NUMBER) |   |
| DATE & TIME SECURITY NOTIFIED   |   | SECURITY PERSON NOTIFIED                  | PERSON MAKING NOTIFICATION  |
| PERSON/PROPERTY AFFECTED:   |   |   | PROPERTY OWNERSHIP  |
| <input type="checkbox"/> PERSON <input type="checkbox"/> BUILDING <input type="checkbox"/> VEHICLE <input type="checkbox"/> EQUIPMENT <input type="checkbox"/> OTHER (INDICATE ABOVE) |   |   | <input type="checkbox"/> PGW <input type="checkbox"/> PERSONAL <input type="checkbox"/> OTHER |
| VEHICLE:   MAKE   YEAR   MODEL   COLOR   LICENSE NO.  |   | STATE                                     | SERIAL NO.  |
| IF OTHER THAN PGW: <input type="checkbox"/> EMPLOYEE <input type="checkbox"/> OTHER   |   | IF PGW VEHICLE:                           |   |
| OWNER:  | ADDRESS:  | PGW NO.: _____                            |   |
|   |   | GARAGE AT: _____                          |   |
| IF INJURIES OCCURRED: (EMERGENCY TREATMENT-HOSPITAL, DOCTOR, DATE, TIME & DIAGNOSIS)  |   |   |   |
| PROPERTY TAKEN (DESCRIBE):  |   |   | MONETARY VALUE  |
|   |   |   | \$  |
| DETAILS OF INCIDENT:  |   |   |   |
|   |   |   |   |
| EMPLOYEE'S SIGNATURE  |   | PAYROLL NO.                               | DATE  |
| SUBMITTING SUPERVISOR'S SIGNATURE   |   | PAYROLL NO.                               | DATE  |

**AUTOMOBILE ACCIDENT REPORT**

Location of Accident \_\_\_\_\_ Date & Time of Accident \_\_\_\_\_

|   |  |
|---|--|
| <b>PGW<br/>VEHICLE</b>  | Vehicle No. _____ Make/Type _____ Year _____ Operator _____ PR No. _____<br>Extent of Damage _____ Est. Speed _____ MPH<br>Nature of Injury to Operator _____  |
| <b>OTHER<br/>VEHICLE</b>  | Owner _____ Address _____<br>Make/Type _____ Year _____ License No. _____<br>Extent of Damage _____ Est. Speed _____ MPH<br>Operator _____ Address _____<br>Operator License No. _____ Injuries and/or Medical Att'n _____<br>Remarks of Operator _____  |
| <b>PASSENGERS &amp;<br/>EXTENT OF INJURIES</b>  | Name _____ Injuries and/or Medical Att'n _____<br>Address _____ In PGW <input type="checkbox"/> Vehicle <input type="checkbox"/> Other<br>Name _____ Injuries and/or Medical Att'n _____<br>Address _____ In PGW <input type="checkbox"/> Vehicle <input type="checkbox"/> Other<br>Name _____ Injuries and/or Medical Att'n _____<br>Address _____ In PGW <input type="checkbox"/> Vehicle <input type="checkbox"/> Other |
| <b>MISC. DATA</b>   | Weather and/or Road Conditions _____ Action by Police _____<br>Name _____ Badge# _____<br>Police District _____<br>Insurance Coverage: Public Liability Policy# _____ Company _____<br>Collision Policy# _____ Company _____   |
| <b>WIT-<br/>NESSES</b>  | Name _____ Address _____<br>Comments: _____  |
| <p><b>Details of Accident:</b> _____</p> <p style="text-align: right;">Draw sketch below showing existing street conditions, direction Traveled, position of vehicles, traffic controls, etc.</p><br><br><br><br><br><br><br><br><br><br> |  |

Reported by \_\_\_\_\_ Reviewed by \_\_\_\_\_  
 Date \_\_\_\_\_ 20\_\_\_\_ Title and Dept. \_\_\_\_\_  
 Phoned to Risk Mngt. Dept. \_\_\_\_\_ 20\_\_\_\_ Date \_\_\_\_\_ 20\_\_\_\_



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF LABOR AND INDUSTRY  
BUREAU OF WORKERS' COMPENSATION  
1171 S. CAMERON STREET, ROOM 103  
HARRISBURG, PA 17104-2501  
(TOLL FREE) 800-482-2383  
TTY (TOLL FREE) 800-362-4223

EMPLOYER'S REPORT  
OF OCCUPATIONAL  
INJURY OR DISEASE

EMPLOYEE SOCIAL SECURITY NUMBER

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

DATE OF INJURY

\_\_\_\_ - \_\_\_\_ - \_\_\_\_  
MONTH DAY YEAR

EMPLOYEE FIRST NAME

\_\_\_\_\_

EMPLOYEE LAST NAME

\_\_\_\_\_

STREET ADDRESS

\_\_\_\_\_

CITY

\_\_\_\_\_

STATE

\_\_\_\_\_

ZIP CODE

\_\_\_\_ - \_\_\_\_

COUNTY

\_\_\_\_\_

PHONE NUMBER

\_\_\_\_ - \_\_\_\_ - \_\_\_\_

EMPLOYEE:

MALE  MARRIED   
FEMALE  SINGLE

NUMBER OF DEPENDENTS

\_\_\_\_\_

DATE OF BIRTH

\_\_\_\_ - \_\_\_\_ - \_\_\_\_  
MONTH DAY YEAR

OCCUPATION OR JOB TITLE

\_\_\_\_\_

NCCI CLASS CODE (IF KNOWN)

\_\_\_\_\_

EMPLOYMENT STATUS

\_\_\_\_\_

FT = Full-time  
PT = Part-time

SL = Seasonal  
VO = Volunteer  
ZZ = Other

EMPLOYER

P | H | I | L | A | D | E | L | P | H | I | A | G | A | S | W | O | R | K | S

STREET ADDRESS

8 | 0 | 0 | W | M | O | N | T | G | O | M | E | R | Y | A | V | E | N | U | E

CITY

P | H | I | L | A | D | E | L | P | H | I | A

STATE

P | A

ZIP CODE

1 | 9 | 1 | 2 | 2 | - | 2 | 8 | 0 | 6

SIC CODE

7 | 5 | 0 | 2

EMPLOYER FEIN

2 | 3 | - | 1 | 6 | 6 | 4 | 7 | 7 | 9

PHONE NUMBER

2 | 1 | 5 | - | 6 | 8 | 4 | - | 6 | 5 | 3 | 9

COUNTY

P | H | I | L | A | D | E | L | P | H | I | A

NAICS CODE

\_\_\_\_\_

FULL PAY FOR DAY OF INJURY?

YES   
NO

TIME EMPLOYEE BEGAN WORK

\_\_\_\_ : \_\_\_\_ AM   
PM

TIME OF OCCURRENCE

\_\_\_\_ : \_\_\_\_ AM   
PM



LAST DAY WORKED

\_\_\_\_ - \_\_\_\_ - \_\_\_\_  
MONTH DAY YEAR

DATE DISABILITY BEGAN

\_\_\_\_ - \_\_\_\_ - \_\_\_\_  
MONTH DAY YEAR

DATE EMPLOYER NOTIFIED

\_\_\_\_ - \_\_\_\_ - \_\_\_\_  
MONTH DAY YEAR

DATE RETURNED TO WORK

\_\_\_\_ - \_\_\_\_ - \_\_\_\_  
MONTH DAY YEAR

DATE OF HIRE

\_\_\_\_ - \_\_\_\_ - \_\_\_\_  
MONTH DAY YEAR

CONTACT FIRST NAME

\_\_\_\_\_

CONTACT PHONE NUMBER

\_\_\_\_ - \_\_\_\_ - \_\_\_\_

CONTACT LAST NAME

\_\_\_\_\_

NOTICE: Report should be clearly completed, (preferably typed) and original mailed to the Bureau at the address in the upper left corner and a copy to employee and insurer.

TYPE OF INJURY CODE      PART OF BODY AFFECTED CODE      CAUSE OF INJURY CODE (ENTER CODES, IF KNOWN)

[Grid for injury codes]

TYPE OF INJURY OR ILLNESS

[Grid for injury type]

PARTS OF BODY AFFECTED

[Grid for body parts]

CAUSE OF INJURY

[Grid for cause of injury]

DID INJURY OR ILLNESS OCCUR ON EMPLOYER'S PREMISES?

YES  NO

IF OUT OF STATE, SPECIFY STATE OF INJURY

[Grid for state]

WERE SAFEGUARDS OR SAFETY EQUIPMENT PROVIDED?

YES  NO

WERE SAFEGUARDS OR SAFETY EQUIPMENT USED?

YES  NO

ALL EQUIPMENT, MATERIALS, OR CHEMICALS EMPLOYEE WAS USING WHEN ACCIDENT OR ILLNESS EXPOSURE OCCURRED

[Large empty box for equipment details]

HOW INJURY OR ILLNESS/ABNORMAL HEALTH CONDITION OCCURRED. DESCRIBE THE SEQUENCE OF EVENTS AND INCLUDE ANY OBJECTS OR SUBSTANCES DIRECTLY RESPONSIBLE.

[Large empty box for description of incident]

IF FATAL, GIVE DATE OF DEATH

[Grid for date of death]

INITIAL TREATMENT:

- NO MEDICAL TREATMENT
MINOR BY EMPLOYEE
CLINIC / HOSPITAL
PANEL PHYSICIAN
EMPLOYEE PHYSICIAN
EMERGENCY CARE
HOSPITALIZED MORE THAN 24 HOURS

PHYSICIAN/HEALTH CARE PROVIDER

Form for physician name and address

HOSPITAL NAME:

Form for hospital name and address

POLICY PERIOD FROM:

[Grid for policy start date]

POLICY PERIOD TO:

[Grid for policy end date]

POLICY/SELF INSURED NUMBER:

[Grid for policy number]

WITNESS FIRST NAME

[Grid for witness first name]

WITNESS PHONE NUMBER

[Grid for witness phone number]

WITNESS LAST NAME

[Grid for witness last name]

PERSON COMPLETING THIS FORM:

Form for filer name, title, phone

INSURANCE CARRIER OR THIRD PARTY ADMINISTRATOR (IF SELF-INSURED)

Form for insurer details: COMP SERVICES, INC, 1717 ARCH STREET - 45TH FLOOR, PHILADELPHIA, PA 19103

DATE PREPARED

[Grid for date prepared]



344 1197-2

Any individual filing misleading or incomplete information knowingly and with intent to defraud is in violation of Section 1102 of the Pennsylvania Workers' Compensation Act and may also be subject to criminal and civil penalties through Pennsylvania Act 165.

OCCUPATIONAL INJURY / ILLNESS  
ACCIDENT INVESTIGATION REPORT (PRINT LEGIBLY OR TYPE)

PHILADELPHIA GAS WORKS

EMPLOYEE'S SUPERVISOR

DEPARTMENT MANAGER

DEPARTMENT SAFETY COORDINATOR

REV. 06/07/00

|   |  |                              |   |   |                               |
|---|--|------------------------------|---|---|-------------------------------|
| Date of Report  |  | Department Name              |   | Station Reporting From  |                               |
| T   | D  | P                            | E   | M   | P                             |
| #   | Employee: First                          |                              | Middle  |   | Last                          |
| Employee's Job Title  |  |                              | Birthdate   | Date of Accident  | Date & Time Accident Reported |
| Time of Accident (Use Military Time)  | Normal Starting Time (Use Military Time) | Hours Worked Prior to Injury | Day of the Week: <input type="checkbox"/> M <input type="checkbox"/> T <input type="checkbox"/> W <input type="checkbox"/> Th <input type="checkbox"/> F <input type="checkbox"/> S <input type="checkbox"/> Su | Employee's Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female             |                               |
| To Whom Was Accident Reported?  |  | Service Date                 | Years on Job Involved: <input type="checkbox"/> 0-1 <input type="checkbox"/> 2-3 <input type="checkbox"/> 4-5 <input type="checkbox"/> 6-10 <input type="checkbox"/> Over 10                                    |   |                               |
| Employee's Description of Accident  |  |                              |   |   |                               |
|   |  |                              |   |   |                               |
|   |  |                              |   |   |                               |
|   |  |                              |   |   |                               |
| Doctor's Name & Address   |  |                              |   |   |                               |
| Hospital Name & Address   |  |                              |   |   |                               |
| Supervisor's Remarks  |  |                              |   |   |                               |
|   |  |                              |   |   |                               |
| Location Where Accident Occurred  |  |                              | Name of Equipment, Material or Process Involved   |   |                               |
| What Do You Recommend to Prevent a Recurrence?  |  |                              |   |   |                               |
|   |  |                              |   |   |                               |
| Supervisor's Signature  |  |                              |   |   | Date                          |
| Comments by Department Manager  |  |                              |   |   |                               |
|   |  |                              |   |   |                               |
|   |  |                              |   |   |                               |
| Department Manager's Signature  |  |                              |   |   | Date                          |
| Accident Type <input type="checkbox"/> Struck Against (201) <input type="checkbox"/> Struck By (204) <input type="checkbox"/> Same Level Fall (216) <input type="checkbox"/> Fall From Elevation (208) <input type="checkbox"/> Overexertion (237)<br><input type="checkbox"/> Caught Between (220) <input type="checkbox"/> Contact With Hot/Cold (243) <input type="checkbox"/> Animal Bites (276) <input type="checkbox"/> Chemical Contact (248) <input type="checkbox"/> Motor Vehicle (261) |  |                              |   |   |                               |
| Nature of Injury <input type="checkbox"/> Bruise (007) <input type="checkbox"/> Cut/Puncture (008) <input type="checkbox"/> Thermal Burn (003) <input type="checkbox"/> Chemical Burn (004) <input type="checkbox"/> Fracture (012)<br><input type="checkbox"/> Hernia/Rupture (016) <input type="checkbox"/> Scratch/Abrasion (021) <input type="checkbox"/> Sprain/Strain (022) <input type="checkbox"/> Concussion (005) <input type="checkbox"/> Other (025)                                  |  |                              |   |   |                               |
| Part of Body: <input type="checkbox"/> Head/Face (101) <input type="checkbox"/> Eye (106) <input type="checkbox"/> Arm/Shoulder (119) <input type="checkbox"/> Hip/Groin (134) <input type="checkbox"/> Hand (127)<br><input type="checkbox"/> Back (132) <input type="checkbox"/> Leg (139) <input type="checkbox"/> Foot (146) <input type="checkbox"/> Finger (127) <input type="checkbox"/> Toes (147) <input type="checkbox"/> Chest (133) <input type="checkbox"/> Body System (151)        |  |                              |   |   |                               |
| Type of Case: <input type="checkbox"/> First Aid (N) <input type="checkbox"/> Medical Treatment <input type="checkbox"/> Restricted Work Activity <input type="checkbox"/> Lost Time <input type="checkbox"/> Fatality  |  |                              |   |   |                               |
| Date—Last Day Worked  | Date—First Day of Disability             | Date—Returned to Work        | Lost Time Workdays<br>No. <input type="checkbox"/> Actual <input type="checkbox"/> Est.   | Restricted Workdays:<br>No. <input type="checkbox"/> Actual <input type="checkbox"/> Est. |                               |
| IMPORTANT—This report must be received by the following within (7) days from injury date:   |  |                              |   |   |                               |
| COPY 1—CORPORATE SAFETY   |  | COPY 2— LEGAL DEPARTMENT     |   | COPY 3—ORIGINATING DEPARTMENT   |                               |
| Safety Coordinator's Signature  |  |                              |   |   | Date                          |

# Appendix A-6

6. PGW has revised its emergency procedures to describe how and when an Incident Command System is established, retrained all emergency responders and field supervisors to address the Incident Command System and coordinated a meeting between PGW and the Philadelphia Fire Department to review Incident Command requirements.

(a) Language defining the concepts of Incident Command, Incident Command Center, and Incident Command Location-On Scene has been added to the “Definitions” and Section III.A of Bulletin 212. PGW has agreed to revise its definition of “PGW Incident Command Center” in its Emergency Response Manual as follows:

PGW Incident Command Center will be where the PGW person in charge is located. If there are other agencies on location (PFD, PPD) that have the ultimate responsibility for the event (i.e., PFD at fire or explosion), the PGW person in charge (PPC) will coordinate all actions and findings through that other agency’s Incident Command Center and that other agency will become the Controlling Agency. PGW shall assign an employee to be present at the Controlling Agency’s Incident Command Center. Once PGW (the PPC or designate) reports to the location of the controlling agency’s command center, PGW must maintain continuous representation at that location and the PGW representative will be able to constantly communicate with the PPC.

(b) PGW emergency procedures clarify that, in an emergency, PGW shall immediately establish a communication chain to share pertinent information with all PGW First Responders and any other First Responder agencies.” [Section III.A].

(c) PGW representatives have met on multiple occasions with partner first responders, PFD and PECO, as outlined in Number #3, above.

(d) PGW emergency responders and field supervisors were re-trained and re-qualified (June 2011) on Emergency Response and ICS.

• Supporting Documentation:

(a) Excerpts from Bulletin 212.

(b) Excerpts from Bulletin 212.

(c) See App. A-3, above.

(d) Incident Command System Training – Logs.

• Cross-References: Prayer for Relief at ¶ (h) Settlement, ¶ 23(f).

6(a)



Effective April 21, 2011

Bulletin Number #212  
Dated September 15, 2008

1. Forced Entry

Upon the initial visit, if any house that requires a leak investigation per this procedure is apparently locked and secure and it is not possible to gain entrance, make an exterior examination. Examine at the basement windows, mailbox or any other place where an indication of the inside atmosphere may be sampled. If an odor or reading of gas is detected coming from a premise either from outside that premise or from an adjoining property, make forcible entry through a window or a door.

- If a forcible entry is required, inform the Dispatcher. The Dispatchers will call 911. Give the Dispatcher the address of every house(s) requiring forced entry.
- Do as little damage as possible.
- During normal business hours notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6532 (voice mail).
- Sign and leave Form #6489 to inform the customer that it was necessary for PGW to enter the premise.
- Complete a detailed Accident Report (Form 119) and submit it at the end of your shift.

2. Chain of Command – Incident Command Center

When **both Distribution and Field Services *union-covered personnel*** are on location, the **Distribution Foreman is in charge and responsible** for following all procedures, directing make safe procedures and then continuing the investigation.

A Field Service Department Supervisor or Distribution Department Supervisor has the authority to supersede the Distribution Foreman.

When **both Distribution and Field Services *supervision*** are on location of a leak investigation, the highest ranking **Distribution Supervisor is in charge**.

All actions will be communicated and coordinated through the person in charge. If there is a change of the person in charge; relay all pertinent information to the person taking control on the job site, then announce the change to key personnel.

As additional PGW personnel arrive they should report to the person in charge who will provide instructions and a summary of current conditions and actions taken as well as any actions underway.

PGW Incident Command Center will be where the person in charge is located. If there are other agencies on location (PFD, PPD) that have the ultimate responsibility for the event (i.e., PFD at fire or explosion), the PGW person in charge will coordinate all actions and findings through that agency's Incident Command Center. Once PGW reports to the location of the



11 11

6(b)





### III. Procedure

#### A. General Requirements

- **ACTION MUST ALWAYS BE TAKEN TOWARD PROTECTING PEOPLE FIRST AND THEN PROPERTY.**
- **All requirements listed throughout this procedure represent minimum requirements and are not meant to limit the Operator in making decisions where experience, safety and common sense indicates otherwise.**
- **All employees responsible for conducting leak investigations must be qualified per PGW Operator Qualification Plan.**
- Employees must wear all required personal protection equipment per PGW Policies.
- Odor complaints are to be dispatched promptly regardless of their source.
- Any delay in arrival to the location of the complaint must be reported to the Dispatcher immediately.
- Conduct all odor complaint investigations as if a hazard exists until it is determined otherwise. Determine the extent of the hazard (leak) by making appropriate GDI checks, observations and tests.
- Review all information given on the order.
- If possible, enter all buildings through the main entrance.
- If available, interview the caller for relevant information.
- If during the initial leak investigation it is determined that a hazard exists, call the Dispatcher immediately providing details of the existing hazard.
- **Mobile phones must be turned off before entering properties for the leak investigation.** All communications must be conducted outside in a natural gas free atmosphere.
- If you suspect that the source of the leak involves any portion of PGW's system that would require a Pressure Operation, notify Dispatching immediately.
- Foreign Odors - on a wide spread foreign odor incident, when instructed by a Dispatcher or Supervisor, the leak investigation can be limited to one premise and a check of structures (boxes) directly outside that premise ("one house check", see definitions). If gas readings are discovered follow the complete leak investigation procedure.
- Leak indications may come from sources other than natural gas (marsh gas, gasoline spills, etc.).
- If there are other "First Responders" agencies (PFD, PPD) on location, discuss with them as to their actions already completed and any findings of their investigation.
- Immediately establish a communications chain to share pertinent information with all PGW First Responders and any other First Responder agencies.

6(d)

## INCIDENT COMMAND SYSTEM (ICS) TRAINING

| TITLE                                | NAME              | ICS 100   | ICS 700   | ICS 200   | ICS 800   | ICS 300 | ICS 400 |
|--------------------------------------|-------------------|-----------|-----------|-----------|-----------|---------|---------|
| MANAGER, DISTRIBUTION                | JOHN PEARCE       | 1/30/2012 | 2/14/2012 | 1/31/2012 | 3/13/2012 | N/A     | N/A     |
| SUPERINTENDENT, DIST. CONSTRUCTION   | JOSEPH HAWKINSON  | 5/4/2012  | 5/4/2012  | 5/4/2012  | 5/4/2012  | N/A     | N/A     |
| SUPERINTENDENT, DIST. OPER. & MAIN.  | BURHAN AWAD       | 5/5/2012  | 5/8/2012  | 5/31/2012 | 6/1/2012  | N/A     | N/A     |
| SUPERINTENDENT, DIST. PRESSURE CONT. | MATTHEW MARINZOLI | 6/5/2012  | 6/5/2012  | N/A       | N/A       | N/A     | N/A     |
| GENERAL SUPERVISOR, DIST. TRAINING   | JOSEPH DURANTE    | 6/7/2012  | 6/22/2012 | N/A       | N/A       | N/A     | N/A     |
| SUPERVISOR, DISTRIBUTION             | WILLIAM DOAR      | 5/3/2012  | 5/3/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | WILLIAM MURPHY    | 5/8/2012  | 5/8/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | THOMAS BROWN      | 5/2/2012  | 5/4/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | JOHN KELLY        | 5/2/2012  | 5/2/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | ROBERT HOWELL     | 5/9/2012  | 5/9/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | ALLAN DONALDSON   | 5/3/2012  | 5/3/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | WILLIAM PALOMBI   | 6/8/2012  | 6/8/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | CARLOS ROJAS      | 5/4/2012  | 5/4/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | ANTHONY HOLMES    | 5/2/2012  | 5/24/2012 | N/A       | N/A       | N/A     | N/A     |
|                                      | GERALD ECK        | 5/4/2012  | 5/4/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | JOHN RIZZO        | 5/3/2012  | 5/3/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | BRIAN RUDERICK    | 5/18/2012 | 5/18/2012 | N/A       | N/A       | N/A     | N/A     |
|                                      | DARNELL BARNES    | 5/1/2012  | 5/2/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | JOSEPH LEVA       | 5/1/2012  | 5/1/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | KEVIN DIXON       | 4/30/2012 | 4/30/2012 | N/A       | N/A       | N/A     | N/A     |
|                                      | WILLIAM WILCOX    | 4/30/2012 | 4/30/2012 | N/A       | N/A       | N/A     | N/A     |
|                                      | ROBERT CAMPBELL   | 5/3/2012  | 5/3/2012  | N/A       | N/A       | N/A     | N/A     |
| STAFF ENGINEER - DISTRIBUTION        | NATINAEAL TOLLERA | 5/4/2012  | 5/4/2012  | 5/4/2012  | 5/10/2012 | N/A     | N/A     |
|                                      | RYAN BREAM        | 6/7/2012  | 6/7/2012  | N/A       | N/A       | N/A     | N/A     |
|                                      | HOAN THAI         | 10/9/2007 | 10/9/2007 | N/A       | N/A       | N/A     | N/A     |
|                                      | MICHAEL PARZANESE | 5/1/2012  | 5/7/2012  | N/A       | N/A       | N/A     | N/A     |

| TITLE                                   | NAME        |           | ICS 100   | ICS 700   | ICS 200   | ICS 800   | ICS 300   | ICS 400 |
|---|-------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|
| ENGINEER I                              | CHARLES     | LYNCH     | 4/26/2012 | 4/30/2012 | N/A       | N/A       | N/A       | N/A     |
|   | JENNIFER    | BULLOCK   | 5/10/2012 | 5/10/2012 | 5/10/2012 | N/A       | N/A       | N/A     |
|   | SEAN        | FLANAGAN  | 5/9/2012  | 5/9/2012  | N/A       | N/A       | N/A       | N/A     |
| CHIEF DISPATCHER - DISTRIBUTION         | ERIC        | ZEKANIS   | 7/6/2012  | 7/6/2012  | N/A       | N/A       | N/A       | N/A     |
| WORK DISPATCHER - DISTRIBUTION          | RICHARD     | WIRT      | 5/15/2012 | 5/15/2012 | N/A       | N/A       | N/A       | N/A     |
|   | JOSEPH      | KIRBY     | 7/5/2012  | 6/25/2012 | N/A       | N/A       | N/A       | N/A     |
|   | JAMES       | CASSAR    | 5/16/2012 | 5/16/2012 | N/A       | N/A       | N/A       | N/A     |
|   | MICHAEL     | KLINGBEIL | 5/29/2012 | 5/29/2012 | N/A       | N/A       | N/A       | N/A     |
|   | CHRISTOPHER | ARMSTRONG | 5/30/2012 | 5/30/2012 | N/A       | N/A       | N/A       | N/A     |
|   | FERNANDO    | STOKES    | 5/16/2012 | 5/16/2012 | N/A       | N/A       | N/A       | N/A     |
|   | ANTHONY     | PEREIRA   | 5/22/2012 | 5/22/2012 | N/A       | N/A       | N/A       | N/A     |
|   | COREY       | JACKSON   | 5/22/2012 | 5/22/2012 | N/A       | N/A       | N/A       | N/A     |
| Manager, Field Services                 | Raymond     | Welte     | 8/27/2011 | 8/28/2011 | 8/27/2011 | 8/29/2011 | N/A       | N/A     |
| Superintendent, Field Services-RPU      | Timothy     | Sullivan  | 9/17/2007 | 10/9/2007 | 9/21/2007 | 9/21/2007 | N/A       | N/A     |
| Superintendent, Field Services          | Michael     | Barry     | 12/7/2004 | 9/26/2007 | 6/25/2007 | 2/9/2012  | 6/25/2007 | N/A     |
| Superintendent, Field Services-Training | Joseph      | DeLussey  | 10/1/2007 | 10/1/2007 | 10/4/2007 | 10/1/2007 | N/A       | N/A     |
| GENERAL SUPERVISOR, FSD- TRAINING       | Jose        | Delgado   | 5/18/2012 | 5/18/2012 | 5/24/2012 | 5/22/2012 | N/A       | N/A     |
| GENERAL SUPERVISOR, FSD.                | Gregory     | Fuller    | 1/12/2012 | 5/15/2012 | 5/22/2012 | 5/14/2012 | N/A       | N/A     |
| Field Supervisor                        | Daniel      | Andrews   | 6/21/2012 | 6/21/2012 | N/A       | N/A       | N/A       | N/A     |
|   | Bernard     | Breslin   | 4/23/2012 | 4/23/2012 | N/A       | N/A       | N/A       | N/A     |
|   | Patrick     | Donaghy   | 4/10/2012 | 4/10/2012 | N/A       | N/A       | N/A       | N/A     |
|   | Joseph      | Feeney    | 3/28/2012 | 3/28/2012 | N/A       | N/A       | N/A       | N/A     |
|   | Carlos      | Figueroa  | 9/17/2007 | 9/19/2007 | N/A       | N/A       | N/A       | N/A     |
|   | Gerard      | Gaydosh   | 3/23/2012 | 3/23/2012 | N/A       | N/A       | N/A       | N/A     |
|   | Kevin       | Gibbons   | 5/9/2012  | 5/9/2012  | N/A       | N/A       | N/A       | N/A     |
|   | Richard     | Herbert   | 5/22/2012 | 5/22/2012 | N/A       | N/A       | N/A       | N/A     |
|   | Jacob       | Howard    | 6/22/2012 | 6/22/2012 | N/A       | N/A       | N/A       | N/A     |
|   | Timothy     | James     | 3/12/2012 | 3/12/2012 | N/A       | N/A       | N/A       | N/A     |

| TITLE | NAME    |           | ICS 100   | ICS 700        | ICS 200 | ICS 800 | ICS 300 | ICS 400 |
|-------|---------|-----------|-----------|----------------|---------|---------|---------|---------|
|       | Burton  | Jefferson | 3/27/2012 | 3/27/2012      | N/A     | N/A     | N/A     | N/A     |
|       | Mark    | Johnson   | 3/13/2012 | 3/13/2012      | N/A     | N/A     | N/A     | N/A     |
|       | Quentin | Jones     | 3/14/2012 | 3/14/2012      | N/A     | N/A     | N/A     | N/A     |
|       | John    | Keebler   | 3/22/2012 | 3/22/2012      | N/A     | N/A     | N/A     | N/A     |
|       | Thomas  | Kilbride  | 5/18/2012 | 5/18/2012      | N/A     | N/A     | N/A     | N/A     |
|       | Richard | Lipscomb  | 6/8/2012  | 6/8/2012       | N/A     | N/A     | N/A     | N/A     |
|       | Juan    | Marquez   | 5/3/2012  | 5/3/2012       | N/A     | N/A     | N/A     | N/A     |
|       | Vince   | McAndress | 4/16/2012 | ppinnaclepa@ao | N/A     | N/A     | N/A     | N/A     |
|       | Robert  | Moore     | 3/29/2012 | 3/29/2012      | N/A     | N/A     | N/A     | N/A     |
|       | Ronald  | Reese     | 4/24/2012 | 4/24/2012      | N/A     | N/A     | N/A     | N/A     |
|       | Hector  | Rivera    | 3/7/2012  | 3/8/2012       | N/A     | N/A     | N/A     | N/A     |
|       | Juan    | Sanchez   | 3/30/2012 | 3/30/2012      | N/A     | N/A     | N/A     | N/A     |
|       | Jeffery | Shapiro   | 3/15/2012 | 3/15/2012      | N/A     | N/A     | N/A     | N/A     |
|       | Dennis  | Sheehan   | 3/8/2012  | 3/8/2012       | N/A     | N/A     | N/A     | N/A     |
|       | Richard | Smith     | 5/2/2012  | 5/2/2012       | N/A     | N/A     | N/A     | N/A     |
|       | Rodney  | Warfield  | 4/2/2012  | 4/2/2012       | N/A     | N/A     | N/A     | N/A     |

09/07/2012

# Appendix A-7

7. PGW has revised its written procedures by reflecting in a bulletin its existing risk management policy of establishing a PGW liaison to maintain constant communication with the Commission Gas Safety Inspectors on site during a reportable incident investigation.
  - (a) Providing a liaison for on-site regulatory investigators has always been the procedure employed by PGW but had not been memorialized. Bulletin 245 is a pre-existing directive regarding procedures to be adopted for pipeline incident investigations. Upon confirmation of a pipeline incident as defined under Section III of this Bulletin, the Chief of Gas Safety of the Public Utilities Commission (“PUC”) must be notified. The following additional language has been added as Section III.4:
    - (i) “A management employee appointed by the Director of Field Operations and Work Planning or his/her designee will be assigned as a liaison with the PA PUC Gas Safety inspectors. This person will be responsible to stay in constant communication with all PA PUC inspectors charged with the investigation. This person will accompany the PA PUC inspectors on scene and in the office for data requests.”
- Supporting Documentation:
  - (a) Excerpts from Bulletin 245.
- Cross-References: Prayer for Relief at ¶ (i) Settlement, ¶ 23(g).

7(a)





**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**PROCEDURE FOR PIPELINE  
INCIDENT INVESTIGATIONS**

Effective Date: March 28, 2011

Procedure Number #245  
Supersedes N/A

**At the scene:**

1. "Make Safe" procedures following Leak Investigation Procedure #212 and FSD Special Odorometer Check Major Incident (Section 1 page 28 FSD Operations Manual) must be implemented by PGW's first responder (a qualified PGW representative). Equipment, such as gas detection instruments and odorometer must be confirmed for calibration. Odorometer samples are required.
2. Whenever present, the Philadelphia Fire Marshall (FM) or Chief is in command of the scene. The highest ranking Field Operations management employee or management employee appointed by the Director of Field Operations and Work Planning or higher will be tasked as a liaison between the FM and PGW.
3. Immediately after an incident is made safe, an investigative team, made up of personnel from various departments approved by the Director of Field Operations and Work Planning or higher, will be formed to conduct the investigation on behalf of PGW. The team can include personnel from Field Operations (Distribution, FSD), Risk Management (RMD), Corporate Communications and the Legal Departments.
4. A management employee appointed by the Director of Field Operations and Work Planning or his/her designee will be assigned as a liaison with the PaPUC Gas Safety inspectors. This person will be responsible to stay in constant communication with all PaPUC Inspectors charged with the investigation. This person will accompany the PaPUC Inspectors on scene and in the office for data requests.
5. After conditions are made safe, no pipe or material is to be cleaned or cut and removed until the FM has been notified and has given permission.
6. All media requests for information will be referred to Corporate Communications.
7. The investigative team leader will determine resource needs at the scene during the entire investigation. Resources and equipment for the investigation will be identified and assembled at a designated location at the job site.
8. The investigation should include accurate written and pictorial observations of the interior and exterior of all buildings involved, ground conditions surrounding the failure area and any unusual conditions such as incorrect appliance installations, explosive chemicals, leaking propane bottles, etc.

**Note:** See Data Collection below:

# Appendix A-8

8. PGW has revised its existing procedures to expedite the dispatch of qualified pressure force personnel when an incident involves or is suspected of involving a high pressure (10-35 psig) main.

(a) Additional language was added to Bulletin 63:

(i) The Dispatcher shall then **review** the Detail Main Map for the location of the order. In the event that the leak complaint is located in the block or **involves the 10-35 psig** or higher main or service the Distribution Department Dispatcher shall: [ . . . ]

(ii) PGW revised Distribution Department Bulletin #63 by adding additional language. Under the section titled “Out of Hours” in DDB#63, the following language was added: “Dispatch a Distribution crew, the Pressure Force Detail crew, the Night Supervisor if he.....” plus additional language was added in the same sections which states: ”informing the First Responders that this leak complaint is along the route of a 10-35 psig or higher main.” And finally additional language was added in the same sections which states: “Request all First Responders to notify Dispatching for the potential need of a Pressure Operation as soon as possible.”

(b) PGW also now tracks the results of this additional resource being dispatched.

(c) Additional language has also been added to the language of Bulletin 212 and 227:

“If you suspect that the source of the leak involves any portion of PGW’s system that would require a Pressure Operation, notify Dispatching immediately.” [Section III.A].

“If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter. [Section III.B.3].

Bulletin 227 has been modified by the addition of the following:

“In an out-of-hours situation it is most important to get personnel MOVING to appropriate locations since many employees must report from home in order to accomplish the Pressure Operation quickly and safely.

• Supporting Documentation: .

(a) Excerpts from Bulletin 63.

(b) Pressure Force Reserve Crew – Out of Hours Log.

(c-1) Excerpts from Bulletin 212.

(c-2) Excerpts from Bulletin 227.

• Cross-References: Prayer for Relief at ¶¶ (j), (q);  
Settlement, ¶ 23(h).

8(a)



FIELD OPERATIONS

DISTRIBUTION DEPARTMENT

**NOTIFICATION PROCEDURE OF  
A POTENTIAL EMERGENCY  
INVOLVING A PRESSURE  
OPERATION**

Bulletin Number #63

Effective Date: March 28, 2011

Supersedes Distribution Department  
Bulletin #63 - Dated February 23, 2007

**I. Purpose**

To ensure early, detailed and accurate notification of a potential emergency that would involve a pressure operation to the Pressure Force and Gas Control supervisory personnel.

**II. Definition**

**Pressure Operation** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.

**Prospect Emergency** – A Customer Service Representative generates an emergency order when a customer calls with a potential gas leak and one of the following conditions are met:

- Customer reports a Strong odor of Gas
- Gas leaks from Schools, Hotels, Hospitals or any other building where people congregate
- Gas leaks reported from Municipal Radio, Fire Department or Police Department
- Reports of an Explosion
- Calls from Contractors, Plumbers, Workmen, etc. indicating they have broken, ruptured or damaged a gas line while digging in the street, sidewalk or yard.
- A second call for a gas leak prior to PGW arriving on location.

**III. Procedure**

Upon receipt of a Prospect Emergency, the Distribution Department Dispatcher shall dispatch the appropriate manpower and equipment to the order location. In the event that the leak complaint is located in the block or involves the **10-35 psig or higher main or service** the Distribution Department Dispatcher shall:

During Normal Business Hours

Dispatch a crew, supervisor and emergency grease unit to the location, informing the PGW First Responders that this leak complaint is along the route of a 10-35 psig or higher main. Notify the Pressure Force Supervisor, Superintendent of Maintenance, Distribution Department Manager and the Gas Control Dispatcher on duty of a potential leak that could require a Pressure Operation. Request information from the PGW First Responders on scene and determine which main is affected as soon as possible.



FIELD OPERATIONS

DISTRIBUTION DEPARTMENT

**NOTIFICATION PROCEDURE OF  
A POTENTIAL EMERGENCY  
INVOLVING A PRESSURE  
OPERATION**

Bulletin Number #63

Effective Date: March 28, 2011

Supersedes Distribution Department  
Bulletin #63 - Dated February 23, 2007

Prepare detail main maps and service information for the location and have copies delivered to personnel at the scene, if necessary. Emergency Incident Report, recording all times and related information. Update information from the field to the Pressure Force Supervisor, Superintendent of Maintenance, Distribution Department Manager and the Gas Control Dispatcher.

Out of Hours

Dispatch a Distribution crew, the Pressure Force Detail crew, the Night Supervisor if he is on duty, (if he is not, dispatch the Detail Supervisor) and the emergency grease unit, informing the First Responders that this leak complaint is along the route of a 10-35 psig or higher main. In all cases, notify the Detail, Reserve and Reserve Staff Supervision, Gas Control Dispatcher on duty and the Pressure Force Supervisor on Reserve. Request and gain information from the first on scene First Responders and determine the affected main as soon as possible. Request all First Responders to notify Dispatching for the potential need of a Pressure Operation as soon as possible. Initiate Emergency Incident Report, recording all times and related information. Update information from the Field to the Detail, Reserve and Reserve Staff Supervision.

Upon field determination that a high pressure leak exists, re-notify the Gas Control Dispatcher and the Pressure Force Supervisor of the approximate location of the leak. After the Pressure Force Supervisor determines any additional manpower needs, assist with the notification of required resources for the Pressure Force personnel. When the Pressure Force crews are called in, the Dispatcher may, when necessary, notify the Philadelphia Police Department (911) and request an escort for each Pressure Force crew from the 8<sup>th</sup> and Berks parking lot to the valve locations.

As soon as possible, the Distribution Dispatcher will confer with the Supervisor on location and it will be determined if there is any additional labor, mobile equipment, tools and/or material that is required at the scene.

**Note: Whenever an order is received out of the normal working hours reporting an explosion or other severe or extreme emergency, the Distribution Dispatcher will immediately dispatch, by telephone, the supervisory employee who lives closest to the job site. Refer to "Dispatching Procedure for Severe or Extreme Emergencies" and "Emergency Notification Procedure" located in Section IV of the Supervisors Handbook.**

Effective Date: March 28, 2011

Bulletin Number #63

Supersedes Distribution Department  
Bulletin #63 - Dated February 23, 2007

**IV. Associated Documentation**

**A. Relevant Code**

1. 49 CFR Part 192 Subpart L – Operations 192.605  
Emergency Plan – Handling Abnormal Operating Conditions

**B. Associated Bulletin**

- Distribution Bulletin #227 - “Out-of-Hours Pressure Operation.”
- Distribution Bulletin #228 - “Pressure Control Operation Outline Procedure.”
- Distribution Bulletin #230 - “Organization for Emergency Operations.”

**C. Attachments**

N/A

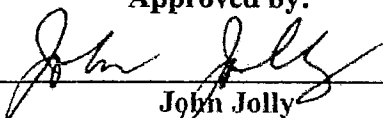
**V. Handbooks**

- A. Distribution Pressure Force Handbook
- B. Field Operations Supervisor’s Handbook
- C. Emergency Plan

**VI. Transaction Listing**

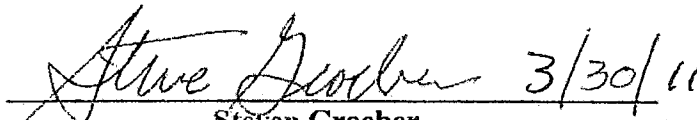
TR-2006-06 – Revised 3/28/11

Approved by:



John Jolly

Manager, Distribution Department



Steven Groeber

Director, Field Operations & Work Planning

8(b)



**PRESSURE FORCE RESERVE CREW - OUT OF HOURS  
- PROSPECT EMERGENCY / HP LEAK NOTIFICATIONS -**

| <b>Date</b> | <b>Time</b> | <b>Location</b>                  | <b>Crew Leader</b> | <b>PF Sup.</b> | <b>Called Off<br/>Y - N?</b> |
|-------------|-------------|----------------------------------|--------------------|----------------|------------------------------|
| 06/22/2011  | 22:30       | 429 Robbins Ave                  | Gavaghan           | Awad           | Y                            |
| 06/22/2011  | 23:30       | 2900 N. 12th St                  | Gavaghan           | Awad           | Y                            |
| 07/04/2011  | 22:10       | 1400 Unity St                    | Gonzalez           | Palombi        | Y                            |
| 07/10/2011  | 15:30       | 901 Levick St                    | Cosgrove           | Awad           | Y                            |
| 07/14/2011  | 16:00       | 169 Levering St                  | Cosgrove           | Awad           | Y                            |
| 07/18/2011  | 23:00       | 2300 Walnut St                   | James              | Awad           | N                            |
| 07/22/2011  | 22:10       | 3300 Delaware - (Fire Dept req.) | Pierson            | Palombi        | Stand By                     |
| 07/24/2011  | 9:00        | Robinson & Vine                  | Pierson            | Palombi        | Y                            |
| 07/27/2011  | 22:05       | 800 E Tioga                      | Pierson            | Palombi        | Y                            |
| 08/07/2011  | 9:30        | 1101 W. Lehigh                   | Cosgrove           | Marinzoli      | Y                            |
| 08/13/2011  | 19:00       | 400 Bristol                      | Gavaghan           | Awad           | Y                            |
| 08/13/2011  | 20:30       | 2600 S. 57th                     | Gavaghan           | Awad           | Y                            |
| 08/16/2011  | 21:19       | 2800 Jackson                     | Gavaghan           | Awad           | Stand By                     |
| 08/21/2011  | 11:57       | 900 E Allegheny                  | Pierson            | Palombi        | Y                            |
| 08/27/2011  | 23:33       | 300 Leverington                  | Cosgrove           | Palombi        | Y                            |
| 08/28/2011  | 20:15       | 6400 Ridge                       | Cosgrove           | Palombi        | N                            |
| 09/03/2011  | 2:25        | 627 N. 16th                      | James              | Awad           | Y                            |
| 09/05/2011  | 10:17       | 4200 Penn St.                    | James              | Awad           | Y                            |
| 09/08/2011  | 17:50       | 1900 N 10th                      | Serrano            | Marinzoli      | Y                            |
| 09/09/2011  | 21:47       | 7801 Roosevelt                   | Serrano            | Marinzoli      | Y                            |
| 09/10/2011  | 21:48       | 1800 E Ontario                   | Serrano            | Marinzoli      | N                            |
| 09/12/2011  | 18:20       | 3025 Castor                      | Serrano            | Marinzoli      | Y                            |





8(c-1)



Effective April 21, 2011

Bulletin Number #212  
Dated September 15, 2008

## I. Purpose

To provide clear direction to PGW employees when they are responding to and investigating an odor complaint. Odor complaints may originate from the police or fire departments, other utilities, contractors, customers or the general public. Odor complaints must be investigated promptly. Any delay in responding to a reported odor complaint must immediately be brought to the attention of the Dispatcher on duty.

If the investigation reveals a gas leak, the leak must be evaluated and action taken in accordance with the guidelines outlined in this procedure. All leak indications must be investigated to identify any potential hazardous conditions. Once a hazardous condition is identified, immediate action must be taken to make conditions safe. **Action must be taken toward protecting people first and then property.**

The employee assigned to the investigation must assume (for any odor complaint investigation) that a hazardous condition exists. Only after an odor complaint investigation is completed shall an operator determine an appropriate classification.

## II. Definitions

- AREA CHECK – The appropriate area to investigate the original reported odor complaint. This is determined by the nature of the notification (phone call) and the investigation itself. **Minimum** coverage should be 50 feet in all directions (approximately three row houses each way) from the odor complaint or any reading.
- BAR HOLE – a 1” diameter or larger hole probed into the ground in a uniform manner with the use of a steel bar. The depth of each bar hole should be along side and near the bottom of the structure (gas main or service line) being checked. All bar holes should be made in a uniform manner.
  - ◇ PURPOSE OF BAR HOLES – used to sample gas/air mixtures underground in an attempt to pinpoint the largest concentration of natural gas and the source of the leak.
- BUILDING LINE – the extended house line from the side of a building.
- CGI – Can’t Get In
- CURB LINE – The outside edge of the curb, where the curb meets the street. A directional identification must be noted on each curb line measurement. (Example: EWC = east of the west curb line)
- ENN – Entry Not Necessary; see section “III.B.1. What buildings must be checked?” (The use of the ENN rules does not apply to FSD technicians that are not qualified. The only FSD technicians qualified are “A” men and above.)



Effective April 21, 2011

Bulletin Number #212  
Dated September 15, 2008

- FFW – Generally means “Front Foundation Wall”. However, for a leak investigation the term also means to check “ALL APPROPRIATE BASEMENT WALLS”, all walls where a gas main (outside) may run adjacent to the building (not only the front wall).
- FIRST RESPONDER – term used to describe the first trained responder to arrive on scene of an emergency, accident, natural or human-made disaster, gas leak, fire or similar event. Such people may be PGW personnel, firefighters, police, other law enforcement or emergency medical services, or lay rescuers to deal with the situation and protect life and property.
- GABLE END – where the end (side) wall of a building does not connect to another building. On all reports that a gable end is indicated the direction of the gable end must also be recorded, example: a single dwelling on a north-south street shall have the address recorded and gabled end to the north and south. See example drawings.
- GDI – Gas Detection Instrument
- GENERAL ATMOSPHERE - is an open area within a room on any floor of a property. The general atmosphere is not behind a wall, in the corners of a room, between or against walls, floors, or in the area of the ceiling joist, or close to the FFW.
- INCIDENT COMMAND CENTER – a designated location used to coordinate activities and share information.
  - ◊ INCIDENT COMMAND LOCATION - ON SCENE – The location of the highest ranking PGW employee responsible for all activities at the job site.
- LOWER EXPLOSIVE LIMIT (LEL) – Lowest concentration (percentage) of gas in air needed for the gas to ignite when given an ignition source. Concentrations lower than LEL are “too lean” to burn. 5% gas in air is the LEL of PGW gas.
- “M PACT” BAR HOLE – a ¼” to 1” diameter hole probed into the ground in a uniform manner with the use of an insulated “M Pact O” tool. The depth of each bar hole should be approximately 14” deep but not to exceed 18”.
  - ◊ PURPOSE OF “M PACT” BAR HOLE – used to sample gas/air mixtures underground to determine if a gas leak exists on a natural gas facility and to determine the gas migration pattern if a leak exists.
- MIGRATION – the area of natural gas movement from and around the source of the leak.
- MIGRATION LIMITS – the outer boundaries of natural gas movement in all directions. A circle of “zero readings” around a migration pattern is necessary to establish the migration limit.



Effective April 21, 2011

Bulletin Number #212  
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- **ODOR COMPLAINT** – a report of a possible inside or outside gas odor, leak, explosion or other hazardous conditions which may involve gas pipelines, or other gas facilities, customer’s house piping, or appliances. All odors must be confirmed using a GDI.
- **OPERATOR** – a PGW Operations’ representative – technician, foreman, supervisor, etc.
- **ONE HOUSE CHECK**— a term used during a declared foreign odor allowing the technician or foreman to make a limited check for safety. Job must be within the area affected from the foreign odor. Permission must be obtained through the dispatcher or supervisor. See “Foreign odor” in “III.A. General Requirements” below.
- **OUTSIDE SOURCE** – (who calls in an odor) a PGW employee, other utility, police or fire personnel, contractors, customers and the general public.
- **PPM GDI GAS READINGS** – samples of the atmosphere taken with a parts per million (PPM) gas detection instrument. Any **INSIDE** reading qualifies as a reading and requires a physical action. An **OUTSIDE** reading of 2% LEL or higher is required in order to qualify as a recordable reading.
- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.
- **READING** – a repeatable deviation on a GDI or equivalent expressed in % LEL & % Gas scales.
- **SAFETY PERIMETER** – The boundary of an area outside of the influence of the leaking gas. Also known as a Collapse Zone by the Philadelphia Fire Department.
- **SUSTAINED READING** – a gas reading found after a bar hole or structure has been opened and is allowed to stabilize or ventilate. **NOTE:** This reading should be recorded on the final report.
- **UNIFORM MANNER** – all bar holes shall be spaced evenly and have the same size and depth.
- **UPPER EXPLOSIVE LIMIT (UEL)** – At concentrations above the UEL the gas has displaced so much air that there is not enough oxygen for the gas to burn. When readings are above the UEL, be aware that the gas concentration will come down though the explosive limit of gas when the source of the gas leak is removed or through ventilation. 15% gas in air is the UEL of PGW gas.
- **VENTILATE** – This term, when used in reference to buildings, structures, manholes and confined spaces, means the introduction of fresh air into the affected structure. Ventilation can be accomplished by opening doors and windows, breaking windows, opening basement grates, and removing manhole covers or lids to prevent or reduce the level of natural gas in the affected structure. This term, when used in reference to gas readings underground, means to draw residual natural gas from below the surface with the use of pneumatic mechanical devices.



### III. Procedure

#### A. General Requirements

- **ACTION MUST ALWAYS BE TAKEN TOWARD PROTECTING PEOPLE FIRST AND THEN PROPERTY.**
- **All requirements listed throughout this procedure represent minimum requirements and are not meant to limit the Operator in making decisions where experience, safety and common sense indicates otherwise.**
- **All employees responsible for conducting leak investigations must be qualified per PGW Operator Qualification Plan.**
- Employees must wear all required personal protection equipment per PGW Policies.
- Odor complaints are to be dispatched promptly regardless of their source.
- Any delay in arrival to the location of the complaint must be reported to the Dispatcher immediately.
- Conduct all odor complaint investigations as if a hazard exists until it is determined otherwise. Determine the extent of the hazard (leak) by making appropriate GDI checks, observations and tests.
- Review all information given on the order.
- If possible, enter all buildings through the main entrance.
- If available, interview the caller for relevant information.
- If during the initial leak investigation it is determined that a hazard exists, call the Dispatcher immediately providing details of the existing hazard.
- **Mobile phones must be turned off before entering properties for the leak investigation.** All communications must be conducted outside in a natural gas free atmosphere.
- **If you suspect that the source of the leak involves any portion of PGW's system that would require a Pressure Operation, notify Dispatching immediately.**
- Foreign Odors - on a wide spread foreign odor incident, when instructed by a Dispatcher or Supervisor, the leak investigation can be limited to one premise and a check of structures (boxes) directly outside that premise ("one house check", see definitions). If gas readings are discovered follow the complete leak investigation procedure.
- Leak indications may come from sources other than natural gas (marsh gas, gasoline spills, etc.).
- If there are other "First Responders" agencies (PFD, PPD) on location, discuss with them as to their actions already completed and any findings of their investigation.
- Immediately establish a communications chain to share pertinent information with all PGW First Responders and any other First Responder agencies.





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1. Forced Entry

Upon the initial visit, if any house that requires a leak investigation per this procedure is apparently locked and secure and it is not possible to gain entrance, make an exterior examination. Examine at the basement windows, mailbox or any other place where an indication of the inside atmosphere may be sampled. If an odor or reading of gas is detected coming from a premise either from outside that premise or from an adjoining property, make forcible entry through a window or a door.

- If a forcible entry is required, inform the Dispatcher. The Dispatchers will call 911. Give the Dispatcher the address of every house(s) requiring forced entry.
- Do as little damage as possible.
- During normal business hours notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6532 (voice mail).
- Sign and leave Form #6489 to inform the customer that it was necessary for PGW to enter the premise.
- Complete a detailed Accident Report (Form 119) and submit it at the end of your shift.

2. Chain of Command – Incident Command Center

When **both Distribution and Field Services *union-covered personnel*** are on location, the **Distribution Foreman is in charge and responsible** for following all procedures, directing make safe procedures and then continuing the investigation.

A Field Service Department Supervisor or Distribution Department Supervisor has the authority to supersede the Distribution Foreman.

When **both Distribution and Field Services *supervision*** are on location of a leak investigation, the highest ranking **Distribution Supervisor is in charge**.

All actions will be communicated and coordinated through the person in charge. If there is a change of the person in charge; relay all pertinent information to the person taking control on the job site, then announce the change to key personnel.

As additional PGW personnel arrive they should report to the person in charge who will provide instructions and a summary of current conditions and actions taken as well as any actions underway.

PGW Incident Command Center will be where the person in charge is located. If there are other agencies on location (PFD, PPD) that have the ultimate responsibility for the event (i.e., PFD at fire or explosion), the PGW person in charge will coordinate all actions and findings through that agency's Incident Command Center. Once PGW reports to the location of the



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controlling agency's command center, PGW must maintain continuous representation at that location.

3. Dispatching Resources Available:

- Distribution Crew(s)
- FSD Technician(s)
- Emergency Grease Equipment
- Cut-Cap Trailer
- Excavation Equipment including Vacuum Excavation truck
- FSD and/or Distribution Supervision
- Pressure Force Supervision and Crews
- Police or Fire Departments through 911 to assist (evacuations, safety perimeter, traffic control, public safety, etc)
- PECO
- PWD
- Notification or dispatching of Supervisory Chain of Command.

4. Odor

If during the course of an investigation a gas odor is detected, the source must be confirmed as soon as possible using a GDI instrument. The course of action may include further migration checks and eventual classifying of the leak. If required, request assistance immediately through the Dispatcher if the odor appears to be coming from inside a building.

B. Inside Leak Investigation (on any odor complaint, inside or outside)

1. What Buildings Must Be Checked (See attached illustrations of this procedure)

- Check the premise closest to the odor complaint. If the odor complaint was reported by a passerby, concentrate on the premise closest to the reported odor.
- If a **reading or odor is found inside** the first premise and the source is suspected from any Distribution facility (mains and services) or another building, the adjoining building(s) must be checked. (Note: in the case of a twin house (gable end) property, the unattached house must be attempted to be checked but can be considered for Entry Not Necessary (see section B.4., and see illustrations).
- Continue to investigate adjoining buildings until no gas reading is found.
- If **no reading or odor is found inside** the initial premise, attempt to enter and check properties on either side. These properties may be considered for "Entry Not Necessary" (See Section B.4.).



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A building must be checked when a reading is found within 5 feet of the building, including the side of the building (Distribution also required).

- A building must be checked when a reading is found inside the curb line in front of the premise and a bar hole cannot be made within 5 feet.
- A building must be checked when a vent box reading is found in front of the premise, (Distribution also required).
- A building must be checked when there is a reading over the service and the service is steel installed in 1975 or before (older).
- Considerations should be made to check additional properties when there is wall to wall paving or frost conditions.

2. Performing The Inside Leak Investigation

- Turn on and zero the GDI using fresh air before entering any premises. Follow the operating instructions for the GDI found in your handbook.
- Normally, the first premise to visit should be the house of the odor complaint. However, the first premise requiring entry may be dictated by the intensity and location of the hazard (leak).
- Knock on door – DO NOT USE THE DOOR BELL.
- Identify yourself. Verify the customer's name and address (if it is the order address).
- **The operator should not switch lights on or off. The customer must also be warned not to switch any electric devices on or off, or to smoke during the investigation.**
- Question the customer regarding the odor complaint regarding the location and intensity of the odor
- Go to the area of where the leak or odor is reported to exist and determine the source of the odor. Take additional GDI readings of the atmosphere as you proceed to this area.
- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- **See Evacuation Procedure described in Section III.B.3 (below).**
- If your investigation confirms a gas leak inside, eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. **Ventilate** the premise. Attempt to shut off gas from the curb box to the property.



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- If there is an LEL reading in the general atmosphere of a property, request Dispatching to notify PECO for assistance.
- If the leak is found inside on exposed piping, control the escaping gas- make conditions safe.
- Continue an inside investigation with the use of a GDI. Examine all appliances and piping, fuel line, meter and meter connections. Also, check the location of water service, gas service and sewer pipe where they enter the building. Check the foundation walls that are adjacent to streets.
- A foundation wall check shall include GDI sampling at any utility entrance through the wall such as gas, water, sewer, cable, drains, electric service and additionally any major cracks or holes that could provide an access for leaking gas. Check all foundation walls that are adjacent to streets.
- Continue to check affected and adjoining properties. Monitor and report any change in conditions to Dispatching.
- All leaks inside must be found and resolved before the employee investigating leaves the job site or is relieved from the job site by someone who will continue the investigation.
- Methods that can be used for an investigation to verify the source of an inside gas odor are:
  - ◊ odor check (smell)
  - ◊ sound check (listening for hissing or blowing)
  - ◊ GDI
  - ◊ soapy solution
- A meter and piping test *is required* to verify the source of an inside gas odor. (for exceptions such as master meters or commercial properties, call a Supervisor for assistance).
- Any inside investigation that has a reading coming into the building from an outside source requires a Distribution Crew. FSD will notify the Dispatcher to call for Distribution. Communication by cellular phone with the Dispatcher shall be made from outside the affected property. Report the initial readings found, as well as any subsequent changes to the initial leak investigation findings. As soon as possible, transmit an electronic message via Mobile Mail confirming the voice contact and update the AIMS Leak Survey screen.
- When a leak is discovered on an appliance covered by PLP, the technician should complete the repair or refer to a qualified PGW Technician.
- (Distribution) In all cases where Distribution responds to an odor complaint and FSD is on location, it is the Foreman's responsibility to examine the FFW(s) and take atmospheric GDI readings. Distribution Foremen or FSD techs are not to enter evacuate buildings to examine the FFW(s) or take atmospheric readings until action has been taken to reduce gas levels below **LEL level**.



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- After checking all inside premises, monitor inside readings and continue an outside leak investigation.
- If a leak is discovered inside the premise, follow the guidelines listed in the table below:

| <b>Leak discovered on:</b>   | <b>Repair procedure:</b>  |
|--|---|
| If a leak is discovered on <u>PGW piping</u> (from the head of service up to the meter outlet) | Shut off gas supply by closing the curb valve and/or head of service valve (if available) or install the appropriate size service stopper. Make repair and restore gas service to the customer.   |
| If a leak is discovered on <u>customer piping</u> (downstream of meter connections)            | <p>A repair will be permitted on 1 ¼” and smaller thread leaks only. The repair will be completed by using the established method of installing Perma-Gum on the leaking threads.</p> <p>After the leak has been repaired, the Technician will recheck the repaired joint with a GDI to verify there is no leakage.</p> <p>If there are no readings on the GDI, the Technician will issue a Class B hazard tag referring the customer to seek assistance from the appropriate Contractor to make the permanent repair.</p> <p>The Technician will list all information on MDT and refer order to the FSD Training Section.</p> <p>In cases involving multiple units, industrial or commercial applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.</p> |
| Leaks involving any type of shut off valve, union, cracked or defective fitting.               | <p>Leaks at shutoff valves and fittings can be permanently repaired by greasing in the valve or tightening the fitting.</p> <p>In cases where these actions do not repair the leak, the defective part of the fuel line must be disconnected and capped if possible. If the fuel line can not be disconnected, the gas must be shut off* with locking device and plug swivel at the meter.</p> <p>A Class A hazard tag must be issued referring customer to the appropriate Contractor to make the permanent repair.</p> <p>The Technician will also complete a temporary shut off work order. In cases involving multiple units, industrial or commercial applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.</p>                                    |
| If a leak is discovered and isolated to an appliance   | <p>Shut gas off to the appliance.</p> <p>Issue the appropriate hazard tag.</p>  |
| General Notes concerning   | If a residential premise has been shut off and relies on gas heat, also provide a “CO and Emergency assistance information card”  |



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|                                 |  |
|---------------------------------|--|
| <p>Inside Leaks and Repairs</p> | <p>to provide the customer information of City agencies which can help.</p> <p>FSD Training will track and maintain records of all repairs that were completed. All temporary repairs will have follow-up by a positive, documented phone call to the customer. Call will be documented on the BCCS customer contact screen and separate FSD list.</p> <p><b>Note:</b> a temporary repair discovered <i>on any subsequent visit</i> is considered a Class A hazard and requires a temporary shut off as described above.</p> <p>All information pertaining to a piping or appliance hazardous condition must be recorded on the Hazard Screen of AIMS.</p> |
|---------------------------------|--|

III.B.3 Evacuation Procedure (minimum requirements)

- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- Do not re-enter the property until the source of leak has been located, made safe or repaired and the LEL levels are reduced to a safe level.
- Eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. Attempt to shut off gas from the curb box to the property.
- Request Dispatching to notify PECO for assistance
- Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Restrict access into the Safety Perimeter to PGW employees required to perform their duties.
- Call for assistance from the Fire Department (call 911) through the Dispatcher. The PFD and PPD will assist you with evacuating and maintaining the Safety Perimeter.
- Evacuate the adjoining properties and move the occupants outside the safety perimeter. Consider the worst case scenario.
- **If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.**
- Continue to report any more evacuation(s) and call for more assistance.



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3. Procedure for Entry Not Necessary (ENN) Investigation (see Section B.1. for buildings eligible for this procedure). This procedure will only be followed by qualified FSD technicians and Distribution Foremen. Qualified FSD technicians are A men and above.

**Check mail slots, windows, basement entry doors, anything to obtain a sample of the inside atmosphere.**

- Obtain a sample of the inside atmosphere by checking mail slots, windows, basement entry doors, etc. with your GDI.
- **If a potential hazard exists, make a forcible entry.** Follow procedures listed above.
- For all CGIs which appear non-hazardous, check the main and service information – age, material and location for the Distribution facilities in front of the property.
- Make “M-Pact” bar holes in front of the CGI building as close to the building as possible.
- Make “M-Pact” bar holes over the gas service of the CGI building.
- Check all outside readings for migration. If there is no migration within 5 feet of the building, the building can be considered for ENN.
- A building must be checked when there is a reading over the service and the service is steel installed in 1975 or before (older).
- If during the leak investigation it is determined that other buildings on the block have underground service conduits (electric or Bell), do not make the premise ENN.
- If conditions are questionable, use the Locksmith Procedure and gain entry.

4. Checklist To Allow ENN

- √ Building does not meet the requirements in section titled “What Buildings Must Be Checked” (III-B-1)
- √ No readings or anticipated migration to within 5 feet of the building.
- √ No readings over a pre-1975, steel service (to the building in question).
- √ No readings in vent box.
- √ No evidence of underground conduit services (electric or bell).

5. Locksmith Procedure

- a. A request for a Locksmith to gain entrance to a building should be made under the following conditions:
  - ❖ Immediate forced entry is not necessary.
  - ❖ Property is not eligible for ENN.
  - ❖ You have exhausted all other options to gain entrance such as checking with neighbors, phone call to customer or self entry.



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- ❖ Two PGW employees are required when entering an unoccupied property.

b. Field Operations Personnel Responsibilities

- ❖ Call Dispatcher or Clerk for Locksmith.
- ❖ If a police officer arrives on scene, report his badge number to the Dispatcher.
- ❖ Report back to Dispatcher or Clerk with the Locksmith's arrival time and a final report.
- ❖ Fill out a 119 property damage report.
- ❖ If lock is changed and keys cannot be given to customer, notify Dispatcher or Clerk of location of keys.
- ❖ During normal business hours, notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6014 (voice mail).
- ❖ Sign and leave Form #6489 (door hanger) to inform the customer that it was necessary for PGW to enter the premise.
- ❖ Assure premise is secured.
- ❖ Sign voucher for Locksmith.

c. Dispatch or Clerk Responsibilities

- ❖ Dispatcher or Clerk contacts Locksmith and notifies police (911).
- ❖ Dispatcher or Clerk will log the Locksmith's arrival time and final report of all houses entered.
- ❖ If a police officer arrives on scene, the Dispatcher or clerk will log the police officer's badge number in the Locksmith Log.

C. Outside Leak Investigation

1. Outside Leak Investigation Procedure

- **Check buildings first, following all previous instructions for "Inside Leak Investigation" (Section III - B.).**
- Exchange information with PGW employee(s) or customers already on location.
- (Distribution and FSD relief) Verify all readings reported.
- Make an area check of all outside underground structures (CB, WB, VB, MH, etc.) in the vicinity of known readings or near the odor complaint. Determine the proper size of the area check. This can be expanded based on the investigation (Minimum 50' in all directions from the odor complaint or a confirmed reading).
- Bar hole as necessary to assure an effective investigation.
- (FSD) Check that there are no readings requiring an immediate Distribution Investigation, see list below (Criteria for a Distribution Crew to be called).





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- Investigate all readings for migration. Confirm that migration does not approach within 5 feet of any building.
- (FSD) When snow or frost restricts investigation, call for Distribution. Continue to check for migration by making inside property checks while waiting for Distribution.
- All duct line or sewer readings must be investigated in all directions to confirm migration pattern.
- Follow Odor Complaint Investigation Reference Guide



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**ODOR COMPLAINT INVESTIGATION REFERENCE GUIDE**

|    | Nature of complaint or readings found  |   |   |    |   |   |   |   |   |   |
|----|--|---|---|----|---|---|---|---|---|---|
| 1  | Conduit Type Manhole with reading - Footway and Roadway Location ex. Sewers, electric ducts, communication ducts etc.  | A | B | C  | D | E |   |   |   |   |
| 2  | Foreign Odor - Odor from underground source and coming through foundation walls, drain, vent, stop box, manhole, etc. or odor from an above ground source such as gasoline, cleaning fluid, paint, chemicals, etc. <b>*If the foreign odor is a wide spread event the dispatcher may instruct a technician to replace "C" with "K" if the job is inside the affected area.</b> | A | B | *C | D |   | F |   |   | * |
| 3  | Gas reading reported by FSD and the DD employee can not confirm the reading and feels a leak does not exist.   | A | B | C  | D |   |   | G |   |   |
| 4  | An odor complaint received directly from a customer on the street  | A | B | C  | D |   |   |   |   | J |
| 5  | Gas leak inside building coming from outside sources   | A | B | C  | D |   |   |   |   |   |
| 6  | Non-Conduit Manhole - Footway Location - Examples: Water mains, survey boxes etc.  | A | B | C  | D |   |   |   |   |   |
| 7  | Leak in Street - Gas blowing into air from underground source  | A | B | C  | D |   |   |   |   |   |
| 8  | Investigating reports of gas odors in a subway or tunnel   |   |   | C  | D |   |   | G | H |   |
| 9  | Electrical Burnouts  |   |   | C  | D |   | F | G | H |   |
| 10 | No odor outside - "No Odor"  |   |   | C  | D |   |   |   |   |   |
| 11 | Gas leak inside a building downstream of the head of service on exposed piping   | A | B |    | D |   |   |   |   | K |

**REFERENCE CODE MINIMUM REQUIREMENTS GUIDE**

|          |   |
|----------|---|
| <b>A</b> | Follow Inside Leak Investigation at building closest to the odor complaint  |
| <b>B</b> | Follow Inside Leak Investigation at adjoining buildings if necessary or determine if the property can be considered for "ENN" Entry Not Necessary   |
| <b>C</b> | Follow Outside Leak Investigation Instructions  |
| <b>D</b> | Use a calibrated Gas Detection Instrument at every point that you investigate for a possible gas leak   |
| <b>E</b> | All conduit and sewer type manhole investigations shall extend to cover and to find clear the most closely connected manhole in all directions along the route of the manhole in which the reading exist. |
| <b>F</b> | Dispatcher/supervisor will determine if notification of Air Management is required  |
| <b>G</b> | A Field Operations Supervisor or above must review the investigation prior to determining a "Safe to Hold" status   |
| <b>H</b> | A Field Operations Supervisor or above must be present during the Investigation   |
| <b>J</b> | Notify the Dispatcher on duty as soon as reported by customer   |
| <b>K</b> | Outside leak investigation limited to GDI check of structures (boxes) in front of the building. "(one house check)"   |

2. Checklist For A Distribution Crew To Be Called – Work Immediately



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All FSD technicians below B man (in rank) cannot make outside leaks safe to hold. They must call Distribution for any leaks found that require Distribution Crew attendance. This check list for not calling Distribution is only for FSD A men and above.

- a. (FSD) Readings and or conditions as noted below require an immediate notification for a Distribution response. FSD Dispatchers must be informed as soon as an initial outside reading is discovered in these structures. Maintain regular communications with the FSD Dispatcher on the status of the investigation. Make final report to FSD Dispatchers when released by Distribution or conditions will be left safe-to-hold.
    - √ A leak that represents an existing hazard to persons or property, and requires immediate action
    - √ Any reading in sewer manholes, storm inlets, vent boxes, light standards
    - √ Any reading inside a building coming from an outside source
    - √ Any reading within 5 feet of a building
    - √ Any reading in subways
    - √ Any reading in PGW manholes
    - √ Reading of 76% LEL or greater in a conduit manhole
    - √ Any reading in two (2) or more conduit manholes of the same type
    - √ Indications of a broken main or third party damage
    - √ Electrical Burnouts
    - √ Readings on a block which contains a 150 PSI (or greater) main (Dispatcher to review)
  - b. If readings do not meet the criteria listed above, the leak may be classified as safe to hold (see below - Checklist for Safe-To-Hold). Once an outside reading is discovered, all reports should be made to DISTRIBUTION DISPATCHERS.
3. Checklist For Safe To Hold
- √ There are no readings that require Distribution visit (see previous list).
  - √ Area check does not indicate migration toward the building. All readings found outside were checked for migration – no migration was found within 5 feet of any buildings.
  - √ Migration is not anticipated to move toward a building structure.
  - √ There is no leak history associated with this leak causing repeated calls. Verification to be obtained from Dispatchers.
  - √ Patches or trenches indicating recent construction work should be checked carefully – no migration was found within 5 ft of any buildings.
  - √ No snow or frost to restrict investigation. (FSD) When snow or frost restricts investigation, call for Distribution. Continue to check for migration by making inside property checks while waiting for Distribution.
  - √ Street block does not have a 150 PSI (or greater) main. (Reading must be pinpointed).



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**D. Final Reports**

- Make oral report to Distribution and FSD Dispatchers via phone.
- Record your findings including reading found in the AIMS database.

**IV. Associated Documentation**

**A. Relevant Code**

1. 49 CFR Part 192.605 Procedural Manual for Operations, Maintenance, and Emergencies
2. 49 CFR Part 192.615 Written Emergency Procedures

**B. Related Documents**

1. Distribution Department Bulletin #63 - Notification Procedure of a Potential Emergency Involving a Pressure Operation
2. Distribution Department Bulletin #212 - Leak Response and Investigation Procedure
3. Distribution Department Bulletin #227 - Initiation of a Pressure Operation
4. Distribution Department Bulletin #228 - Pressure Control Operation Outline Procedure.
5. Distribution Department Bulletin #230 - Organization for Emergency Operations.

**C. Attachments**

Sample Leak Investigation Illustrations

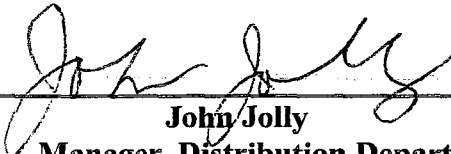
**V. Handbooks**

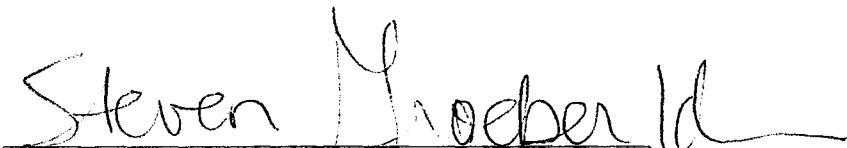
FSD Operations Manual (Section I)  
Distribution Foreman's Handbook (Section I)

**VI. Transaction Listing**

TR 2007-#03

**Approved By:**

  
\_\_\_\_\_  
**John Jolly**  
Manager, Distribution Department

  
\_\_\_\_\_  
**Steven Groeber**  
Director, Field Operations & Work Planning

8(c-2)



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**INITIATION OF A  
PRESSURE OPERATION**

Effective Date: March 23, 2011

Bulletin Number: #227  
Supersedes: DD Bulletin dated February  
15, 2009

**To: All Field Operations Supervision**

**I. Purpose**

The following describes the proper discussions, approvals and notifications to initiate a Pressure Operation of the distribution system "out of hours". During normal working hours most discussions, approvals and notifications will be made in a similar fashion. All Pressure Operations must be approved by one of the following:

- o Manager of Field Service Department
- o Manager of Distribution
- o Director of Field Operations and Work Planning
- o Vice President of Field Operations

**II. Definition**

- **FIRST RESPONDER** – term used to describe the first trained responder to arrive on scene of an emergency, accident, natural or human-made disaster, gas leak, fire or similar event. Such people may be PGW personnel, firefighters, police, other law enforcement or emergency medical services, or lay rescuers to deal with the situation and protect life and property.
- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.

**III. Procedure**

The Field Operations Supervisor on location will assess the need for a Pressure Operation in pressure of the distribution system based on maintaining the safety or minimizing the hazard for people and property. In an out of hours situation it is most important to get personnel **MOVING** to appropriate locations since many employees must report from home in order to accomplish the Pressure Operation quickly and safely.

**As soon as the supervisor on location can identify the need or potential need for a Pressure Operation**

**The Supervisor on location shall,**

1. Notify the Dispatcher of the approximate location of the leak.
2. Notify the Dispatcher of any known details of the job. Request the Dispatcher to notify the Pressure Force crew (on detail) to report to location.
3. Notify and confirm the need for the Pressure Operation with the Staff on Reserve



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**INITIATION OF A  
PRESSURE OPERATION**

Effective Date: March 23, 2011

Bulletin Number: #227  
Supersedes: DD Bulletin dated February  
15, 2009

4. Request assistance from PECO and PFD if necessary

**The Dispatcher shall:**

1. Notify the Pressure Force Supervisor on Call
2. Once the need for Pressure Operation is determined, if the Pressure Force Supervisor determines any additional manpower needs, the dispatcher will assist with the notification of required resources for Pressure Force personnel
3. Notify the Staff on Reserve
4. Notify the Manager of the Distribution Department
5. Notify any additional required personnel, material and equipment needed to accomplish the work.

**The Staff on Reserve shall,**

1. Notify the Pressure Force Supervisor on call of the requirements and for him to make proper arrangement for the Pressure Operation.
2. Discuss and confirm the need for the Pressure Operation with the Managers of Distribution and/or the Manager of Field Service Department. Either one can approve the Pressure Operation. Try to have a conference call with both but continue with notifications even if one is unavailable.
3. Notify the Director of Field Operations and Work Planning and Vice President of Field Operations.
4. Assess all the needs in the field relating to the job and advise the dispatchers to MOVE personnel, material and equipment as necessary. Consider all outside notifications necessary for the emergency.
5. Report to the job location.

**The Pressure Force Supervisor shall,**

1. Assess the parameters of the Pressure Operation using high pressure Distribution System Valve and Regulator maps.
2. Determine the number of Pressure Force crews, FSD Technicians and Supervisors needed.
3. Confirm with the Dispatchers that all required personnel were notified.
4. Dispatch Pressure Force crews to the valve locations as determined using high pressure Distribution System Valve and Regulator maps.
5. When possible, review the operational maps outside the Distribution Dispatching office for any abnormal system conditions that might affect the Pressure Operation. Make sure that all valves involved in the Pressure Operation can be operated. Refer to Distribution Department Bulletin # 281 "Inoperable & Closed Control Valves".

# Appendix A-9



- 9. PGW has verified that it will continue to follow its policy of annually inspecting all main control valves and street regulator stations valves, continuing to identify all non-operable emergency valves and continuing to provide a schedule to make such valves operable.
  - (a) PGW has added Bulletin 281 which contains a summary of main valve inspections, listing inoperable valves in the system and plans for repair, replacement or substitution. Alternative emergency valves are identified for each inoperable valve.
  - (b) Bulletin 281 contains the following:

All main control valves and street regulator station valves in PGW’s 10-35 psi and higher systems are inspected annually.

    - (i) If a valve is found to be inoperable, the following options are considered and one is selected:
      - (1) repair the valve to make it operable;
      - (2) designate another valve or valves to substitute for the inoperable valve;  
or
      - (3) replace the valve.
  - (c) Where replacement is required, PGW develops a replacement plan and a cost estimate for inclusion in our Capital Budget.
- Supporting documentation:
  - (a) Bulletin 281.
  - (b) See Item 9(a) at § V.C, ¶¶ 1, 2 and 3.
  - (c) Examples of Valve Replacement Plan and Cost Estimates.
- Cross-References: Prayer for Relief at ¶ (k);  
Settlement, ¶ 23(i).

9(a)



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**PRESSURE FORCE  
EMERGENCY VALVES  
OPERATIONAL CONDITION**

Date: March 24, 2011

Bulletin #281  
Supersedes: New

### **I. Purpose**

This bulletin is an overview of PGW emergency valves (10-35 psig or higher systems) and valve maintenance schedule. Inoperable and closed control valves are also listed as of the date shown at the top of the bulletin. This bulletin will be updated on an annual basis in time for preparation of the Capital Budget.

### **II. Definitions**

- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.
- **AIMS** - Advanced Intelligent Mobile System: PGW's computer dispatch and work management system.

### **III. Active Emergency Valves (by Type) in PGW's 10-35 psi and Higher Systems**

| Emergency Valve Purpose                   | Count |
|---|-------|
| Control                                   | 1060  |
| Street Regulator Station Emergency Inlet  | 251   |
| Street Regulator Station District Inlet   | 205   |
| Street Regulator Station Monitor Inlet    | 169   |
| Street Regulator Station District Outlet  | 16    |
| Street Regulator Station Monitor Outlet   | 13    |
| Street Regulator Station Bypass           | 185   |
| Street Regulator Station Emergency Outlet | 6     |
| Bypass                                    | 28    |
| Blow off                                  | 185   |
| Hi-Flo                                    | 2     |

### **IV. Valves Maintenance Schedule and Inspections Update**

All main control valves and street regulator station valves in PGW's 10-35 psi and higher systems are inspected once a year. The following information is electronically recorded and stored in the AIMS work management system during the inspection process:

- Valve Inspection date
- Amount of operation (Full, Half, Less than half, or None)
- Position of the valve (Open, Closed, or Closed & Locked)
- Condition of the adjacent main, valve tag, and valve frame cover
- Condition of valve test points (if any)



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**PRESSURE FORCE  
EMERGENCY VALVES  
OPERATIONAL CONDITION**

Date: March 24, 2011

Bulletin #281  
Supersedes: New

- Any type of maintenance that was done to the valve (Grease and ease, adjust gland, etc)
- Any type of future maintenance that could be required – maintenance orders

Main Valves Inspection Schedule:

| Valve Number | Amount of Operation |           |
|--------------|---------------------|-----------|
|              | Even Years          | Odd Years |
| Even         | Full                | Half      |
| Odd          | Half                | Full      |

Street Regulator Station Valves Inspection Schedule:

| If valve belongs to street regulator station... | ...done with:     | Month       |
|---|-------------------|-------------|
| Inlet & Outlet Valves                           | Clean or Overhaul | Various     |
| All Other Valves                                | 3rd Inspection    | May or June |

Valve Inspections Update:

Total of 332 active emergency valves were inspected in the period spanning from 01/01/2011 to the date of this bulletin. All remaining 1788 valves are going to be inspected before 12/31/2011.

**V. Inoperable Control Valves**

- A.** The following categories of valves have been established to minimize system disruptions, minimize affected street regulator stations and customer interruptions during pressure Operation, in accordance with 49 CFR Part 192.181 and 49 CFR Part 192.747 .
- B.** The following operating characteristics should be considered when assigning an emergency distribution system valve to one of the categories.
1. Total number of customers and the type of customers as hospitals, schools, commercial, and industrial users that would be affected.
  2. Time required for available personnel to perform a pressure operation.
  3. Time required for reducing system pressure in the area by means as exhausting to another system or to the atmosphere.
  4. Time required for restoration of service to the customers.
  5. Weather restrictions and ability to temporary shut down street regulator stations
- C.** Inoperable Valves - The following actions should be considered if a valve is found inoperable.
1. Repair the valve to make it operable.



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**PRESSURE FORCE  
EMERGENCY VALVES  
OPERATIONAL CONDITION**

Date: March 24, 2011

Bulletin #281  
Supersedes: New

2. Designate another valve or valves to substitute for the inoperable valve. Consideration should be given to the following:
  - a. Updating records for emergency shutdown and future maintenance requirements.
  - b. Informing employees of the change to the isolation or emergency shutdown plan.
3. Replace the valve.

| Class | Description  |
|-------|--|
| A     | Critical, replace as soon as possible  |
| B     | Important, addressed as second priority  |
| C     | Non-essential, inspected annually for atmosphere readings, piping/vault conditions |

| Class | Pressure   | Valve # | Alternative Valve | Size | Location             | DMM   | Action              |
|-------|------------|---------|-------------------|------|----------------------|-------|---------------------|
| A     | 10-35 psig | 1142    | 1062<br>2054      | 12"  | 28th & Grays Ferry   | N4-72 | Replace             |
| B     | 10-35 psig | 1487    | 1486              | 36"  | 22nd & Arch          | M4-77 | Repair/Replace      |
| B     | 10-35 psig | 1488    | 754               | 20"  | 22nd & Arch          | M4-77 | Repair/Dig-up       |
| B     | 10-35 psig | 1988    | 982               | 8"   | Byberry & Lewis      | B9-57 | Continue Inspecting |
| C     | 10-35 psig | 855     | 856               | 16"  | Castor & Cottman     | F8-91 | Inspect Only        |
| C     | 10-35 psig | 910     | 632               | 30"  | Bustleton & Lardner  | H7-19 | Inspect Only        |
| C     | 10-35 psig | 915     | 1012              | 8"   | Rising Sun & Cottman | F7-36 | Inspect Only        |
| C     | 10-35 psig | 979-A   | Blow-off          | 2"   | Grant & Krewstown    | D8-68 | Inspect Only        |
| C     | 10-35 psig | 1006    | Cut & Cap         | 6"   | Belgrade & LeFevre   | J7-99 | Inspect Only        |
| C     | 10-35 psig | 1076-A  | Blow-off          | 4"   | 22nd & Arch          | M4-77 | Inspect Only        |
| C     | 10-35 psig | 1507    | Cut & Cap         | 36"  | Castor & Balfour     | K7-95 | Inspect Only        |

**Note:**

When conducting out-of-hours pressure operations, review the operational maps (6X-107) outside the Distribution Dispatching office for any atypical system conditions that might affect the operation. Also, make sure that all valves involved in the pressure operation can be operated before dispatching Pressure Force crews. If a valve is determined to be inoperable, send the crew to the designated alternative valve.

**VI. Closed Main Valves**

The Distribution 10-35 psig and higher systems continue to operate with the assumption that all main control valves are open, with the exceptions listed below. Also, bypass valves are always assumed closed and are therefore not listed.



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**PRESSURE FORCE  
EMERGENCY VALVES  
OPERATIONAL CONDITION**

Date: March 24, 2011

Bulletin #281  
Supersedes: New

| Valve #  | Location                                | Pressure System |
|----------|---|-----------------|
| 840      | Thompson & Lehigh<br>(Reading RR)       | 10-35 psig      |
| 901, 902 | Castor & Balfour                        | 10-35 psig      |
| 986      | Navy Yard<br>(Building 736)             | 10-35 psig      |
| 1110     | Large & Orthodox                        | 10-35 psig      |
| 1152     | Venango & Mascher                       | 10-35 psig      |
| 1206     | Wissahickon & Roberts<br>(SEPTA)        | 10-35 psig      |
| 1329     | Cotton & Main                           | 10-35 psig      |
| 1359     | 3001 Castor Ave.<br>(Franklin Smelting) | 150 psig        |
| 1471     | Woodhaven and Medford                   | 10-35 psig      |
| 1644     | Milnor & Disston<br>(Army Exchange)     | 10-35 psig      |
| 1697     | Formerly Airport Motel                  | 60 psig         |
| 1731     | 30th & Morris                           | 10-35 psig      |
| 1740     | 57th & Lindbergh<br>(U.S. Gypsum)       | 10-35 psig      |
| 1748     | Princeton & Milnor                      | 10-35 psig      |
| 2003     | Butler & Belgrade                       | 150 psig        |
| 2020     | 2100 Oregon                             | 150 psig        |
| 2060     | Thompson & Tioga                        | 10-35 psig      |

**VII. Associated Documentation**

**A. Relevant Code**

1. 49 CFR Part 192.181 Distribution Line Valves.
2. 49 CFR Part 192.747 Valve Maintenance: Distribution Systems

**B. Related Documents**

1. Distribution Department Bulletin #63 - Notification Procedure of a Potential Emergency Involving a Pressure Operation
2. Distribution Department Bulletin #98 – Pressure Force Inspection & Maintenance Schedules
3. Distribution Department Bulletin #212 - Leak Response and Investigation Procedure
4. Distribution Department Bulletin #227 – Initiation of a Pressure Operation
5. Distribution Department Bulletin #228 - Pressure Control Operation Outline Procedure.
6. Distribution Department Bulletin #230 - Organization for Emergency Operations.



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**PRESSURE FORCE  
EMERGENCY VALVES  
OPERATIONAL CONDITION**

Date: March 24, 2011

Bulletin #281  
Supersedes: New

7. Distribution Department Bulletin #238 – Procedure for Inspection of Control Valves, District Regulators and Industrial Regulators in the Distribution System

**C. Handbooks**

1. Pressure Force Handbook
2. Dispatching Manual (Section V – pages 41-44)

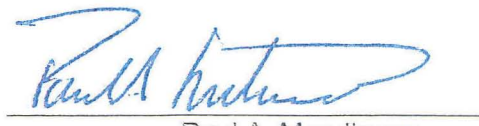
**VIII. Transaction Listing**

TR-2011-21

Prepared by Burhan Awad  
3/24/11

Approved:

  
Steven A. Groeber  
Director, Field Operations & Work Planning

  
Paul A. Mondimore  
Vice President, Field Operations

9(c)



**CAPITAL PROGRAM PROPOSAL YEAR 2010**

DEPARTMENT: Distribution

ADDITION

REPLACEMENT

DIVISION:

BUDGET CATEGORY: 52-23-2-01

**PRIORITY:**

1  SAFETY

3  ENFORCED RELOCATIONS

5  IMPROVED EFFICIENCY AND DISCRETIONARY

2  RELIABILITY

4  LOAD GROWTH

**DESCRIPTION OF PROPOSED PROJECT:**

Replacement and rehabilitation ( via encapsulation) of

high pressure main valves.

**LOCATION:**

Unspecified.

**NEED FOR PROJECT:**

Replace or Repair defective valves.

**ESTIMATE OF COST (In Thousands)**

**MONTHLY EXPENDITURE FOR BUDGET YEAR (In Thousands)**

**ESTIMATED TIMING & EXPENDITURE SCHEDULE (In Thousands)**

|                    |        |
|--------------------|--------|
| PGW LABOR          | \$ 141 |
| MATERIAL           | 30     |
| PURCHASED SERVICES | -      |
| OTHER              | 28     |
| PROJECT COST       | \$ 199 |
| ADMIN & GENERAL    |        |
| 14.3% OF PROJECT   | 28     |
| SUB TOTAL          | \$ 227 |
| AFUDC OF SUBTOTAL  | -      |
| TOTAL CAPITAL COST | \$ 227 |

|       |        |
|-------|--------|
| SEP   | \$ 18  |
| OCT   | 19     |
| NOV   | 19     |
| DEC   | 19     |
| JAN   | 19     |
| FEB   | 19     |
| MAR   | 19     |
| APR   | 19     |
| MAY   | 19     |
| JUN   | 19     |
| JUL   | 19     |
| AUG   | 19     |
| TOTAL | \$ 227 |

|                |        |
|----------------|--------|
| BUDGET YEAR    | \$ 227 |
| FORECAST YEARS |        |
| YEAR 1         |        |
| YEAR 2         |        |
| YEAR 3         |        |
| TOTAL          | \$ 227 |

SUBMITTED BY DEPARTMENT  
MANAGER/DIRECTOR

APPROVED BY VICE PRESIDENT OR  
SENIOR VICE PRESIDENT

APPROVED BY EXECUTIVE VICE  
PRESIDENT & CHIEF OPER. OFFICER

APPROVED BY PRESIDENT AND CEO

ESTIMATED BY: Finance/Distribution

DATE: Dec 2008

**CAPITAL PROJECT**  
**BUDGET JUSTIFICATION**

**Department:**           **Distribution Department**

**Fiscal Year:**           **2010**

**Project Title:**       **Replacement of High Pressure Main Valves D-23 (52-23-2-01)**

**Estimated Cost:**     **\$227,000**  
**(Attach Engineering Estimate for Budget Year Project)**

|                                |                            |                      |
|--------------------------------|----------------------------|----------------------|
| <b>Type of Project:</b>        | <b>Addition</b>            | _____                |
|                                | <b>Replacement</b>         | _____ <b>X</b> _____ |
| <b>Basis of Justification:</b> | <b>Safety</b>              | _____ <b>X</b> _____ |
|                                | <b>Reliability</b>         | _____                |
|                                | <b>Improved Efficiency</b> | _____                |
|                                | <b>Enforced Relocation</b> | _____                |
|                                | <b>Revenue Producing</b>   | _____                |

**Justification - Attach the following information for each project.**

1.     **Detailed explanation of project.**  
      **To provide funds for the replacement and rehabilitation of high pressure main valves.**
  
2.     **Identify consequences of not doing this project.**  
      **Emergency shutdown valves would be out of code compliance with DOT 192.**
  
3.     **Economic analysis using simple payback method.**  
      **No economic justification required for safety.**
  
4.     **If economic analysis cannot justify the project, provide justification for why the project is required, i.e. code or regulatory requirement (state specific code/regulation), safety ( provide specific historical data to explain the current condition) etc.**
  
5.     **Identify options/alternatives for this project.**  
      **Replace the valves.**

## Control Valve Replacement Cost Estimate Report

Target: FY 2010  
Location: 28<sup>th</sup> and Grays Ferry  
Map No.: DMM N4-72  
Identifier: Valve # 1142  
Date: 12/04/2008

Listed below is the estimated cost to replace distribution system valve # 1142 (which is located in a manhole at the above stated location). The estimated cost of \$87,031.00 includes labor and material to replace the 12" control valve on a 12-inch, 35-psi system with a more easy-to-operate and durable ball valve.

The estimate includes all labor hours needed by the Distribution crews to prepare and perform the replacement work. Because of the location of the valve and the complexity that will be involved in the replacement work, adequate man-hours are needed for the replacement work. Also included in the estimate are man-hours allocated for Pressure Force crews to manage and monitor the line pressure prior, during and after completion of the valve replacement - the line pressure will be reduced to a suitable operating pressure. Corrosion Control will be required to perform a corrosion survey on the line and the newly installed valve, making certain the section worked on is cathodically protected.

A flange end, ANSI 150 valve will be used as the replacement valve. The valve will be gear operated. The table below details the cost associated with the control valve replacement work:

| <b>Item</b>         | <b>Estimated Cost</b> |
|---------------------|-----------------------|
| Labor               | \$37,114.00           |
| Materials           | \$22,919.00           |
| Paving              | \$2,082.00            |
| Transportation/Tool | \$10,402.00           |
| Contingency (5%)    | \$3,626.00            |
| <b>Sub-total</b>    | <b>\$76,143.00</b>    |
| A&G                 | \$10,888.00           |
| <b>TOTAL</b>        | <b>\$87,031.00</b>    |

**FISCAL 2010**  
**52-23-2-01 (D-23-R-1)**

**52-23-2-01 REPLACEMENT AND REHABILITATION ( VIA ENCAPSULATION)**  
**OF HIGH PRESSURE MAIN VALVE**

**Project Description**

|                    | <u>5 Year Average</u><br><u>Joints</u> | <u>Cost/Joint</u> |                | <u>Project Cost</u> |
|--------------------|--|-------------------|----------------|---------------------|
| Encapsulations     | 6                                      | \$ 20,445         | =              | \$123,000           |
| 28th & Grays Ferry |  |                   | =              | \$76,000            |
|                    |  |                   |                | <hr/>               |
|                    |  |                   | Project Cost = | \$199,000           |

**2010 Estimate**

| <u>Category</u>                |      | <u>Percentage</u> |                  | <u>Total Cost</u>       |
|--------------------------------|------|-------------------|------------------|-------------------------|
| PGW Labor, % of Total          |      | 71%               | =                | 141,000                 |
| Material, % of Total           |      | 15%               | =                | 30,000                  |
| Purchased Services, % of Total |      | 0%                | =                | 0                       |
| Other, % of Total              |      | 14%               | =                | 28,000                  |
|                                |      |                   |                  | <hr/>                   |
|                                |      |                   | Project Cost =   | \$199,000               |
| Adm. & Gen.                    |      | 14.3% x           | 199,000 =        | 28,000                  |
| AFUDC                          | .014 | x 4.79% x         | 227,000 =        | <hr/>                   |
|                                |      |                   | Total Estimate = | <u><u>\$227,000</u></u> |

2010 Capital Program

52-23-2-01 (D-23-R-1)

REPLACEMENT AND REHABILITATION ( VIA ENCAPSULATION)  
OF HIGH PRESSURE MAIN VALVE

Valve Flange Encapsulation

|            | FY2004    | FY2005    | FY2006     | FY2007     | FY2008     | <u>5 Year Average</u> |
|------------|-----------|-----------|------------|------------|------------|-----------------------|
| Joints     | 4         | 0         | 12         | 8          | 6          | 6                     |
| Costs      | \$ 73,440 | \$ 13,904 | \$ 143,000 | \$ 297,730 | \$ 131,639 |                       |
| Cost/Joint | \$18,360  | \$0       | \$11,917   | \$37,216   | \$21,940   |                       |

Average of the Four Methods, Less A&G, With AFUDC, Escalated to 2008 = 19,631

Escalation to Fiscal 2010

| <u>Avg. of the (4) Methods<br/>W/O A&amp;G, With AFUDC<br/>Escalated To 2008<br/>Cost/Unit</u> | <u>Average<br/>AFUDC</u> | <u>Esc.<br/>Factor</u> | <u>(Without AFUDC)<br/>Service<br/>Cost/Unit</u> |
|--|--------------------------|------------------------|--|
| \$ 19,631  | .014                     | 1.056                  | \$ 20,445  |

|  |  |
|--|--|
| <b>CAPITAL PROGRAM PROPOSAL YEAR 2011</b><br><br><input type="checkbox"/> ADDITION <input checked="" type="checkbox"/> REPLACEMENT | DEPARTMENT: Distribution<br><br>DIVISION:<br><br>BUDGET CATEGORY: 52-23-2-01 |
|--|--|

**PRIORITY:**

1  SAFETY                      3  ENFORCED RELOCATIONS                      5  IMPROVED EFFICIENCY AND DISCRETIONARY

2  RELIABILITY                      4  LOAD GROWTH

**DESCRIPTION OF PROPOSED PROJECT:**                      Replacement and rehabilitation ( via encapsulation) of

high pressure main valves.                      Specific valves: 22nd and Arch Valve # 1487

22nd and Arch Valve # 1488

Mason and Dewees

**LOCATION:**                      Unspecified.

**NEED FOR PROJECT:**                      Replace or Repair defective valves.

| ESTIMATE OF COST (In Thousands)                       | MONTHLY EXPENDITURE FOR BUDGET YEAR (In Thousands) | ESTIMATED TIMING & EXPENDITURE SCHEDULE (In Thousands)                 |
|---|--|--|
| PGW LABOR                      \$    203              |  | BUDGET YEAR                      \$    522                             |
| MATERIAL                      _____ 190               |  | FORECAST YEARS   |
| PURCHASED SERVICES                      _____ 4       | SEP                      \$    43                  | YEAR 1                      _____                                      |
| OTHER                      _____ 44                   | OCT                      _____ 43                  | YEAR 2                      _____                                      |
| PROJECT COST                      \$    441           | NOV                      _____ 43                  | YEAR 3                      _____                                      |
| ADMIN & GENERAL                                       | DEC                      _____ 43                  | TOTAL                      \$    522                                   |
| <u>18.2%</u> OF PROJECT                      _____ 80 | JAN                      _____ 43                  |  |
| SUB TOTAL                      \$    521              | FEB                      _____ 43                  | _____<br>SUBMITTED BY DEPARTMENT<br>MANAGER/DIRECTOR                   |
| AFUDC _____ OF SUBTOTAL                      _____ 1  | MAR                      _____ 44                  |  |
| TOTAL CAPITAL COST                      \$    522     | APR                      _____ 44                  | _____<br>APPROVED BY VICE PRESIDENT OR<br>SENIOR VICE PRESIDENT        |
|   | MAY                      _____ 44                  |  |
|   | JUN                      _____ 44                  |  |
|   | JUL                      _____ 44                  | _____<br>APPROVED BY EXECUTIVE VICE<br>PRESIDENT & CHIEF OPER. OFFICER |
|   | AUG                      _____ 44                  |  |
|   | TOTAL                      \$    522               | _____<br>APPROVED BY PRESIDENT AND CEO                                 |
| ESTIMATED BY: <u>Finance/Distribution</u>             |  |  |
| DATE: <u>Nov 2009</u>                                 |  |  |

**CAPITAL PROJECT**  
**BUDGET JUSTIFICATION**

**Department:**           **Distribution Department**

**Fiscal Year:**         **2011**

**Project Title:**       **Replacement of High Pressure Main Valves D-23 (52-23-2-01)**

**Estimated Cost:**     **\$522,000**  
**(Attach Engineering Estimate for Budget Year Project)**

|                                |                            |                      |
|--------------------------------|----------------------------|----------------------|
| <b>Type of Project:</b>        | <b>Addition</b>            | _____                |
|                                | <b>Replacement</b>         | _____ <b>X</b> _____ |
| <b>Basis of Justification:</b> | <b>Safety</b>              | _____ <b>X</b> _____ |
|                                | <b>Reliability</b>         | _____                |
|                                | <b>Improved Efficiency</b> | _____                |
|                                | <b>Enforced Relocation</b> | _____                |
|                                | <b>Revenue Producing</b>   | _____                |

**Justification - Attach the following information for each project.**

1.   **Detailed explanation of project.**  
      **To provide funds for the replacement and rehabilitation of high pressure main valves.**
  
2.   **Identify consequences of not doing this project.**  
      **Emergency shutdown valves would be out of code compliance with DOT 192.**
  
3.   **Economic analysis using simple payback method.**  
      **No economic justification required for safety.**
  
4.   **If economic analysis cannot justify the project, provide justification for why the project is required, i.e. code or regulatory requirement (state specific code/regulation), safety ( provide specific historical data to explain the current condition) etc.**
  
5.   **Identify options/alternatives for this project.**  
      **Replace the valves.**

**FISCAL 2011**  
**52-23-2-01 (D-23-R-1)**

**52-23-2-01 REPLACEMENT AND REHABILITATION ( VIA ENCAPSULATION)**  
**OF HIGH PRESSURE MAIN VALVE**

**Project Description**

|                            | <u>5 Year Average</u><br><u>Joints</u> | <u>Cost/Joint</u> |                | <u>Project Cost</u> |
|----------------------------|--|-------------------|----------------|---------------------|
| Encapsulations             | 5                                      | \$ 17,813         | =              | \$92,628            |
| 22nd and Arch Valve # 1487 |  |                   | =              | \$164,494           |
| 22nd and Arch Valve # 1488 |  |                   | =              | \$122,756           |
| Mason and Dewees           |  |                   | =              | <u>\$61,312</u>     |
|                            |  |                   | Project Cost = | \$441,190           |

**2011 Estimate**

| <u>Category</u>                |      | <u>Percentage</u> |                  | <u>Total Cost</u>       |
|--------------------------------|------|-------------------|------------------|-------------------------|
| PGW Labor, % of Total          |      | 46%               | =                | 203,000                 |
| Material, % of Total           |      | 43%               | =                | 190,000                 |
| Purchased Services, % of Total |      | 1%                | =                | 4,000                   |
| Other, % of Total              |      | 10%               | =                | <u>44,000</u>           |
|                                |      |                   |                  | 0                       |
|                                |      |                   | Project Cost =   | \$441,000               |
| Adm. & Gen.                    |      | 18.2%             | x                | 441,190 = 80,000        |
| AFUDC                          | .022 |                   | x                | 521,190 = <u>1,000</u>  |
|                                |      |                   | Total Estimate = | <u><u>\$522,000</u></u> |



2011 Capital Program

52-23-2-01 (D-23-R-1)

REPLACEMENT AND REHABILITATION ( VIA ENCAPSULATION)  
OF HIGH PRESSURE MAIN VALVE

Valve Flange Encapsulation

|            | FY2005    | FY2006     | FY2007     | FY2008     | FY2009   | <u>5 Year Average</u> |
|------------|-----------|------------|------------|------------|----------|-----------------------|
| Joints     | 0         | 12         | 8          | 6          | 0        | 5                     |
| Costs      | \$ 13,904 | \$ 143,000 | \$ 297,730 | \$ 131,639 | \$ 8,250 |                       |
| Cost/Joint | \$0       | \$11,917   | \$37,216   | \$21,940   | \$0      |                       |

Average of the Four Methods, Less A&G, With AFUDC, Escalated to 2009 = 17,805

Escalation to Fiscal 2011

| <u>Avg. of the (4) Methods<br/>W/O A&amp;G, With AFUDC<br/>Escalated To 2009<br/>Cost/Unit</u> | <u>Average<br/>AFUDC</u> | <u>Esc.<br/>Factor</u> | <u>(Without AFUDC)<br/>Service<br/>Cost/Unit</u> |
|--|--------------------------|------------------------|--|
| \$ 17,805  | .022                     | 1.022                  | \$ 17,813  |

## Control Valve Replacement Cost Estimate Report

Target: FY 2011  
Location: 22<sup>nd</sup> and Arch  
Map No.: DMM M4-77  
Identifier: Valve # 1487, size 36"  
Date: 12/2009

Listed below is the estimated cost to replace distribution system valve # 1487. The estimate includes all labor hours required by the Distribution crews to prepare and perform the replacement work. Because of the location of the valves and the complexity that will be involved in the replacement work, adequate man-hours are needed for the replacement work. Also included in the estimate are man-hours allocated for Pressure Force crews to manage and monitor the line pressure prior, during and after completion of the installation of the new valve. During the operation Distribution valves will be closed and the surrounding Distribution system monitored to ensure suitable operating pressure. Corrosion Control will be required to perform a corrosion survey on the line and the newly installed valve, making certain the section worked on is cathodically protected.

The table below details the cost associated with the control valve replacement work:

| Item                | Estimated Cost   |
|---------------------|------------------|
| Labor               | \$68,524         |
| Materials           | \$70,625         |
| Paving              | \$2,082          |
| Transportation/Tool | \$15,430         |
| Contingency (5%)    | \$7,833          |
| <b>Sub-total</b>    | <b>\$164,494</b> |
| A&G                 | \$29,938         |
| <b>TOTAL</b>        | <b>\$194,432</b> |

## Control Valve Replacement Cost Estimate Report

Target:       FY 2011  
Location:     22<sup>nd</sup> and Arch  
Map No.:     DMM M4-77  
Identifier:    Valve # 1488, size 30"  
Date:         12/2009

Listed below is the estimated cost to replace distribution system valve # 1488. The estimate includes all labor hours required by the Distribution crews to prepare and perform the replacement work. Because of the location of the valves and the complexity that will be involved in the replacement work, adequate man-hours are needed for the replacement work. Also included in the estimate are man-hours allocated for Pressure Force crews to manage and monitor the line pressure prior, during and after completion of the installation of the new valve. During the operation Distribution valves will be closed and the surrounding Distribution system monitored to ensure suitable operating pressure. Corrosion Control will be required to perform a corrosion survey on the line and the newly installed valve, making certain the section worked on is cathodically protected.

The table below details the cost associated with the control valve replacement work:

| Item                | Estimated Cost   |
|---------------------|------------------|
| Labor               | \$61,527         |
| Materials           | \$39,253         |
| Paving              | \$2,082          |
| Transportation/Tool | \$14,048         |
| Contingency (5%)    | \$5,846          |
| <b>Sub-total</b>    | <b>\$122,756</b> |
| A&G                 | \$22,342         |
| <b>TOTAL</b>        | <b>\$145,098</b> |

## Control Valve Replacement Cost Estimate Report

Target:       FY 2011  
Location:     Mason and Dewees  
Map No.:     DDM F9-1  
Identifier:    Valve # 5035  
Date:         12/2009

Listed below is the estimated cost to replace distribution system valve # 5035. The estimate includes all labor hours required by the Distribution crews to prepare and perform the replacement work. Because of the location of the valves and the complexity that will be involved in the replacement work, adequate man-hours are needed for the replacement work. Also included in the estimate are man-hours allocated for Pressure Force crews to manage and monitor the line pressure prior, during and after completion of the installation of the new valve. During the operation Distribution valves will be closed and the surrounding Distribution system monitored to ensure suitable operating pressure. Corrosion Control will be required to perform a corrosion survey on the line and the newly installed valve, making certain the section worked on is cathodically protected.

The table below details the cost associated with the control valve replacement work:

| Item                | Estimated Cost  |
|---------------------|-----------------|
| Labor               | \$37,206        |
| Materials           | \$11,512        |
| Paving              | \$2,016         |
| Transportation/Tool | \$7,658         |
| Contingency (5%)    | \$2,920         |
| <b>Sub-total</b>    | <b>\$61,312</b> |
| A&G                 | \$11,159        |
| <b>TOTAL</b>        | <b>\$72,471</b> |

# Appendix A-10

10. PGW has revised its existing written procedure that establishes a safety perimeter for leak investigations and emergency response and has re-qualified PGW emergency responders and field supervisors to these procedures.
  - (a) PGW has added the phrase “Safety Perimeter” to the “Definitions” section of Bulletin 212, Leak Response and Investigation Procedure. Under this section, a safety perimeter is identified as “the boundary of an area outside of the influence of the leaking gas. Also known as a Collapse Zone by the Philadelphia Fire Department.”
  - (b) The term “safety perimeter” has also been added to section III.A.3 of Bulletin 212 (Dispatching Resources Available) in this context:
    - (i) “Police or Fire Department through 911 to assist (evacuations, safety perimeter, traffic control, public safety, etc.)”; and within Section III.B.2 (Performing the Leak Investigation), by inserting the sentence: “Attempt to shut off gas from the curb box to the property.”
  - (c) The following passages have been added to Section III.B.3, which prescribes minimum requirements for the Evacuation Procedure:
    - (i) “Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Minimize any PGW employees required to perform their duties within the Safety Perimeter.”
    - (ii) “Call for assistance from the Fire Department (call 911) through the Dispatcher. The PFD and PPD will assist you with evacuating and maintaining the Safety Perimeter.”
    - (iii) “If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.”
  - (d) PGW emergency responders and field supervisors were re-trained and re-qualified (June 2011) on Emergency Response and the revised Distribution Department Bulletins.) (See Item 1.)
- Supporting Documentation: .
  - (a) Excerpts from Bulletin 212.
  - (b) Excerpts from Bulletin 212.
  - (c) Excerpts from Bulletin 212.
  - (d) See App. A-1, above.
- Cross-References: Prayer for Relief at ¶ (l); Settlement, ¶ 23(j).

10(a)



**FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS**

**LEAK RESPONSE AND INVESTIGATION  
PROCEDURE**

**Effective April 21, 2011**

Bulletin Number #212  
Dated September 15, 2008

- **ODOR COMPLAINT** – a report of a possible inside or outside gas odor, leak, explosion or other hazardous conditions which may involve gas pipelines, or other gas facilities, customer’s house piping, or appliances. All odors must be confirmed using a GDI.
- **OPERATOR** – a PGW Operations’ representative – technician, foreman, supervisor, etc.
- **ONE HOUSE CHECK**— a term used during a declared foreign odor allowing the technician or foreman to make a limited check for safety. Job must be within the area affected from the foreign odor. Permission must be obtained through the dispatcher or supervisor. See “Foreign odor” in “III.A. General Requirements” below.
- **OUTSIDE SOURCE** – (who calls in an odor) a PGW employee, other utility, police or fire personnel, contractors, customers and the general public.
- **PPM GDI GAS READINGS** – samples of the atmosphere taken with a parts per million (PPM) gas detection instrument. Any **INSIDE** reading qualifies as a reading and requires a physical action. An **OUTSIDE** reading of 2% LEL or higher is required in order to qualify as a recordable reading.
- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.
- **READING** – a repeatable deviation on a GDI or equivalent expressed in % LEL & % Gas scales.
- **SAFETY PERIMETER** – The boundary of an area outside of the influence of the leaking gas. Also known as a Collapse Zone by the Philadelphia Fire Department.
- **SUSTAINED READING** – a gas reading found after a bar hole or structure has been opened and is allowed to stabilize or ventilate. NOTE: This reading should be recorded on the final report.
- **UNIFORM MANNER** – all bar holes shall be spaced evenly and have the same size and depth.
- **UPPER EXPLOSIVE LIMIT (UEL)** – At concentrations above the UEL the gas has displaced so much air that there is not enough oxygen for the gas to burn. When readings are above the UEL, be aware that the gas concentration will come down though the explosive limit of gas when the source of the gas leak is removed or through ventilation. 15% gas in air is the UEL of PGW gas.
- **VENTILATE** – This term, when used in reference to buildings, structures, manholes and confined spaces, means the introduction of fresh air into the affected structure. Ventilation can be accomplished by opening doors and windows, breaking windows, opening basement grates, and removing manhole covers or lids to prevent or reduce the level of natural gas in the affected structure. This term, when used in reference to gas readings underground, means to draw residual natural gas from below the surface with the use of pneumatic mechanical devices.



10(b)



FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS

LEAK RESPONSE AND INVESTIGATION  
PROCEDURE

Effective September 7, 2010

Bulletin Number #212  
Supersedes: September 15, 2008

1. Forced Entry

Upon the initial visit, if any house that requires a leak investigation per this procedure is apparently locked and secure and it is not possible to gain entrance, make an exterior examination. Examine at the basement windows, mailbox or any other place where an indication of the inside atmosphere may be sampled. If an odor or reading of gas is detected coming from a premise either from outside that premise or from an adjoining property, make forcible entry through a window or a door.

- If a forcible entry is required, inform the Dispatcher. The Dispatchers will call 911. Give the Dispatcher the address of every house(s) requiring forced entry.
- Do as little damage as possible.
- During normal business hours notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6532 (voice mail).
- Sign and leave Form #6489 to inform the customer that it was necessary for PGW to enter the premise.
- Complete a detailed Accident Report (Form 119) and submit it at the end of your shift.

2. Who Is In Charge?

When both Distribution and Field Services *union-covered personnel* are on location, the Distribution Foreman is responsible for following all procedures and making a thorough leak investigation including front foundation wall checks.

A Field Service Department Supervisor or Distribution Department Supervisor has the authority to supersede the Distribution Foreman.

When both Distribution and Field Services *supervision* are on location of an outside leak investigation, the highest ranking Distribution Supervisor is in charge.

3. Dispatching Resources Available:

- Distribution Crew(s)
- FSD Technician(s)
- Emergency Grease Equipment
- Cut-Cap Trailer Excavation Equipment, Vacuum Excavation truck
- FSD and/or Distribution Supervision
- Pressure Force Supervision and Crews
- Police or Fire Departments through 911 to assist (evacuations, traffic control, public safety, etc)
- Notification or Dispatching of Supervisory Chain of Command.



FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS

**LEAK RESPONSE AND INVESTIGATION  
PROCEDURE**

Effective September 7, 2010

Bulletin Number #212  
Supersedes: September 15, 2008

|  |   |
|--|---|
|  | applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.   |
| Leaks involving any type of shut off valve, union, cracked or defective fitting. | <p>Leaks at shutoff valves and fittings can be permanently repaired by greasing in the valve or tightening the fitting.</p> <p>In cases where these actions do not repair the leak, the defective part of the fuel line must be disconnected and capped if possible. If the fuel line can not be disconnected, the gas must be shut off with locking device and plug swivel at the meter.</p> <p>A Class A hazard tag must be issued referring customer to the appropriate Contractor to make the permanent repair.</p> <p>The Technician will also complete a temporary shut off work order. In cases involving multiple units, industrial or commercial applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.</p>                             |
| If a leak is discovered and isolated to an appliance                             | <p>Shut gas off to the appliance.</p> <p>Issue the appropriate hazard tag.</p>  |
| General Notes concerning Inside Leaks and Repairs                                | <p>If a residential premise has been shut off and relies on gas heat, also provide a "CO and Emergency assistance information card" to provide the customer information of City agencies which can help.</p> <p>FSD Training will track and maintain records of all repairs that were completed. All temporary repairs will have follow-up by a positive, documented phone call to the customer. Call will be documented on the BCCS customer contact screen and separate FSD list.</p> <p><b>Note:</b> a temporary repair discovered <i>on any subsequent visit</i> is considered a Class A hazard and requires a temporary shut off as described above.</p> <p>All information pertaining to a piping or appliance hazardous condition must be recorded on the Hazard Screen of AIMS.</p> |

3. Evacuation Procedure (minimum requirements)

- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE THE PREMISE** and notify **Dispatching**.
- **Attempt to shut off gas from the curb box and ventilate the property; however, do not re-enter the property until the LEL levels are reduced.**
- Evacuate the adjoining properties and move the occupants away from the building.

10(c)



**FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS**

**LEAK RESPONSE AND INVESTIGATION  
PROCEDURE**

**Effective April 21, 2011**

Bulletin Number #212  
Dated September 15, 2008

|                                 |  |
|---------------------------------|--|
| <p>Inside Leaks and Repairs</p> | <p>to provide the customer information of City agencies which can help.</p> <p>FSD Training will track and maintain records of all repairs that were completed. All temporary repairs will have follow-up by a positive, documented phone call to the customer. Call will be documented on the BCCS customer contact screen and separate FSD list.</p> <p><b>Note:</b> a temporary repair discovered <i>on any subsequent visit</i> is considered a Class A hazard and requires a temporary shut off as described above.</p> <p>All information pertaining to a piping or appliance hazardous condition must be recorded on the Hazard Screen of AIMS.</p> |
|---------------------------------|--|

III.B.3 Evacuation Procedure (minimum requirements)

- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- Do not re-enter the property until the source of leak has been located, made safe or repaired and the LEL levels are reduced to a safe level.
- Eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. Attempt to shut off gas from the curb box to the property.
- Request Dispatching to notify PECO for assistance
- Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Restrict access into the Safety Perimeter to PGW employees required to perform their duties.
- Call for assistance from the Fire Department (call 911) through the Dispatcher. The PFD and PPD will assist you with evacuating and maintaining the Safety Perimeter.
- Evacuate the adjoining properties and move the occupants outside the safety perimeter. Consider the worst case scenario.
- If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.
- Continue to report any more evacuation(s) and call for more assistance.

# Appendix A-11

11. PGW has revised its written procedure to require appropriate categories of PGW emergency responders and field supervisors to receive National Incident Management System (“NIMS”) training and a schedule of this training.
  - (a) PGW has supplemented pre-existing Bulletin 230 with a new Bulletin, number 286, identifying training regarding organized emergency responses by field operations departments utilizing Incident Command and NIMS protocols.
  - (b) PGW’s Corporate Preparedness Department will conduct yearly training programs for new and recently promoted employees (as required) to achieve national certifications. On-line training courses leading to certification will be available through the Emergency Management Institute. Refresher training courses will be provided as needed.
  - (c) PGW will begin to provide an overview of NIMS training to all union foremen that will provide them with all material information from the training. PGW understands that, at present, the Philadelphia Fire Department does not utilize NIMS protocols. Should PFD choose to implement NIMS protocols, PGW will revisit the need for additional personnel to receive NIMS training.
- Supporting Documentation:
  - (a) Bulletin 286.
  - (b) Summary of employees who have received NIMS training and certification.
  - (c) NIMS Overview Material.
- Cross-References: Prayer for Relief at ¶ (m);  
Settlement, ¶ 23(k).

11(a)





## FIELD OPERATIONS

### DISTRIBUTION DEPARTMENT

Effective Date: 3/27/11

## INCIDENT COMMAND TRAINING REQUIREMENTS

Bulletin Number #286  
Supersedes: New

### I. Purpose

National Incident Management System (NIMS) is a national program designed to provide a consistent nationwide training template for government and private sector organizations to effectively work together in preparation, response, and recovery from domestic incidents. All Field Operations Department supervisors will be trained in NIMS and Incident Command System (ICS) in order to effectively initiate, communicate and integrate emergency response actions to natural gas emergencies internally with PGW personnel or externally with various utilities and government agencies.

### II. Definition

**EMI** – Emergency Management Institute

**FIRST RESPONDER** – term used to describe the first trained responder to arrive on scene of an emergency, accident, natural or human-made disaster, gas leak, fire or similar event. Such people may be PGW personnel, firefighters, police, other law enforcement or emergency medical services, or lay rescuers to deal with the situation and protect life and property.

**ICS** – Incident Command System

**NIMS** – National Incident Management System

### III. Policy Statement

Department management, at the appropriate levels, will complete the necessary training in these principles, as required to achieve the necessary national certifications and improve the effectiveness of response to emergencies and incidents.

The Policy and Compliance Department will conduct programs once a year to insure new and recently promoted employees are trained to the appropriate level. Refresher training will be provided as needed.

These courses are available through EMI online with certifying exams. They are:

- IS-100.PWb - Introduction to the Incident Command System (ICS 100) for Public Works
- IS-700 National Incident Management System (NIMS), an Introduction
- IS-200.b - ICS for Single Resources and Initial Action Incidents
- IS-800.B National Response Framework, an Introduction



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

Effective Date: 3/27/11

**INCIDENT COMMAND TRAINING  
REQUIREMENTS**

Bulletin Number #286  
Supersedes: New

Upon completion of these courses the employee will email a copy of their certificate to the Policy and Compliance Department where it will be maintained.

**IV. Associated Documentation**

**Relevant Code**

- 49 CFR Part 192.615 Written Emergency Procedures
- 49 CFR Part 192.605 Procedural Manual for Operations, Maintenance, and Emergencies

**Associated Bulletins**

- Distribution Department Bulletin #212 - Leak Response and Investigation Procedure
- Distribution Department Bulletin #230 - Organization for Emergency Operations.
- Distribution Department Bulletin #245 - Procedure for Pipeline Incident Investigations
- Distribution Department Bulletin #284 - Training Requirements

**Related Documents**

- Emergency Plan – Handling Abnormal Operating Conditions

**Attachments**

N/A

**V. Handbooks**

- Supervisor's Handbook

**VI. Transaction Listing**

TR-2011-22

Prepared by John Zuk  
3/24/11

Approved by:

John Zuk

Director, Employee Relations

Steven A. Groeber

Director, Field Operations & Work Planning

11(b)

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**PAUL A MONDIMORE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100**

**Introduction to the Incident Command System,  
(ICS 100)**

*Issued this 16th Day of April, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**PAUL A MONDIMORE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00200**

**ICS for Single Resources and  
Initial Action Incidents**

*Issued this 16th Day of April, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**PAUL A MONDIMORE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700**

**National Incident Management System  
(NIMS) an Introduction**

*Issued this 16th Day of April, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**PAUL A MONDIMORE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00800.A**

**National Response Plan (NRP), an Introduction**

*Issued this 16th Day of April, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**STEVEN A GROEBER PE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100**

**Introduction to the Incident Command System,  
(ICS 100)**

*Issued this 11th Day of April, 2007*

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute



# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**STEVEN A GROEBER P.E.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00200**

**ICS for Single Resources and  
Initial Action Incidents**

*Issued this 24th Day of April, 2007*

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**STEVEN A GROEBER P.E.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700**

**National Incident Management System  
(NIMS) an Introduction**

*Issued this 12th Day of April, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**STEVEN A GROEBER P.E.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00800.A**

**National Response Plan (NRP), an Introduction**

*Issued this 24th Day of April, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOHN J PEARCE JR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 30th Day of January, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOHN J PEARCE JR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00200.b**

**ICS for Single Resources and  
Initial Action Incident, ICS-200**

*Issued this 31st Day of January, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOHN J PEARCE JR**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 14th Day of February, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOHN J PEARCE JR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00800.b**

**National Response Framework, An Introduction**

*Issued this 13th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**DENNIS R REICHERT**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PW**

**Introduction to the Incident Command System,  
ICS 100 for Public Works Personnel**

*Issued this 10th Day of October, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute



# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**DENNIS R REICHERT**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00200**

**ICS for Single Resources and  
Initial Action Incidents**

*Issued this 10th Day of October, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that


**DENNIS R REICHERT**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700**

**National Incident Management System  
(NIMS) an Introduction**

*Issued this 10th Day of October, 2007*

  
Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

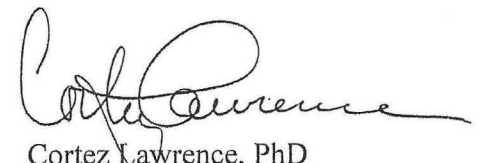
**DENNIS R REICHERT**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00800.A**

**National Response Plan (NRP), an Introduction**

*Issued this 10th Day of October, 2007*

  
Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**HOAN H THAI**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PW**

**Introduction to the Incident Command System,  
ICS 100 for Public Works Personnel**

*Issued this 9th Day of October, 2007*

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**HOAN H THAI**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700**

**National Incident Management System  
(NIMS) an Introduction**

*Issued this 9th Day of October, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

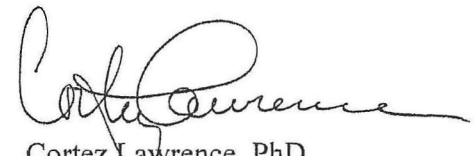
**MATTHEW Y MARINZOLI**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PW**

**Introduction to the Incident Command System,  
ICS 100 for Public Works Personnel**

*Issued this 28th Day of January, 2008*

  
Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that


**MATTHEW Y MARINZOLI**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700**

**National Incident Management System  
(NIMS) an Introduction**

*Issued this 28th Day of January, 2008*

  
Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

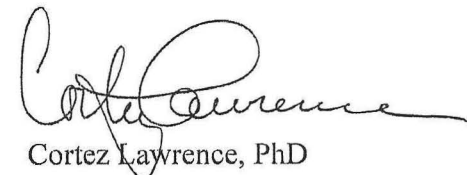
**CARLOS E FIGUEROA**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PW**

**Introduction to the Incident Command System,  
ICS 100 for Public Works Personnel**

*Issued this 12th Day of October, 2007*



Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute



# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**CARLOS E FIGUEROA**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700**

**National Incident Management System  
(NIMS) an Introduction**

*Issued this 12th Day of October, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

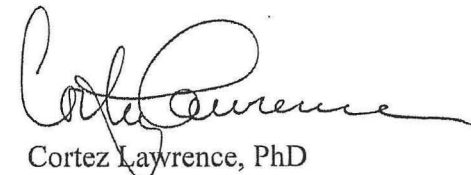
**JOSEPH DE LUSSEY SR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PW**

**Introduction to the Incident Command System,  
ICS 100 for Public Works Personnel**

*Issued this 1st Day of October, 2007*

  
Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOSEPH DE LUSSEY SR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00200**

**ICS for Single Resources and  
Initial Action Incidents**

*Issued this 4th Day of October, 2007*

A handwritten signature in black ink, appearing to read "Cortez Lawrence".

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOSEPH DE LUSSEY SR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700**

**National Incident Management System  
(NIMS) an Introduction**

*Issued this 1st Day of October, 2007*

Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

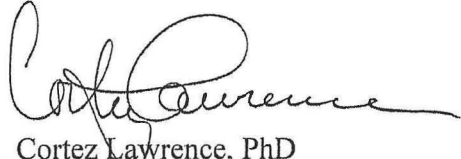
**JOSEPH DE LUSSEY SR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00800.A**

**National Response Plan (NRP), an Introduction**

*Issued this 1st Day of October, 2007*

  
Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**MICHAEL J BARRY**


has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700**

**National Incident Management System  
(NIMS) an Introduction**

*Issued this 26th Day of September, 2007*

0.3 CEU



Cortez Lawrence, PhD  
Superintendent  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**MICHAEL J BARRY SR**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00800.b**

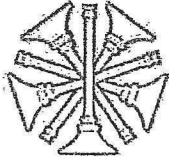
**National Response Framework, An Introduction**

*Issued this 9th Day of February, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute



**CAMDEN COUNTY FIRE ACADEMY**

**Certificate of Attendance**

PRESENTED TO

**MICHAEL J. BARRY, Sr.**

WHO HAS ATTENDED THE COMPLETE COURSE OF

**INCIDENT MANAGEMENT I-300 - 24 HRS**

PRESENTED THIS 25TH DAY OF JUNE, 07

**Paul E. Hartstein**

Chief Fire Marshal

**Herbert E. Steelman**

Director - Department of Public Safety

**Joseph Ripa**

Freeholder - Department of Public Safety



# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**RAYMOND WELTE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 27th Day of August, 2011*



A handwritten signature in cursive script, reading "Vilma Schifano-Milmoe".

Vilma Schifano-Milmoe  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**RAYMOND WELTE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00200.b**

**ICS for Single Resources and  
Initial Action Incident, ICS-200**

*Issued this 27th Day of August, 2011*



A handwritten signature in cursive script, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**RAYMOND WELTE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 28th Day of August, 2011*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**RAYMOND WELTE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00800.b**

**National Response Framework, An Introduction**

*Issued this 29th Day of August, 2011*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**BERNARD J BRESLIN**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 23rd Day of April, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**BERNARD J BRESLIN**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 23rd Day of April, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**BURTON JEFFERSON JR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 27th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**BURTON JEFFERSON JR**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 27th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute



# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**DENNIS J SHEEHAN JR.**


has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 8th Day of March, 2012*



  
Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**DENNIS J SHEEHAN JR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 8th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**GERARD J GAYDOSH**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System**

**(ICS 100) for Public Works**

*Issued this 23rd Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**GERARD J GAYDOSH**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 23rd Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**HECTOR RIVERA JR**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 7th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**HECTOR RIVERA JR.,**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 8th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JEFF SHAPIRO**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System**

**(ICS 100) for Public Works**

*Issued this 15th Day of March, 2012*



*Vilma Schifano Milmo*

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JEFF SHAPIRO**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 15th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute



# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOHN E KEEBLER SR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System**

**(ICS 100) for Public Works**

*Issued this 22nd Day of March, 2012*



*Vilma Schifano Milmo*

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOHN E KEEBLER SR.**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 22nd Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOSEPH M FEENEY**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System**

**(ICS 100) for Public Works**

*Issued this 28th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JOSEPH M FEENEY**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 28th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JUAN SANCHEZ**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System**

**(ICS 100) for Public Works**

*Issued this 30th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**JUAN SANCHEZ**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)  
An Introduction**

*Issued this 30th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**MARK A JOHNSON**

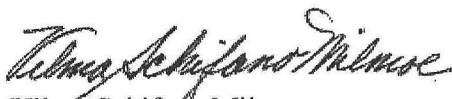
has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 13th Day of March, 2012*



  
Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**MARK A JOHNSON**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 13th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute



# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**PATRICK J DONAGHY**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 10th Day of April, 2012*



A handwritten signature in black ink, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**PATRICK J DONAGHY**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 10th Day of April, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**QUENTIN JONES**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 14th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**QUENTIN JONES**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 14th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**ROBERT F MOORE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 29th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**ROBERT F MOORE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 29th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmo".

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**RODNEY WARFIELD**

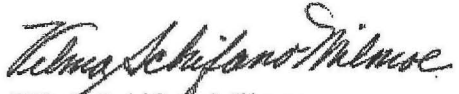
has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 2nd Day of April, 2012*



  
Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**RODNEY WARFIELD**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 2nd Day of April, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute



# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**RONALD C REESE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 24th Day of April, 2012*



*Vilma Schifano Milmo*

Vilma Schifano Milmo  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**RONALD C REESE**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 24th Day of April, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**TIMOTHY A JAMES**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 12th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



## FEMA

This Certificate of Achievement is to acknowledge that

**TIMOTHY A JAMES**

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

**IS-00700.a**

**National Incident Management System (NIMS)**

**An Introduction**

*Issued this 12th Day of March, 2012*



A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

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**IS-00100.PWb**

**Introduction to the Incident Command System  
(ICS 100) for Public Works**

*Issued this 16th Day of April, 2012*



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Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

# Emergency Management Institute



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A handwritten signature in cursive script, reading "Vilma Schifano Milmoie".

Vilma Schifano Milmoie  
Superintendent (Acting)  
Emergency Management Institute

11(c)

# PGW Introduction to NIMS



NATIONAL INCIDENT  
MANAGEMENT SYSTEM



Homeland  
Security



FEMA

Understanding NIMS  
IS-700.A – January 2009  
Visual 2.1



# Unit Objectives

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## Describe:

- The intent of NIMS.
- The key concepts and principles underlying NIMS.

## Unit List



 See pages 5-8 of the NIMS document.

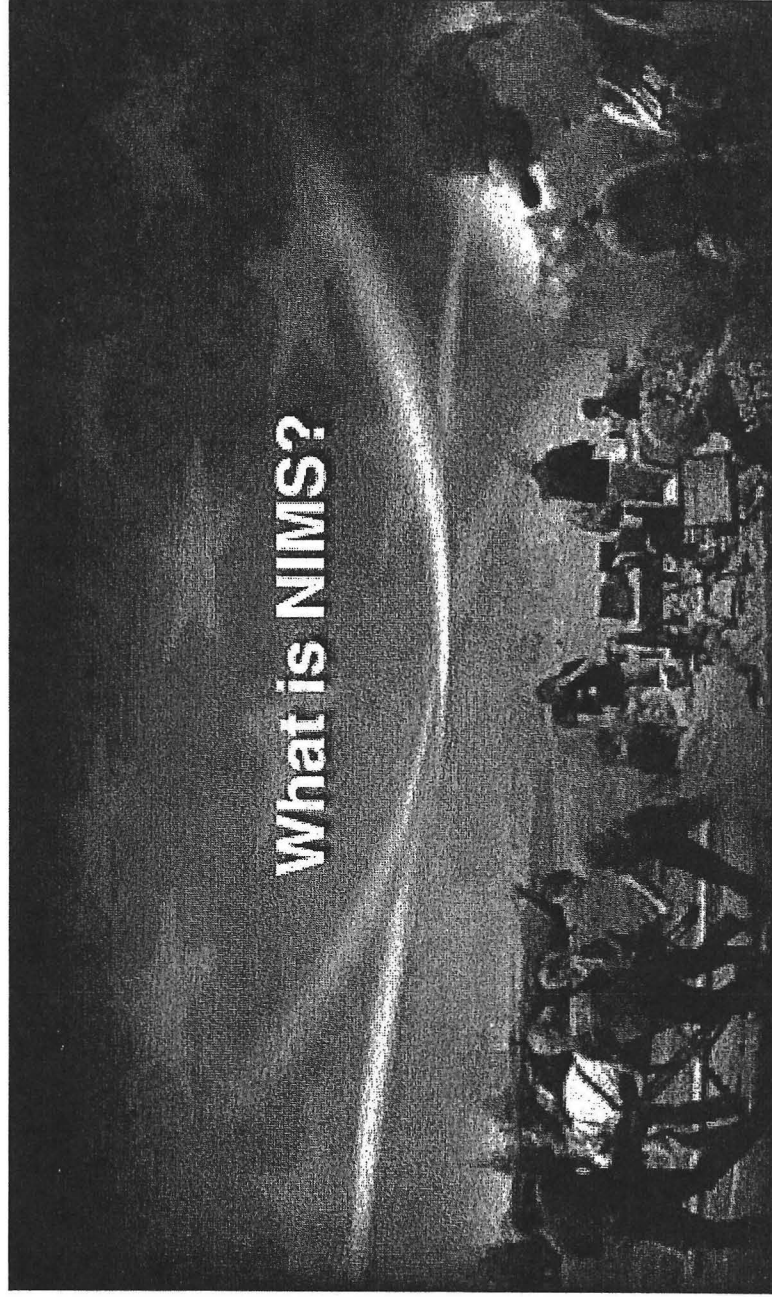


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Understanding NIMS  
IS-700.A – January 2009  
Visual 2.2

# What Is NIMS?

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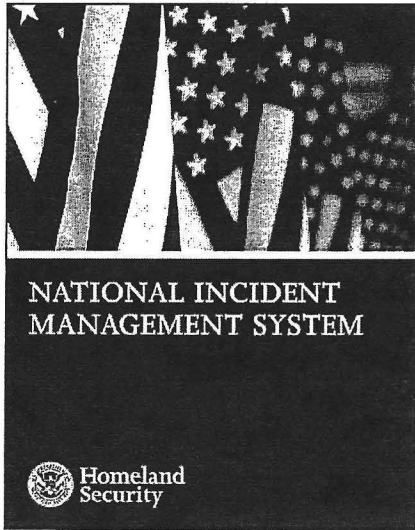


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Understanding NIMS  
IS-700.A – January 2009  
Visual 2.3

# NIMS Overview

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**What ? . . . NIMS provides a consistent nationwide template . . .**

**Who? . . . to enable Federal, State, tribal, and local governments, the private sector, and nongovernmental organizations to work together . . .**

**How? . . . to prepare for, prevent, respond to, recover from, and mitigate the effects of incidents regardless of cause, size, location, or complexity . . .**

**Why? . . . in order to reduce the loss of life and property, and harm to the environment.**



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**Understanding NIMS  
IS-700.A – January 2009  
Visual 2.4**

# NIMS: What It Is/What It's Not

## NIMS is . . .

- A flexible framework of:
  - Doctrine
  - Concepts
  - Principles
  - Terminology
  - Organizational processes
- Applicable to all hazards and jurisdictions

## NIMS is not . . .

- An operational incident management plan
- A resource allocation plan
- A terrorism/WMD-specific plan
- Designed to address international events



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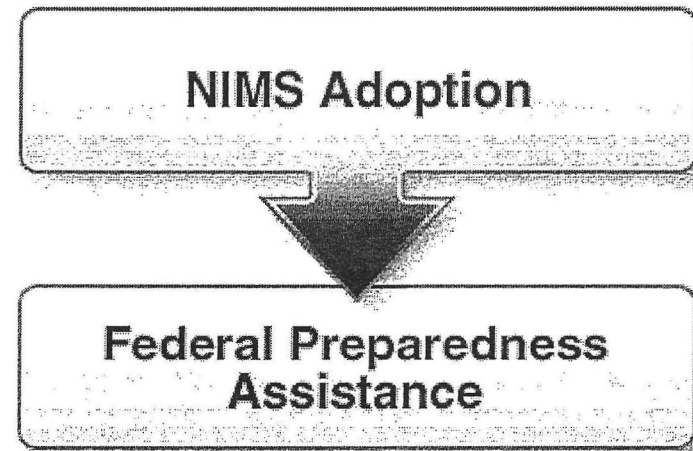
Understanding NIMS  
IS-700.A – January 2009  
Visual 2.5

# The NIMS Mandate

---

**HSPD-5 requires all Federal departments and agencies to:**

- **Adopt and use NIMS in incident management programs and activities.**
- **Make adoption of NIMS a condition for Federal preparedness assistance (through grants, contracts, and other activities).**



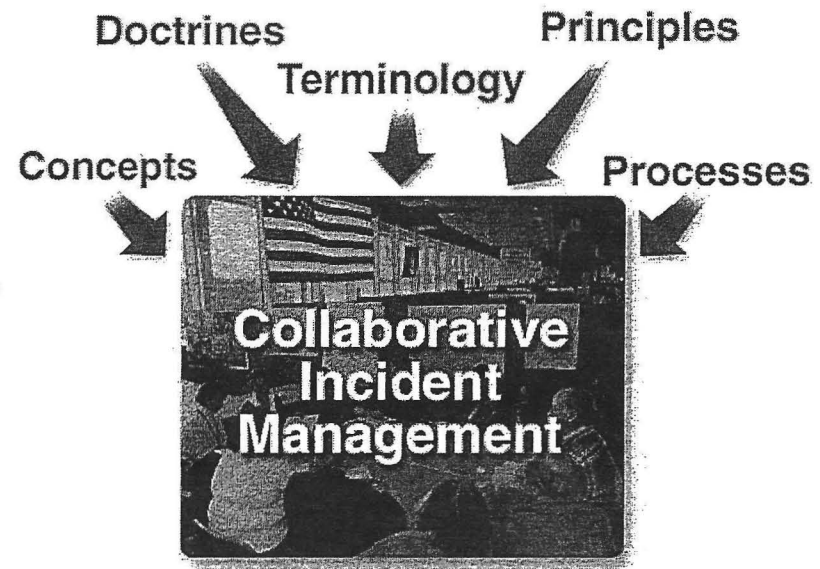
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IS-700.A – January 2009  
Visual 2.6

# Collaborative Incident Management

## NIMS:

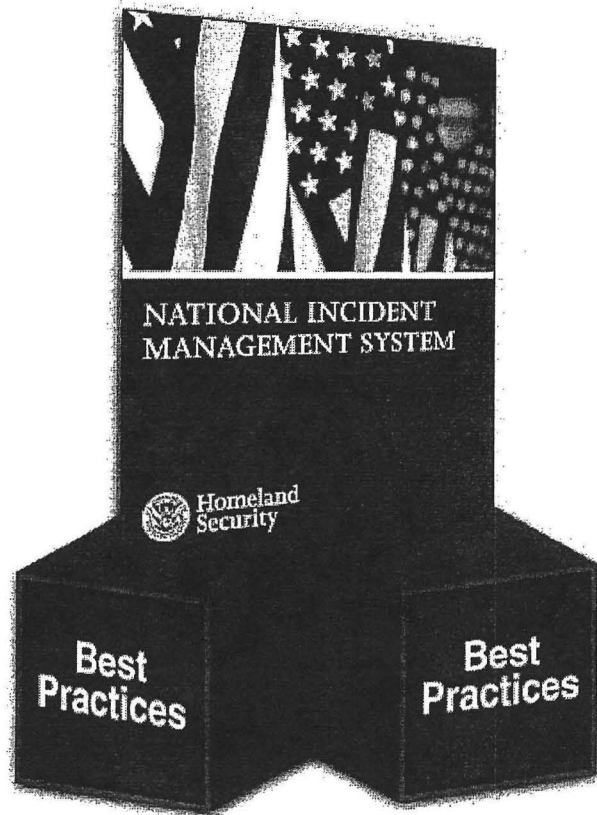
- Is not an operational incident management or resource allocation plan.
- Represents a core set of doctrines, concepts, principles, terminology, and organizational processes
- Enables effective, efficient, and collaborative incident management.



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Understanding NIMS  
IS-700.A – January 2009  
Visual 2.7

# NIMS Builds on Best Practices



**NIMS integrates emergency management best practices that:**

- **Lay the groundwork for the components of NIMS.**
- **Provide for the further development and refinement of supporting national standards, guidelines, protocols, systems, and technologies.**

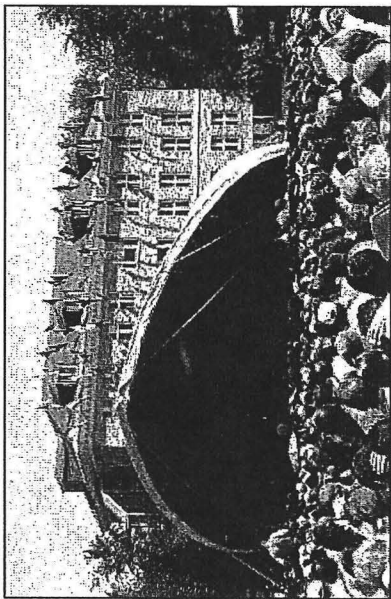


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Visual 2.8

# Flexibility

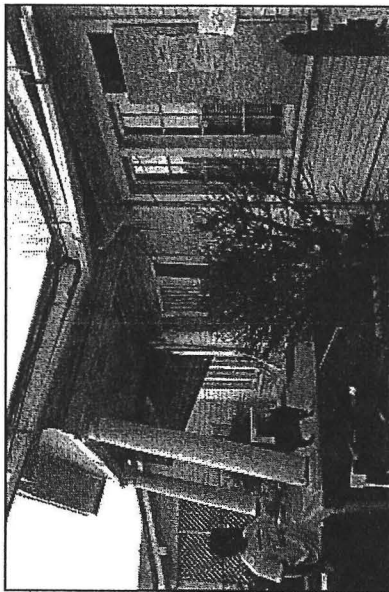
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**Planned Events**



**Forecasted Events**



**No-Notice Events**



**FEMA**

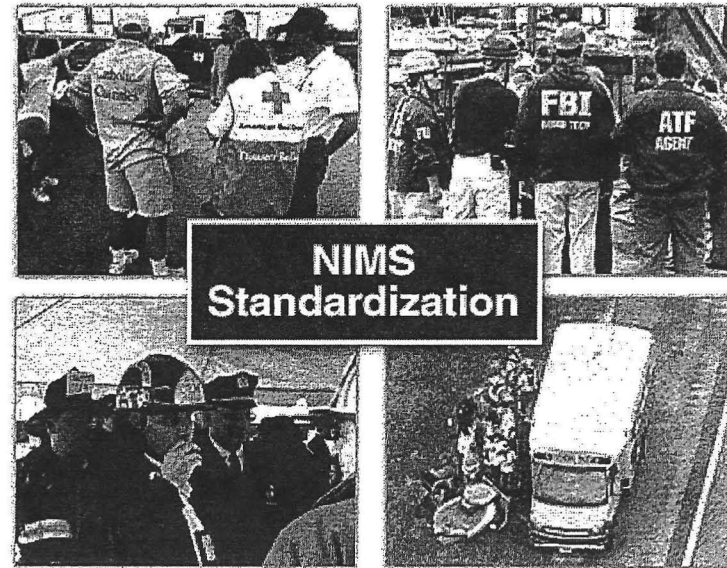
Understanding NIMS  
IS-700.A – January 2009  
Visual 2.9



# Standardization

## Standardized organizational structures:

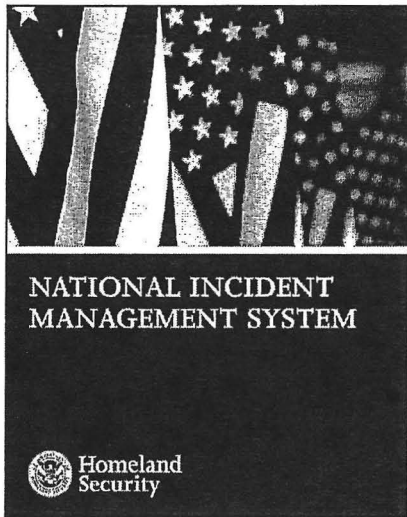
- Improve integration and connectivity among jurisdictions and disciplines.
- Allow those who adopt NIMS to work together.
- Foster cohesion among various response organizations.



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Visual 2.10

# NIMS Components



**Preparedness**

**Communications and Information Management**

**Resource Management**

**Command and Management**

**Ongoing Management and Maintenance**

**Incident Command System**

**Multiagency Coordination Systems**

**Public Information**



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Visual 2.11

# PGW Incident Command Structure

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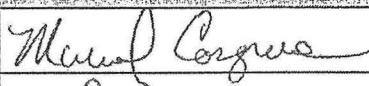
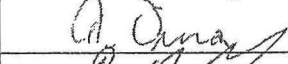




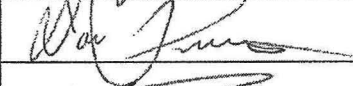


- All actions will be communicated and coordinated through the person in charge. If there is a change of the person in charge; relay all pertinent information to the person taking control on the job site, then announce the change to key personnel.
- As additional PGW personnel arrive they should report to the person in charge who will provide instructions and a summary of current conditions and actions taken as well as any actions underway.
- PGW Incident Command Center will be where the person in charge is located. If there are other agencies on location (PFD, PPD) that have the ultimate responsibility for the event (i.e., PFD at fire or explosion), the PGW person in charge will coordinate all actions and findings through that agency's Incident Command Center. Once PGW reports to the location of the controlling agency's command center, PGW must maintain continuous representation at that location.



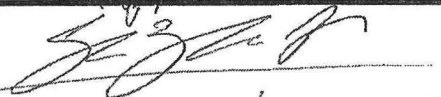
**FEMA**

Understanding NIMS  
IS-700.A – January 2009  
Visual 2.12

Pressure Force Meeting  
 9/6/2012 - 9/7/2012  
 Review Distrubution Bulletin #238:  
 Main Valve Inspection Procedure (updated 5/22/2012)

| Name                  | Signature  |
|-----------------------|--|
| Cosgrove              |    |
| Dina                  |    |
| Gavaghan              |    |
| Gonzalez              |    |
| <del>KERR James</del> |    |
| JAMES Kerr            | ↓  |
| Lynch                 |    |
| Pierson               |   |
| Serrano               |  |
| Walsh                 |  |

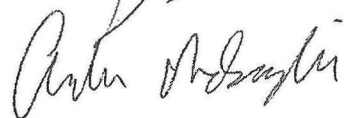
Woods



SACORDO



MCLAUGHLIN



FAUST



# Appendix A-12

12. PGW has revised its existing written procedure to include information on how to recognize a controllable and non-controllable incident and appropriate actions that should be taken.
  - (a) Bulletin 212, which established procedures for use during leak response and investigation, has been revised to incorporate the following passages in sections III.A (General Requirements) and III.B.3 (Evacuation Procedure) respectively:
    - (i) “If you suspect that the source of the leak involves any portion of PGW’s system that would require a Pressure Operation, notify Dispatching immediately;” and
    - (ii) “Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Restrict access into the Safety Perimeter to PGW employees required to perform their duties.”
    - (iii) “If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.”
  - (b) PGW emergency responders and field supervisors were re-trained and re-qualified (June 2011) on Emergency Response and the revised Distribution Department Bulletins. (See Item 1.)
- Supporting Documentation:
  - (a) Excerpts from Bulletin 212.
  - (b) See App. A-1, above.
- Cross-References: Prayer for Relief at ¶ (n); Settlement, ¶ 23(l).

12(a)



### III. Procedure

#### A. General Requirements

- **ACTION MUST ALWAYS BE TAKEN TOWARD PROTECTING PEOPLE FIRST AND THEN PROPERTY.**
- **All requirements listed throughout this procedure represent minimum requirements and are not meant to limit the Operator in making decisions where experience, safety and common sense indicates otherwise.**
- **All employees responsible for conducting leak investigations must be qualified per PGW Operator Qualification Plan.**
- Employees must wear all required personal protection equipment per PGW Policies.
- Odor complaints are to be dispatched promptly regardless of their source.
- Any delay in arrival to the location of the complaint must be reported to the Dispatcher immediately.
- Conduct all odor complaint investigations as if a hazard exists until it is determined otherwise. Determine the extent of the hazard (leak) by making appropriate GDI checks, observations and tests.
- Review all information given on the order.
- If possible, enter all buildings through the main entrance.
- If available, interview the caller for relevant information.
- If during the initial leak investigation it is determined that a hazard exists, call the Dispatcher immediately providing details of the existing hazard.
- **Mobile phones must be turned off before entering properties for the leak investigation.** All communications must be conducted outside in a natural gas free atmosphere.
- **If you suspect that the source of the leak involves any portion of PGW's system that would require a Pressure Operation, notify Dispatching immediately.**
- Foreign Odors - on a wide spread foreign odor incident, when instructed by a Dispatcher or Supervisor, the leak investigation can be limited to one premise and a check of structures (boxes) directly outside that premise ("one house check", see definitions). If gas readings are discovered follow the complete leak investigation procedure.
- Leak indications may come from sources other than natural gas (marsh gas, gasoline spills, etc.).
- If there are other "First Responders" agencies (PFD, PPD) on location, discuss with them as to their actions already completed and any findings of their investigation.
- Immediately establish a communications chain to share pertinent information with all PGW First Responders and any other First Responder agencies.





|                                 |  |
|---------------------------------|--|
| <p>Inside Leaks and Repairs</p> | <p>to provide the customer information of City agencies which can help.</p> <p>FSD Training will track and maintain records of all repairs that were completed. All temporary repairs will have follow-up by a positive, documented phone call to the customer. Call will be documented on the BCCS customer contact screen and separate FSD list.</p> <p><b>Note:</b> a temporary repair discovered <i>on any subsequent visit</i> is considered a Class A hazard and requires a temporary shut off as described above.</p> <p>All information pertaining to a piping or appliance hazardous condition must be recorded on the Hazard Screen of AIMS.</p> |
|---------------------------------|--|

III.B.3 Evacuation Procedure (minimum requirements)

- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- Do not re-enter the property until the source of leak has been located, made safe or repaired and the LEL levels are reduced to a safe level.
- Eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. Attempt to shut off gas from the curb box to the property.
- Request Dispatching to notify PECO for assistance
- **Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Restrict access into the Safety Perimeter to PGW employees required to perform their duties.**
- Call for assistance from the Fire Department (call 911) through the Dispatcher. The PFD and PPD will assist you with evacuating and maintaining the Safety Perimeter.
- Evacuate the adjoining properties and move the occupants outside the safety perimeter. Consider the worst case scenario.
- **If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.**
- Continue to report any more evacuation(s) and call for more assistance.

# Appendix A-13

13. PGW has re-qualified all work crews, emergency responders and field supervisors as to protecting the public, PGW workers, and property during emergencies, with emphasis on the requirement that responders not enter a building with 40% LEL or higher.

*See Appendix A-1 for documentation.*

Cross References: Prayer For Relief at ¶ (o);  
Settlement, ¶ 23(m).

# Appendix A-14

14. PGW is revising its written procedures to define and distinguish ventilating a building from ventilating a street and to stop ventilating when a building has gas at or above the explosive range.

- Supporting Documentation:

(a) Bulletin 296 (Draft).

Cross-References: Prayer for Relief at ¶ (p);  
Settlement, ¶ 23(n).

14(a)



## FIELD OPERATIONS

DISTRIBUTION DEPARTMENT

## VENTILATING PROCEDURE

Effective Date: 4/1/12

Bulletin Number 296  
Supersedes: NEW

### I. Purpose

To provide guidance on ventilation of natural gas from a building or underground source, and ventilation of carbon monoxide from a building.

### II. Definitions

**Bar Hole** - A 1" diameter or larger hole probed into the ground in a uniform manner with the use of a steel bar. The depth of each bar hole should be alongside and near the bottom of the structure (gas main or service line) being checked. All bar holes should be made in a uniform manner.

**Bar Hole Plugs** - Commonly used as a roadway patching material for sealing bar holes: (cold mix road tar - cone shaped - four inch long - one-half inch to three inches in diameter).

**Bar Hole Ventilator** - 3/8" holes drilled into a 3' x 1" pipe, a funnel and a quick connection for air supply which is used to draw residual gas out of a bar hole.

**Cavity** - A hollow or hole area within the body of the earth.

**Cold Patch** - Commonly used as a temporary road patching material: (cold mix asphalt).

**Denso Tape** - Wax tape used to form a tight seal around the bar ventilator while in the bar hole.

**Manhole** - An opening through which one may enter a sewer, regulator or valve vault.

**Migration** - The area of natural gas movement from and around the source of the leak.

**PECO** - Philadelphia Electric Company

**Permagum** - Plumber's putty used to form a tight seal around the bar ventilator while in the bar hole.

**PFD** - Philadelphia Fire Department

**PPM** - Parts Per Million

**Tamper** - a pneumatic tool used to compact a utility trench after back-filling, so it does not settle over time.



## FIELD OPERATIONS

### DISTRIBUTION DEPARTMENT

### VENTILATING PROCEDURE

Effective Date: 4/1/12

Bulletin Number 296

Supersedes: NEW

**Ventilation** - The introduction of fresh air into the affected structure or the drawing out of natural gas from below the surface.

- a. When used in reference to buildings, structures, manholes and confined spaces:  
The dissipation of gas and the introduction of fresh air into the affected structure, ventilation can be accomplished by opening doors and windows, breaking windows, opening basement grates, or removing manhole covers or lids to reduce the level of natural gas or carbon monoxide in the affected structure.
- b. When used in reference to gas readings underground:  
The drawing of natural gas from below the surface with the use of bar-holing, excavation, or pneumatic ventilating devices.

**Ventilation Board** - 4' x 6' aluminum board, with insulated edges, funnel and quick connection for air supply which covers an outdoor excavation and is used to draw residual gas out of a trench or cavity.

## II. Procedure

Ventilating should be considered in order to:

- Clear gas from a building, structure, manhole or confined space.
- To remove gas from the ground after a gas line has been repaired.

### A. Ventilating a building can be accomplished by:

- Opening windows and doors
- Leave the front door open to signify it is venting
- Leave the door open until the source of the reading has been found and repaired, the reading has been reduced to zero, and the odor (if applicable) of natural gas and/or carbon monoxide in the building has been eliminated.

### B. Ventilating soil or duct lines can be accomplished by:

- Bar-holing, excavating, or mechanical venting
- Opening (removing the box or manhole lid) and barricading any structure in which gas escapes an affected area e.g. curb box, water box, conduit manholes etc.
- Leaving structures open until the source has been found and repaired, the reading has been reduced to zero, and the odor of natural gas in the structure has been eliminated
- Consider the use of pneumatic ventilators such as a board ventilator or a bar hole ventilator, to draw the migrating gas away from the building/s (described below)
- Consider making an opening to relieve the gas from the ground thus reducing the quantity of gas migration toward the building.

**There is no "one way" to ventilate. In each case one must consider numerous variables in order to produce effective ventilation.**





## FIELD OPERATIONS

### DISTRIBUTION DEPARTMENT

### VENTILATING PROCEDURE

Effective Date: 4/1/12

Bulletin Number 296  
Supersedes: NEW

The following is a list of guidelines when ventilation is required for A and/or B:

1. Determine which reading is the most critical to relieve first. For example, if several houses are affected clearing the one with the highest reading should be considered.
2. Assess the underground area, consider amount of frost, the spread of migration, location of duct lines, and vicinity of buildings.
3. Remove lids and barricade (secure) manholes/curb boxes that are affected.
4. Open existing bar holes. Consider using a bar hole ventilator in an attempt to divert migrating gas away from any affected buildings.
5. Install additional bar holes with a rotary drill, if necessary.
6. Space bar holes in a uniform manner and as close as possible to the affected structure without damaging the gas facility or other facilities. Adhere to PA One Call requirements.
7. Consider the use of a pneumatic bar hole ventilator or a board ventilator to divert migrating gas from affected buildings.
8. When using a pneumatic ventilator, seal all unused bar holes before beginning the ventilating process.
9. When using a Bar Hole Ventilator to clear a building make sure the hole in the ground is sealed around the bar hole ventilator.
10. When using a Board Ventilator to clear a building make sure the ground below the board is flat and clean to create a good seal between the board and ground.
11. If the opening is larger than the board ventilator, backfill the hole so that the sides of the board cover the hole.
12. Seal all sides of the board.
13. Check the ventilator to determine if it is effectively pulling residual gas by using a gas detection instrument.
14. Recheck the affected building/s to see if the ventilation methods performed have reduced or eliminated the reported readings.
15. If necessary move pneumatic ventilator to another location.



## FIELD OPERATIONS

### DISTRIBUTION DEPARTMENT

### VENTILATING PROCEDURE

Effective Date: 4/1/12

Bulletin Number 296

Supersedes: NEW

16. Locate and repair leak.

**C. Ventilating to clear readings in the ground or building after a repair has been made:**

1. After repair has been made and if gas readings have not completely dissipated use a pneumatic bar hole or board ventilator to remove the residual gas.
2. Seal all unused bar holes before beginning the ventilating process.
3. Replace all removed manhole and curb box lids.
4. When using a Bar Hole Ventilator to clear a building make sure the hole in the ground is sealed around the bar hole ventilator.
5. When using a Board Ventilator, make sure the ground below the board is flat and clean to create a good seal between the board and ground.
6. If the opening is larger than the board ventilator, backfill the hole so that the sides of the board cover the hole.
7. Seal all sides of the board.
8. Check the ventilator to determine if it is effectively pulling residual gas by using a gas detection instrument.

#### Rechecks

1. While ventilating after a repair continue to check the affected building/s and/or structures every 15-30 minutes. When readings are cleared, turn off the ventilator and recheck. If readings remain clear wait another 15 minutes and check again. If you are a ventilator crew and readings remain clear, call for a supervisor.
2. If readings are unchanged after ventilating move the venting location numerous times, if necessary, in order to be effective and continue ventilating until the gas readings have improved to make safe situation. If there is no improvement in the readings continue with a migration check. If you are a ventilator crew, call for a supervisor.

#### Other Duties

While you are ventilating you are expected to housekeep the area, set barricades to protect pedestrians, remove trash, carefully attend your entire job site, take lunch during ventilating of residual gas, monitor houses affected and re-cement FFWS's.



## FIELD OPERATIONS

### DISTRIBUTION DEPARTMENT

### VENTILATING PROCEDURE

Effective Date: 4/1/12

Bulletin Number 296  
Supersedes: NEW

#### Paperwork

1. If you are a ventilator crew, a ventilating chart is to be filled out for every job you are given. If all readings are clear, have this form completed so that your releasing supervisor can initial the form. If you are relieved on location you will report all readings that exist to your relief. Fill out this form completely, including all your times, note your relief's name. If readings do not continuously improve by your efforts, call for a supervisor.
2. Keep clear records of your rechecks and note times through your entire shift. This will be helpful to show your relief or your supervisor and help to determine your progress.
3. Consider your customers. Be courteous and remember that you may be the last PGW employee available to help our customer, usually after a long ordeal. Leave the jobsite clean. Backfill properly, seal all bar holes and try and replace all excess dirt back in the hole and use the cement (footway) or turned over asphalt (roadway) as top ballast.
4. Write any instructions for the dispatcher of what remains to be done after you leave.
5. Try not to leave any unfinished work you could take care of yourself. If possible remove all barricades. You are not permitted to leave your jobsite without contacting your coordinator.

#### Equipment Required

|                                      |                            |
|--------------------------------------|----------------------------|
| Solid Bar                            | Wax Tape                   |
| Bar Puller and Handle                | Gas Detection Instrument   |
| Bucket (Three Gallon)                | Pneumatic Rotary Drill     |
| Board Ventilator/Bar Hole Ventilator | Shovels (Spade and Square) |
| Pre-mixed Concrete (40 lb. bag)      | Pneumatic Tamper           |
| Cold Patch (60 lb Bag)               | Hand Trowel                |
| Compressor                           | Yarn Or Jute Packing       |



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

**VENTILATING PROCEDURE**

Effective Date: 4/1/12

Bulletin Number 296

Supersedes: NEW

**IV. Associated Documentation**

**Relevant Code**

CFR 192.615

**Associated Bulletins**

Leak Response and Investigation Procedure - Bulletin #212

PFD and PECO Assistance on Leaks Calls - Bulletin #285

Carbon Monoxide Procedure for Distribution Employees - Bulletin #271

**Attachments**

N/A

**V. Handbooks**

Foreman's Handbook

Field Services Operations Manual

**VI. Transaction Listing**

TR-2012-02

Prepared by B. Bright 10/21/2011

**Approved by:**

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**Steven A. Groeber**

**Director, Field Operations & Work Planning**

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**Michael H. Jones**

**Vice President – Technical Compliance**

# Appendix A-15

15. PGW has reviewed and modified its written procedures to require Pressure Force to respond to: a) every “Prospect Emergency” (high priority) leak or odor complaint call/report which is located on a street block where there is a high pressure main (above 10 psig) installed, or b) for all other leaks or odor complaint calls/reports, where a PGW emergency responder believes that a high pressure main is or could be involved.

(a) Additional language was added to Bulletin 63, applicable to all “Prospect” Emergency (high priority) leaks:

“The Dispatcher shall then review the Detail Main Map for the location of the order. In the event that the leak complaint is located in the block or involves the 10-35 psig or higher main or service the Distribution Department Dispatcher shall: ...”

(b) PGW revised Bulletin #63 by adding additional language. Under the section titled “Out of Hours” in DDB#63, the following language was added: “Dispatch a Distribution crew, the Pressure Force Detail crew, the Night Supervisor if he.....” plus additional language was added in the same sections which states: ”informing the First Responders that this leak complaint is along the route of a 10-35 psig or higher main.” And finally additional language was added in the same sections which states: “Request all First Responders to notify Dispatching for the potential need of a Pressure Operation as soon as possible.” PGW also now tracks the results of this additional resource being dispatched.

(c) Additional language has also been added to the language of Bulletin 212 and 227:

“If you suspect that the source of the leak involves any portion of PGW’s system that would require a Pressure Operation, notify Dispatching immediately.” [Section III.A].

“If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter. [Section III.B.3].

Bulletin 227 has been modified by the addition of the following:

“In an out of hours situation it is most important to get personnel MOVING to appropriate locations since many employees must report from home in order to accomplish the Pressure Operation quickly and safely.

• Supporting Documentation:

- (a-1) Excerpts from Bulletin 63.
- (a-2) Prospect Emergency Dispatch Log
- (b) Pressure Force Reserve Crew – Out of Hours Log.
- (c-1) Excerpts from Bulletin 212.
- (c-2) Excerpts from Bulletin 227.

Cross-References: Prayer for Relief at ¶ (p);  
Settlement, ¶ 23(o).

15(a-1)



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

**NOTIFICATION PROCEDURE OF  
A POTENTIAL EMERGENCY  
INVOLVING A PRESSURE  
OPERATION**

Bulletin Number #63

Effective Date: March 28, 2011

Supersedes Distribution Department  
Bulletin #63 - Dated February 23, 2007

**I. Purpose**

To ensure early, detailed and accurate notification of a potential emergency that would involve a pressure operation to the Pressure Force and Gas Control supervisory personnel.

**II. Definition**

**Pressure Operation** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.

**Prospect Emergency** – A Customer Service Representative generates an emergency order when a customer calls with a potential gas leak and one of the following conditions are met:

- Customer reports a Strong odor of Gas
- Gas leaks from Schools, Hotels, Hospitals or any other building where people congregate
- Gas leaks reported from Municipal Radio, Fire Department or Police Department
- Reports of an Explosion
- Calls from Contractors, Plumbers, Workmen, etc. indicating they have broken, ruptured or damaged a gas line while digging in the street, sidewalk or yard.
- A second call for a gas leak prior to PGW arriving on location.

**III. Procedure**

Upon receipt of a Prospect Emergency, the Distribution Department Dispatcher shall dispatch the appropriate manpower and equipment to the order location. In the event that the leak complaint is located in the block or involves the **10-35 psig or higher main or service** the Distribution Department Dispatcher shall:

During Normal Business Hours

Dispatch a crew, supervisor and emergency grease unit to the location, informing the PGW First Responders that this leak complaint is along the route of a 10-35 psig or higher main. Notify the Pressure Force Supervisor, Superintendent of Maintenance, Distribution Department Manager and the Gas Control Dispatcher on duty of a potential leak that could require a Pressure Operation. Request information from the PGW First Responders on scene and determine which main is affected as soon as possible.





FIELD OPERATIONS

DISTRIBUTION DEPARTMENT

NOTIFICATION PROCEDURE OF  
A POTENTIAL EMERGENCY  
INVOLVING A PRESSURE  
OPERATION

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Prepare detail main maps and service information for the location and have copies delivered to personnel at the scene, if necessary. Emergency Incident Report, recording all times and related information. Update information from the field to the Pressure Force Supervisor, Superintendent of Maintenance, Distribution Department Manager and the Gas Control Dispatcher.

Out of Hours

Dispatch a Distribution crew, the Pressure Force Detail crew, the Night Supervisor if he is on duty, (if he is not, dispatch the Detail Supervisor) and the emergency grease unit, informing the First Responders that this leak complaint is along the route of a 10-35 psig or higher main. In all cases, notify the Detail, Reserve and Reserve Staff Supervision, Gas Control Dispatcher on duty and the Pressure Force Supervisor on Reserve. Request and gain information from the first on scene First Responders and determine the affected main as soon as possible. Request all First Responders to notify Dispatching for the potential need of a Pressure Operation as soon as possible. Initiate Emergency Incident Report, recording all times and related information. Update information from the Field to the Detail, Reserve and Reserve Staff Supervision.

Upon field determination that a high pressure leak exists, re-notify the Gas Control Dispatcher and the Pressure Force Supervisor of the approximate location of the leak. After the Pressure Force Supervisor determines any additional manpower needs, assist with the notification of required resources for the Pressure Force personnel. When the Pressure Force crews are called in, the Dispatcher may, when necessary, notify the Philadelphia Police Department (911) and request an escort for each Pressure Force crew from the 8<sup>th</sup> and Berks parking lot to the valve locations.

As soon as possible, the Distribution Dispatcher will confer with the Supervisor on location and it will be determined if there is any additional labor, mobile equipment, tools and/or material that is required at the scene.

**Note: Whenever an order is received out of the normal working hours reporting an explosion or other severe or extreme emergency, the Distribution Dispatcher will immediately dispatch, by telephone, the supervisory employee who lives closest to the job site. Refer to "Dispatching Procedure for Severe or Extreme Emergencies" and "Emergency Notification Procedure" located in Section IV of the Supervisors Handbook.**



**FIELD OPERATIONS**

**DISTRIBUTION DEPARTMENT**

**NOTIFICATION PROCEDURE OF  
A POTENTIAL EMERGENCY  
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**IV. Associated Documentation**

**A. Relevant Code**

1. 49 CFR Part 192 Subpart L – Operations 192.605  
Emergency Plan – Handling Abnormal Operating Conditions

**B. Associated Bulletin**

- Distribution Bulletin #227 - "Out-of-Hours Pressure Operation."
- Distribution Bulletin #228 - "Pressure Control Operation Outline Procedure."
- Distribution Bulletin #230 - "Organization for Emergency Operations."

**C. Attachments**

N/A

**V. Handbooks**

- A. Distribution Pressure Force Handbook
- B. Field Operations Supervisor's Handbook
- C. Emergency Plan

**VI. Transaction Listing**

TR-2006-06 – Revised 3/28/11

Approved by:

John Jolly

Manager, Distribution Department

Steven Groeber

Director, Field Operations & Work Planning

15(a-2)

| Date       | Location              | PF Supervisor | Time PF Notified | Preliminary Report                          | PF Crew  |               |             |               | Time Arrived on a Job | PF Crew Activity                    | Time Released |
|------------|-----------------------|---------------|------------------|---|----------|---------------|-------------|---------------|-----------------------|-------------------------------------|---------------|
|            |                       |               |                  |   | A - Man  | Time Notified | B - Man     | Time Notified |                       |                                     |               |
| 05/14/2011 | 3178 Chatham          | Palombi       | 3:44             | Car hit gauge post                          | Pierson  | 3:44          |             |               |                       |                                     |               |
| 05/31/2011 | 2200 W. Allegheny     | Palombi       | 23:59            | Reading in PGWMH                            | Gavaghan | 23:59         |             |               | N/A                   | Greased studs on valve              |               |
| 07/04/2011 | 1400 Unity            | Palombi       | 22:17            | 12" HP steel main on block                  | Gonzalez | 22:14         | 11:40       |               |                       |                                     |               |
| 07/10/2011 | 901 Levick            | Palombi       | 16:30            | Inside leak HP main on block                | Cosgrove | 16:30         |             |               | 16:54 called off      |                                     |               |
| 07/18/2011 | 200 S. 24th St.       | Palombi       | 1:10             | 30" HP main on block                        | J. James | 1:10          | T. Douglass | 1:37          | 1:55                  | None                                |               |
| 07/27/2011 | 801 E. Tioga          | Palombi       | 22:03            | HP main on block                            | Pierson  | 22:03         | Faust       | 22:04         |                       | None                                |               |
| 08/02/2011 | 1935 E. Allegheny     | Palombi       | 23:55            | HP main on block                            | Pierson  | 23:56         | Kalup       | 23:58         | 0:41                  | None                                |               |
| 08/28/2011 | 6400 Ridge            | Palombi       | 20:15            | 12" hp main on block                        | Cosgrove | 20:15         |             |               | 20:35                 | None                                |               |
| 09/25/2011 | 1500 Church           | Palombi       | 20:39            | 20" hp broken main                          | Dina     | 21:34         |             |               |                       | Pressure Reduction                  |               |
| 10/03/2011 | 2200 W. Allegheny     | Palombi       | 4:01             | Reading in PGWMH                            | Dina     | 6:38          |             |               | 6:52                  | None                                |               |
| 10/03/2011 | 11580 Roosevelt       | Palombi       | 23:55            | HP main on block                            | Gonzalez | 23:35         | Scott       | 23:35         | 0:45                  | None                                |               |
| 10/10/2011 | 2810 Amber            | Palombi       | 21:57            | HP main on block                            | n/a      | 21:56         |             |               |                       | None                                | 23:00         |
| 10/10/2011 | 1501 Walnut St.       | Palombi       | 20:27            | HP main on block                            | n/a      | 20:29         | n/a         | 20:30         |                       | None                                |               |
| 10/11/2011 | 2800 Cantrell         | Palombi       | 22:36            | HP main on block                            | n/a      | 22:38         | n/a         | 22:38         |                       | None                                |               |
| 10/23/2011 | 2001 Hamilton         | Palombi       | 20:49            | HP main on block                            | Gavaghan | 20:57         |             |               | 21:36                 | make repairs                        |               |
| 11/02/2011 | 3440 Chestnut         | Palombi       | 19:45            | Hp drip RO                                  | S. Walsh | 19:45         | n/a         | n/a           |                       | Pressure Reduction                  |               |
| 12/06/2011 | 7639 Germantown       | Palombi       | 16:20            | HP main on block                            | Serrano  | 16:20         | n/a         | n/a           | N/A                   | None                                |               |
| 12/08/2011 | 2900 W. Allegheny     | Palombi       | 6:45             | 12% gas pgwmh                               | Dina     | 6:45          | n/a         | n/a           | N/A                   | None                                |               |
| 12/27/2011 | 9400 Clark St.        | Palombi       | 0:14             | HP main on block                            | Walsh    | 0:14          | Woods       | 0:16          | 1:10                  | None                                | 2:37          |
| 01/09/2012 | 6930 Cresheim         | Palombi       | 23:54            | HP main on block                            | Gonzalez | 23:54         | n/a         | n/a           | N/A                   | None                                | 1:06          |
| 2/4/2012   | 2400 Graysferry Ave   |               |                  | 0 - 30% Gas Cold Patch trench, 65%LEL PGWMH | A. Dina  | 19:08         | D. Harris   | 19:06         | 20:26                 |                                     |               |
| 2/23/2012  | 3432 W. Allegheny     | Palombi       | 18:06            | Odor  | Pierson  | 18:07         | Harris      | 18:07         |                       | None                                |               |
| 2/27/2012  | 746 Adams Ave         |               |                  | Odor & 80% Gas BH over 12" CI Main          | Pierson  | 0:36          | Harris      | 0:36          | 1:20                  | None                                |               |
| 3/4/2012   | 5200 Chew Ave         |               |                  | Fire Dept                                   | James    | 2:06          |             | 2:20          | 2:35                  | None                                |               |
| 3/17/2012  | 14000 Roosevelt Blvd  | Palombi       | 14:00            | Contractor hit 6" IP Main                   | Gonzalez | 13:56         |             | 14:05         | 15:00                 |                                     |               |
| 3/19/2012  | 6409 Hasbrok Ave      |               |                  | Fire Dept                                   | Gonzalez | 21:59         |             |               |                       | None                                |               |
| 4/8/2012   | 201 Pattison          | Marinzolli    |                  | Contractor damaged HP svc inside            |          | 12:06         |             |               | 13:15                 | None                                |               |
| 4/24/2012  | 700 Arch              |               |                  | LP drip cock leaking                        | James    | 16:53         |             | 17:01         | 17:20                 | leaking                             |               |
| 5/31/2012  | 5700 Rising Sun       |               |                  | Car hit PGW vent post                       | Walsh    | 16:04         |             |               |                       | None                                |               |
| 6/30/2012  | 302 W. Oregon Ave     |               |                  | 20 GAS BUF BOX 0-100+ BH                    | S. Walsh | 10:24         |             | 10:40         | 11:00                 | None                                |               |
| 7/7/2012   | 3406 East Falls Ln    |               | 8:49             | car hit outside meter set                   | Gavaghan | 8:49          |             | 8:55          | 9:10                  |                                     |               |
| 7/13/2012  | 4506 Castor Ave       | Palombi       | 16:00            | Hp on block                                 | Pierson  | 15:41         |             | 15:55         | N/A                   | Not needed on a job.                |               |
| 8/13/2012  | 2300 S. Columbus      |               |                  | Hp on block                                 | Gavaghan | 0:05          |             | 0:13          | 1:00                  | None                                |               |
| 8/30/2012  | 1405 E. Washington Ln | Palombi       | 6:38             | Car hit HP Gauge Post                       | A. Dina  | 5:23          |             | 6:00          | 6:01                  | leaking                             |               |
| 8/31/2012  | 1332 N. 56            |               |                  | Odor  | A. Dina  | 6:12          |             | 6:25          | 7:10                  | None                                |               |
| 9/17/2012  | 5200 Penn             |               |                  | Septa Bus burning (Battery)                 | A. Dina  | 17:36         |             | 17:50         | N/A                   | Not needed on a job                 |               |
| 9/30/2012  | 2200 W. Allegheny     |               |                  | Car hit HP Guage Post and Vent Post         | Walsh    | 4:00          |             |               | 4:30                  | Shut off Guage line in PGW MH by PF |               |
| 10/13/2012 | 200 Walnut            |               |                  | Broken Water Main                           | Serrano  | 13:08         |             | 13:25         | 13:51                 | None                                |               |
| 10/20/2012 | 6700 Ditman           | Marinzolli    | 22:25            | HP main on block                            | Gavaghan | 22:25         | Harris      | 22:25         | 22:46                 | None                                |               |
| 10/21/2012 | 100 Leverington       | Marinzolli    | 7:56             | HP main on block                            | Gavaghan | 7:56          | Harris      | 7:58          | 8:53                  | None                                |               |
| 10/22/2012 | 2300 W. Allegheny     | Marinzolli    | 3:18             | HP main on block                            | Gavaghan | 3:20          | Harris      | 3:20          | 4:09                  | None                                |               |

15(b)

**PRESSURE FORCE RESERVE CREW - OUT OF HOURS**  
**- PROSPECT EMERGENCY / HP LEAK NOTIFICATIONS -**

| Date       | Time  | Location                         | Crew Leader | PF Sup    | Called Off<br>Y-N? |
|------------|-------|----------------------------------|-------------|-----------|--------------------|
| 06/22/2011 | 22:30 | 429 Robbins Ave                  | Gavaghan    | Awad      | Y                  |
| 06/22/2011 | 23:30 | 2900 N. 12th St                  | Gavaghan    | Awad      | Y                  |
| 07/04/2011 | 22:10 | 1400 Unity St                    | Gonzalez    | Palombi   | Y                  |
| 07/10/2011 | 15:30 | 901 Levick St                    | Cosgrove    | Awad      | Y                  |
| 07/14/2011 | 16:00 | 169 Levering St                  | Cosgrove    | Awad      | Y                  |
| 07/18/2011 | 23:00 | 2300 Walnut St                   | James       | Awad      | N                  |
| 07/22/2011 | 22:10 | 3300 Delaware - (Fire Dept req.) | Pierson     | Palombi   | Stand By           |
| 07/24/2011 | 9:00  | Robinson & Vine                  | Pierson     | Palombi   | Y                  |
| 07/27/2011 | 22:05 | 800 E Tioga                      | Pierson     | Palombi   | Y                  |
| 08/07/2011 | 9:30  | 1101 W. Lehigh                   | Cosgrove    | Marinzoli | Y                  |
| 08/13/2011 | 19:00 | 400 Bristol                      | Gavaghan    | Awad      | Y                  |
| 08/13/2011 | 20:30 | 2600 S. 57th                     | Gavaghan    | Awad      | Y                  |
| 08/16/2011 | 21:19 | 2800 Jackson                     | Gavaghan    | Awad      | Stand By           |
| 08/21/2011 | 11:57 | 900 E Allegheny                  | Pierson     | Palombi   | Y                  |
| 08/27/2011 | 23:33 | 300 Leverington                  | Cosgrove    | Palombi   | Y                  |
| 08/28/2011 | 20:15 | 6400 Ridge                       | Cosgrove    | Palombi   | N                  |
| 09/03/2011 | 2:25  | 627 N. 16th                      | James       | Awad      | Y                  |
| 09/05/2011 | 10:17 | 4200 Penn St.                    | James       | Awad      | Y                  |
| 09/08/2011 | 17:50 | 1900 N 10th                      | Serrano     | Marinzoli | Y                  |
| 09/09/2011 | 21:47 | 7801 Roosevelt                   | Serrano     | Marinzoli | Y                  |
| 09/10/2011 | 21:48 | 1800 E Ontario                   | Serrano     | Marinzoli | N                  |
| 09/12/2011 | 18:20 | 3025 Castor                      | Serrano     | Marinzoli | Y                  |







15(c-1)



Effective April 21, 2011

Bulletin Number #212  
Dated September 15, 2008

## **I. Purpose**

To provide clear direction to PGW employees when they are responding to and investigating an odor complaint. Odor complaints may originate from the police or fire departments, other utilities, contractors, customers or the general public. Odor complaints must be investigated promptly. Any delay in responding to a reported odor complaint must immediately be brought to the attention of the Dispatcher on duty.

If the investigation reveals a gas leak, the leak must be evaluated and action taken in accordance with the guidelines outlined in this procedure. All leak indications must be investigated to identify any potential hazardous conditions. Once a hazardous condition is identified, immediate action must be taken to make conditions safe. **Action must be taken toward protecting people first and then property.**

The employee assigned to the investigation must assume (for any odor complaint investigation) that a hazardous condition exists. Only after an odor complaint investigation is completed shall an operator determine an appropriate classification.

## **II. Definitions**

- AREA CHECK – The appropriate area to investigate the original reported odor complaint. This is determined by the nature of the notification (phone call) and the investigation itself. **Minimum** coverage should be 50 feet in all directions (approximately three row houses each way) from the odor complaint or any reading.
- BAR HOLE – a 1” diameter or larger hole probed into the ground in a uniform manner with the use of a steel bar. The depth of each bar hole should be along side and near the bottom of the structure (gas main or service line) being checked. All bar holes should be made in a uniform manner.
  - ◊ PURPOSE OF BAR HOLES – used to sample gas/air mixtures underground in an attempt to pinpoint the largest concentration of natural gas and the source of the leak.
- BUILDING LINE – the extended house line from the side of a building.
- CGI – Can’t Get In
- CURB LINE – The outside edge of the curb, where the curb meets the street. A directional identification must be noted on each curb line measurement. (Example: EWC = east of the west curb line)
- ENN – Entry Not Necessary; see section “III.B.1. What buildings must be checked?” (The use of the ENN rules does not apply to FSD technicians that are not qualified. The only FSD technicians qualified are “A” men and above.)



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- FFW – Generally means “Front Foundation Wall”. However, for a leak investigation the term also means to check “ALL APPROPRIATE BASEMENT WALLS”, all walls where a gas main (outside) may run adjacent to the building (not only the front wall).
- FIRST RESPONDER – term used to describe the first trained responder to arrive on scene of an emergency, accident, natural or human-made disaster, gas leak, fire or similar event. Such people may be PGW personnel, firefighters, police, other law enforcement or emergency medical services, or lay rescuers to deal with the situation and protect life and property.
- GABLE END – where the end (side) wall of a building does not connect to another building. On all reports that a gable end is indicated the direction of the gable end must also be recorded, example: a single dwelling on a north-south street shall have the address recorded and gabled end to the north and south. See example drawings.
- GDI – Gas Detection Instrument
- GENERAL ATMOSPHERE - is an open area within a room on any floor of a property. The general atmosphere is not behind a wall, in the corners of a room, between or against walls, floors, or in the area of the ceiling joist, or close to the FFW.
- INCIDENT COMMAND CENTER – a designated location used to coordinate activities and share information.
  - ◊ INCIDENT COMMAND LOCATION - ON SCENE – The location of the highest ranking PGW employee responsible for all activities at the job site.
- LOWER EXPLOSIVE LIMIT (LEL) – Lowest concentration (percentage) of gas in air needed for the gas to ignite when given an ignition source. Concentrations lower than LEL are “too lean” to burn. 5% gas in air is the LEL of PGW gas.
- “M PACT” BAR HOLE – a ¼” to 1” diameter hole probed into the ground in a uniform manner with the use of an insulated “M Pact O” tool. The depth of each bar hole should be approximately 14” deep but not to exceed 18”.
  - ◊ PURPOSE OF “M PACT” BAR HOLE – used to sample gas/air mixtures underground to determine if a gas leak exists on a natural gas facility and to determine the gas migration pattern if a leak exists.
- MIGRATION – the area of natural gas movement from and around the source of the leak.
- MIGRATION LIMITS – the outer boundaries of natural gas movement in all directions. A circle of “zero readings” around a migration pattern is necessary to establish the migration limit.



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- **ODOR COMPLAINT** – a report of a possible inside or outside gas odor, leak, explosion or other hazardous conditions which may involve gas pipelines, or other gas facilities, customer's house piping, or appliances. All odors must be confirmed using a GDI.
- **OPERATOR** – a PGW Operations' representative – technician, foreman, supervisor, etc.
- **ONE HOUSE CHECK**— a term used during a declared foreign odor allowing the technician or foreman to make a limited check for safety. Job must be within the area affected from the foreign odor. Permission must be obtained through the dispatcher or supervisor. See "Foreign odor" in "III.A. General Requirements" below.
- **OUTSIDE SOURCE** – (who calls in an odor) a PGW employee, other utility, police or fire personnel, contractors, customers and the general public.
- **PPM GDI GAS READINGS** – samples of the atmosphere taken with a parts per million (PPM) gas detection instrument. Any **INSIDE** reading qualifies as a reading and requires a physical action. An **OUTSIDE** reading of 2% LEL or higher is required in order to qualify as a recordable reading.
- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.
- **READING** – a repeatable deviation on a GDI or equivalent expressed in % LEL & % Gas scales.
- **SAFETY PERIMETER** – The boundary of an area outside of the influence of the leaking gas. Also known as a Collapse Zone by the Philadelphia Fire Department.
- **SUSTAINED READING** – a gas reading found after a bar hole or structure has been opened and is allowed to stabilize or ventilate. **NOTE:** This reading should be recorded on the final report.
- **UNIFORM MANNER** – all bar holes shall be spaced evenly and have the same size and depth.
- **UPPER EXPLOSIVE LIMIT (UEL)** – At concentrations above the UEL the gas has displaced so much air that there is not enough oxygen for the gas to burn. When readings are above the UEL, be aware that the gas concentration will come down though the explosive limit of gas when the source of the gas leak is removed or through ventilation. 15% gas in air is the UEL of PGW gas.
- **VENTILATE** – This term, when used in reference to buildings, structures, manholes and confined spaces, means the introduction of fresh air into the affected structure. Ventilation can be accomplished by opening doors and windows, breaking windows, opening basement grates, and removing manhole covers or lids to prevent or reduce the level of natural gas in the affected structure. This term, when used in reference to gas readings underground, means to draw residual natural gas from below the surface with the use of pneumatic mechanical devices.



### III. Procedure

#### A. General Requirements

- **ACTION MUST ALWAYS BE TAKEN TOWARD PROTECTING PEOPLE FIRST AND THEN PROPERTY.**
- **All requirements listed throughout this procedure represent minimum requirements and are not meant to limit the Operator in making decisions where experience, safety and common sense indicates otherwise.**
- **All employees responsible for conducting leak investigations must be qualified per PGW Operator Qualification Plan.**
- Employees must wear all required personal protection equipment per PGW Policies.
- Odor complaints are to be dispatched promptly regardless of their source.
- Any delay in arrival to the location of the complaint must be reported to the Dispatcher immediately.
- Conduct all odor complaint investigations as if a hazard exists until it is determined otherwise. Determine the extent of the hazard (leak) by making appropriate GDI checks, observations and tests.
- Review all information given on the order.
- If possible, enter all buildings through the main entrance.
- If available, interview the caller for relevant information.
- If during the initial leak investigation it is determined that a hazard exists, call the Dispatcher immediately providing details of the existing hazard.
- **Mobile phones must be turned off before entering properties for the leak investigation.** All communications must be conducted outside in a natural gas free atmosphere.
- **If you suspect that the source of the leak involves any portion of PGW's system that would require a Pressure Operation, notify Dispatching immediately.**
- Foreign Odors - on a wide spread foreign odor incident, when instructed by a Dispatcher or Supervisor, the leak investigation can be limited to one premise and a check of structures (boxes) directly outside that premise ("one house check", see definitions). If gas readings are discovered follow the complete leak investigation procedure.
- Leak indications may come from sources other than natural gas (marsh gas, gasoline spills, etc.).
- If there are other "First Responders" agencies (PFD, PPD) on location, discuss with them as to their actions already completed and any findings of their investigation.
- Immediately establish a communications chain to share pertinent information with all PGW First Responders and any other First Responder agencies.



FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS

**LEAK RESPONSE AND INVESTIGATION**  
**PROCEDURE**

Effective April 21, 2011

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1. Forced Entry

Upon the initial visit, if any house that requires a leak investigation per this procedure is apparently locked and secure and it is not possible to gain entrance, make an exterior examination. Examine at the basement windows, mailbox or any other place where an indication of the inside atmosphere may be sampled. If an odor or reading of gas is detected coming from a premise either from outside that premise or from an adjoining property, make forcible entry through a window or a door.

- If a forcible entry is required, inform the Dispatcher. The Dispatchers will call 911. Give the Dispatcher the address of every house(s) requiring forced entry.
- Do as little damage as possible.
- During normal business hours notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6532 (voice mail).
- Sign and leave Form #6489 to inform the customer that it was necessary for PGW to enter the premise.
- Complete a detailed Accident Report (Form 119) and submit it at the end of your shift.

2. Chain of Command – Incident Command Center

When **both Distribution and Field Services *union-covered personnel*** are on location, the **Distribution Foreman is in charge and responsible** for following all procedures, directing make safe procedures and then continuing the investigation.

A Field Service Department Supervisor or Distribution Department Supervisor has the authority to supersede the Distribution Foreman.

When **both Distribution and Field Services *supervision*** are on location of a leak investigation, the highest ranking **Distribution Supervisor is in charge**.

All actions will be communicated and coordinated through the person in charge. If there is a change of the person in charge; relay all pertinent information to the person taking control on the job site, then announce the change to key personnel.

As additional PGW personnel arrive they should report to the person in charge who will provide instructions and a summary of current conditions and actions taken as well as any actions underway.

PGW Incident Command Center will be where the person in charge is located. If there are other agencies on location (PFD, PPD) that have the ultimate responsibility for the event (i.e., PFD at fire or explosion), the PGW person in charge will coordinate all actions and findings through that agency's Incident Command Center. Once PGW reports to the location of the



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controlling agency's command center, PGW must maintain continuous representation at that location.

3. Dispatching Resources Available:

- Distribution Crew(s)
- FSD Technician(s)
- Emergency Grease Equipment
- Cut-Cap Trailer
- Excavation Equipment including Vacuum Excavation truck
- FSD and/or Distribution Supervision
- Pressure Force Supervision and Crews
- Police or Fire Departments through 911 to assist (evacuations, safety perimeter, traffic control, public safety, etc)
- PECO
- PWD
- Notification or dispatching of Supervisory Chain of Command.

4. Odor

If during the course of an investigation a gas odor is detected, the source must be confirmed as soon as possible using a GDI instrument. The course of action may include further migration checks and eventual classifying of the leak. If required, request assistance immediately through the Dispatcher if the odor appears to be coming from inside a building.

B. Inside Leak Investigation (on any odor complaint, inside or outside)

1. What Buildings Must Be Checked (See attached illustrations of this procedure)

- Check the premise closest to the odor complaint. If the odor complaint was reported by a passerby, concentrate on the premise closest to the reported odor.
- If **a reading or odor is found inside** the first premise and the source is suspected from any Distribution facility (mains and services) or another building, the adjoining building(s) must be checked. (Note: in the case of a twin house (gable end) property, the unattached house must be attempted to be checked but can be considered for Entry Not Necessary (see section B.4., and see illustrations).
- Continue to investigate adjoining buildings until no gas reading is found.
- If **no reading or odor is found inside** the initial premise, attempt to enter and check properties on either side. These properties may be considered for "Entry Not Necessary" (See Section B.4.).



FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS

LEAK RESPONSE AND INVESTIGATION  
PROCEDURE

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A building must be checked when a reading is found within 5 feet of the building, including the side of the building (Distribution also required).

- A building must be checked when a reading is found inside the curb line in front of the premise and a bar hole cannot be made within 5 feet.
- A building must be checked when a vent box reading is found in front of the premise, (Distribution also required).
- A building must be checked when there is a reading over the service and the service is steel installed in 1975 or before (older).
- Considerations should be made to check additional properties when there is wall to wall paving or frost conditions.

2. Performing The Inside Leak Investigation

- Turn on and zero the GDI using fresh air before entering any premises. Follow the operating instructions for the GDI found in your handbook.
- Normally, the first premise to visit should be the house of the odor complaint. However, the first premise requiring entry may be dictated by the intensity and location of the hazard (leak).
- Knock on door – DO NOT USE THE DOOR BELL.
- Identify yourself. Verify the customer's name and address (if it is the order address).
- **The operator should not switch lights on or off. The customer must also be warned not to switch any electric devices on or off, or to smoke during the investigation.**
- Question the customer regarding the odor complaint regarding the location and intensity of the odor
- Go to the area of where the leak or odor is reported to exist and determine the source of the odor. Take additional GDI readings of the atmosphere as you proceed to this area.
- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- See **Evacuation Procedure described in Section III.B.3 (below).**
- If your investigation confirms a gas leak inside, eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. **Ventilate** the premise. Attempt to shut off gas from the curb box to the property.





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- If there is an LEL reading in the general atmosphere of a property, request Dispatching to notify PECO for assistance.
- If the leak is found inside on exposed piping, control the escaping gas- make conditions safe.
- Continue an inside investigation with the use of a GDI. Examine all appliances and piping, fuel line, meter and meter connections. Also, check the location of water service, gas service and sewer pipe where they enter the building. Check the foundation walls that are adjacent to streets.
- A foundation wall check shall include GDI sampling at any utility entrance through the wall such as gas, water, sewer, cable, drains, electric service and additionally any major cracks or holes that could provide an access for leaking gas. Check all foundation walls that are adjacent to streets.
- Continue to check affected and adjoining properties. Monitor and report any change in conditions to Dispatching.
- All leaks inside must be found and resolved before the employee investigating leaves the job site or is relieved from the job site by someone who will continue the investigation.
- Methods that can be used for an investigation to verify the source of an inside gas odor are:
  - ◊ odor check (smell)
  - ◊ sound check (listening for hissing or blowing)
  - ◊ GDI
  - ◊ soapy solution
- A meter and piping test *is required* to verify the source of an inside gas odor. (for exceptions such as master meters or commercial properties, call a Supervisor for assistance).
- Any inside investigation that has a reading coming into the building from an outside source requires a Distribution Crew. FSD will notify the Dispatcher to call for Distribution. Communication by cellular phone with the Dispatcher shall be made from outside the affected property. Report the initial readings found, as well as any subsequent changes to the initial leak investigation findings. As soon as possible, transmit an electronic message via Mobile Mail confirming the voice contact and update the AIMS Leak Survey screen.
- When a leak is discovered on an appliance covered by PLP, the technician should complete the repair or refer to a qualified PGW Technician.
- (Distribution) In all cases where Distribution responds to an odor complaint and FSD is on location, it is the Foreman's responsibility to examine the FFW(s) and take atmospheric GDI readings. Distribution Foremen or FSD techs are not to enter evacuate buildings to examine the FFW(s) or take atmospheric readings until action has been taken to reduce gas levels below **LEL level**.



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- After checking all inside premises, monitor inside readings and continue an outside leak investigation.
- If a leak is discovered inside the premise, follow the guidelines listed in the table below:

| <b>Leak discovered on:</b>   | <b>Repair procedure:</b>  |
|--|---|
| If a leak is discovered on <u>PGW piping</u> (from the head of service up to the meter outlet) | Shut off gas supply by closing the curb valve and/or head of service valve (if available) or install the appropriate size service stopper. Make repair and restore gas service to the customer.   |
| If a leak is discovered on <u>customer piping</u> (downstream of meter connections)            | <p>A repair will be permitted on 1 ¼” and smaller thread leaks only. The repair will be completed by using the established method of installing Perma-Gum on the leaking threads.</p> <p>After the leak has been repaired, the Technician will recheck the repaired joint with a GDI to verify there is no leakage.</p> <p>If there are no readings on the GDI, the Technician will issue a Class B hazard tag referring the customer to seek assistance from the appropriate Contractor to make the permanent repair.</p> <p>The Technician will list all information on MDT and refer order to the FSD Training Section.</p> <p>In cases involving multiple units, industrial or commercial applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.</p> |
| Leaks involving any type of shut off valve, union, cracked or defective fitting.               | <p>Leaks at shutoff valves and fittings can be permanently repaired by greasing in the valve or tightening the fitting.</p> <p>In cases where these actions do not repair the leak, the defective part of the fuel line must be disconnected and capped if possible. If the fuel line can not be disconnected, the gas must be shut off* with locking device and plug swivel at the meter.</p> <p>A Class A hazard tag must be issued referring customer to the appropriate Contractor to make the permanent repair.</p> <p>The Technician will also complete a temporary shut off work order. In cases involving multiple units, industrial or commercial applications; contact a <b>SUPERVISOR</b> to determine an alternate method of repair and recheck.</p>                                    |
| If a leak is discovered and isolated to an appliance   | <p>Shut gas off to the appliance.</p> <p>Issue the appropriate hazard tag.</p>  |
| General Notes concerning   | If a residential premise has been shut off and relies on gas heat, also provide a “CO and Emergency assistance information card”  |



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|                          |  |
|--------------------------|--|
| Inside Leaks and Repairs | <p>to provide the customer information of City agencies which can help.</p> <p>FSD Training will track and maintain records of all repairs that were completed. All temporary repairs will have follow-up by a positive, documented phone call to the customer. Call will be documented on the BCCS customer contact screen and separate FSD list.</p> <p><b>Note:</b> a temporary repair discovered <i>on any subsequent visit</i> is considered a Class A hazard and requires a temporary shut off as described above.</p> <p>All information pertaining to a piping or appliance hazardous condition must be recorded on the Hazard Screen of AIMS.</p> |
|--------------------------|--|

III.B.3 Evacuation Procedure (minimum requirements)

- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- Do not re-enter the property until the source of leak has been located, made safe or repaired and the LEL levels are reduced to a safe level.
- Eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. Attempt to shut off gas from the curb box to the property.
- Request Dispatching to notify PECO for assistance
- Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Restrict access into the Safety Perimeter to PGW employees required to perform their duties.
- Call for assistance from the Fire Department (call 911) through the Dispatcher. The PFD and PPD will assist you with evacuating and maintaining the Safety Perimeter.
- Evacuate the adjoining properties and move the occupants outside the safety perimeter. Consider the worst case scenario.
- **If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.**
- Continue to report any more evacuation(s) and call for more assistance.



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3. Procedure for Entry Not Necessary (ENN) Investigation (see Section B.1. for buildings eligible for this procedure). This procedure will only be followed by qualified FSD technicians and Distribution Foremen. Qualified FSD technicians are A men and above.

**Check mail slots, windows, basement entry doors, anything to obtain a sample of the inside atmosphere.**

- Obtain a sample of the inside atmosphere by checking mail slots, windows, basement entry doors, etc. with your GDI.
- **If a potential hazard exists, make a forcible entry.** Follow procedures listed above.
- For all CGIs which appear non-hazardous, check the main and service information – age, material and location for the Distribution facilities in front of the property.
- Make “M-Pact” bar holes in front of the CGI building as close to the building as possible.
- Make “M-Pact” bar holes over the gas service of the CGI building.
- Check all outside readings for migration. If there is no migration within 5 feet of the building, the building can be considered for ENN.
- A building must be checked when there is a reading over the service and the service is steel installed in 1975 or before (older).
- If during the leak investigation it is determined that other buildings on the block have underground service conduits (electric or Bell), do not make the premise ENN.
- If conditions are questionable, use the Locksmith Procedure and gain entry.

4. Checklist To Allow ENN

- √ Building does not meet the requirements in section titled “What Buildings Must Be Checked” (III-B-1)
- √ No readings or anticipated migration to within 5 feet of the building.
- √ No readings over a pre-1975, steel service (to the building in question).
- √ No readings in vent box.
- √ No evidence of underground conduit services (electric or bell).

5. Locksmith Procedure

- a. A request for a Locksmith to gain entrance to a building should be made under the following conditions:
  - ❖ Immediate forced entry is not necessary.
  - ❖ Property is not eligible for ENN.
  - ❖ You have exhausted all other options to gain entrance such as checking with neighbors, phone call to customer or self entry.



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- ❖ Two PGW employees are required when entering an unoccupied property.

b. Field Operations Personnel Responsibilities

- ❖ Call Dispatcher or Clerk for Locksmith.
- ❖ If a police officer arrives on scene, report his badge number to the Dispatcher.
- ❖ Report back to Dispatcher or Clerk with the Locksmith's arrival time and a final report.
- ❖ Fill out a 119 property damage report.
- ❖ If lock is changed and keys cannot be given to customer, notify Dispatcher or Clerk of location of keys.
- ❖ During normal business hours, notify the Risk Management Department with a final report, extension 6535. Out-of-hours leave a final report on extension 6014 (voice mail).
- ❖ Sign and leave Form #6489 (door hanger) to inform the customer that it was necessary for PGW to enter the premise.
- ❖ Assure premise is secured.
- ❖ Sign voucher for Locksmith.

c. Dispatch or Clerk Responsibilities

- ❖ Dispatcher or Clerk contacts Locksmith and notifies police (911).
- ❖ Dispatcher or Clerk will log the Locksmith's arrival time and final report of all houses entered.
- ❖ If a police officer arrives on scene, the Dispatcher or clerk will log the police officer's badge number in the Locksmith Log.

C. Outside Leak Investigation

1. Outside Leak Investigation Procedure

- **Check buildings first, following all previous instructions for "Inside Leak Investigation" (Section III - B.).**
- Exchange information with PGW employee(s) or customers already on location.
- (Distribution and FSD relief) Verify all readings reported.
- Make an area check of all outside underground structures (CB, WB, VB, MH, etc.) in the vicinity of known readings or near the odor complaint. Determine the proper size of the area check. This can be expanded based on the investigation (Minimum 50' in all directions from the odor complaint or a confirmed reading).
- Bar hole as necessary to assure an effective investigation.
- (FSD) Check that there are no readings requiring an immediate Distribution Investigation, see list below (Criteria for a Distribution Crew to be called).



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- Investigate all readings for migration. Confirm that migration does not approach within 5 feet of any building.
- (FSD) When snow or frost restricts investigation, call for Distribution. Continue to check for migration by making inside property checks while waiting for Distribution.
- All duct line or sewer readings must be investigated in all directions to confirm migration pattern.
- Follow Odor Complaint Investigation Reference Guide



**LEAK/FIRE DUTY SECTION**  
**FIELD OPERATIONS**  
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Bulletin Number #212  
Dated January 16, 2008

**ODOR COMPLAINT INVESTIGATION REFERENCE GUIDE**

|    | Nature of complaint or readings found  | A | B | C  | D | E |   |   |   |   |   |
|----|--|---|---|----|---|---|---|---|---|---|---|
| 1  | Conduit Type Manhole with reading - Footway and Roadway Location ex. Sewers, electric ducts, communication ducts etc.  | A | B | C  | D | E |   |   |   |   |   |
| 2  | Foreign Odor - Odor from underground source and coming through foundation walls, drain, vent, stop box, manhole, etc. or odor from an above ground source such as gasoline, cleaning fluid, paint, chemicals, etc. <b>*If the foreign odor is a wide spread event the dispatcher may instruct a technician to replace "C" with "K" if the job is inside the affected area.</b> | A | B | *C | D |   | F |   |   |   | * |
| 3  | Gas reading reported by FSD and the DD employee can not confirm the reading and feels a leak does not exist.   | A | B | C  | D |   |   | G |   |   |   |
| 4  | An odor complaint received directly from a customer on the street  | A | B | C  | D |   |   |   |   | J |   |
| 5  | Gas leak inside building coming from outside sources   | A | B | C  | D |   |   |   |   |   |   |
| 6  | Non-Conduit Manhole - Footway Location - Examples: Water mains, survey boxes etc.  | A | B | C  | D |   |   |   |   |   |   |
| 7  | Leak in Street - Gas blowing into air from underground source  | A | B | C  | D |   |   |   |   |   |   |
| 8  | Investigating reports of gas odors in a subway or tunnel   |   |   | C  | D |   |   | G | H |   |   |
| 9  | Electrical Burnouts  |   |   | C  | D |   | F | G | H |   |   |
| 10 | No odor outside - "No Odor"  |   |   | C  | D |   |   |   |   |   |   |
| 11 | Gas leak inside a building downstream of the head of service on exposed piping   | A | B |    | D |   |   |   |   |   | K |

**REFERENCE CODE MINIMUM REQUIREMENTS GUIDE**

|          |   |
|----------|---|
| <b>A</b> | Follow Inside Leak Investigation at building closest to the odor complaint  |
| <b>B</b> | Follow Inside Leak Investigation at adjoining buildings if necessary or determine if the property can be considered for "ENN" Entry Not Necessary   |
| <b>C</b> | Follow Outside Leak Investigation Instructions  |
| <b>D</b> | Use a calibrated Gas Detection Instrument at every point that you investigate for a possible gas leak   |
| <b>E</b> | All conduit and sewer type manhole investigations shall extend to cover and to find clear the most closely connected manhole in all directions along the route of the manhole in which the reading exist. |
| <b>F</b> | Dispatcher/supervisor will determine if notification of Air Management is required  |
| <b>G</b> | A Field Operations Supervisor or above must review the investigation prior to determining a "Safe to Hold" status   |
| <b>H</b> | A Field Operations Supervisor or above must be present during the Investigation   |
| <b>J</b> | Notify the Dispatcher on duty as soon as reported by customer   |
| <b>K</b> | Outside leak investigation limited to GDI check of structures (boxes) in front of the building. "(one house check)"   |

2. Checklist For A Distribution Crew To Be Called – Work Immediately



**LEAK/FIRE DUTY SECTION**  
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All FSD technicians below B man (in rank) cannot make outside leaks safe to hold. They must call Distribution for any leaks found that require Distribution Crew attendance. This check list for not calling Distribution is only for FSD A men and above.

- a. (FSD) Readings and or conditions as noted below require an immediate notification for a Distribution response. FSD Dispatchers must be informed as soon as an initial outside reading is discovered in these structures. Maintain regular communications with the FSD Dispatcher on the status of the investigation. Make final report to FSD Dispatchers when released by Distribution or conditions will be left safe-to-hold.
- √ A leak that represents an existing hazard to persons or property, and requires immediate action
  - √ Any reading in sewer manholes, storm inlets, vent boxes, light standards
  - √ Any reading inside a building coming from an outside source
  - √ Any reading within 5 feet of a building
  - √ Any reading in subways
  - √ Any reading in PGW manholes
  - √ Reading of 76% LEL or greater in a conduit manhole
  - √ Any reading in two (2) or more conduit manholes of the same type
  - √ Indications of a broken main or third party damage
  - √ Electrical Burnouts
  - √ Readings on a block which contains a 150 PSI (or greater) main (Dispatcher to review)
- b. If readings do not meet the criteria listed above, the leak may be classified as safe to hold (see below - Checklist for Safe-To-Hold). Once an outside reading is discovered, all reports should be made to DISTRIBUTION DISPATCHERS.

3. Checklist For Safe To Hold

- √ There are no readings that require Distribution visit (see previous list).
- √ Area check does not indicate migration toward the building. All readings found outside were checked for migration – no migration was found within 5 feet of any buildings.
- √ Migration is not anticipated to move toward a building structure.
- √ There is no leak history associated with this leak causing repeated calls. Verification to be obtained from Dispatchers.
- √ Patches or trenches indicating recent construction work should be checked carefully – no migration was found within 5 ft of any buildings.
- √ No snow or frost to restrict investigation. (FSD) When snow or frost restricts investigation, call for Distribution. Continue to check for migration by making inside property checks while waiting for Distribution.
- √ Street block does not have a 150 PSI (or greater) main. (Reading must be pinpointed).





D. Final Reports

- Make oral report to Distribution and FSD Dispatchers via phone.
- Record your findings including reading found in the AIMS database.

**IV. Associated Documentation**

A. Relevant Code

1. 49 CFR Part 192.605 Procedural Manual for Operations, Maintenance, and Emergencies
2. 49 CFR Part 192.615 Written Emergency Procedures

B. Related Documents

1. Distribution Department Bulletin #63 - Notification Procedure of a Potential Emergency Involving a Pressure Operation
2. Distribution Department Bulletin #212 - Leak Response and Investigation Procedure
3. Distribution Department Bulletin #227 - Initiation of a Pressure Operation
4. Distribution Department Bulletin #228 - Pressure Control Operation Outline Procedure.
5. Distribution Department Bulletin #230 - Organization for Emergency Operations.

C. Attachments

Sample Leak Investigation Illustrations

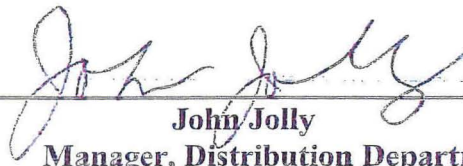
**V. Handbooks**

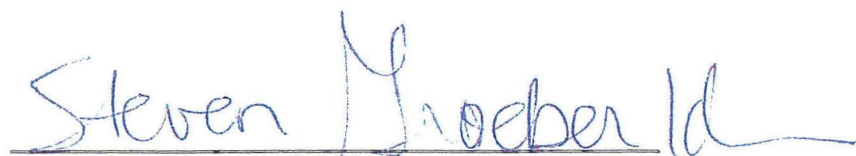
FSD Operations Manual (Section I)  
Distribution Foreman's Handbook (Section I)

**VI. Transaction Listing**

TR 2007-#03

**Approved By:**

  
\_\_\_\_\_  
**John Jolly**  
Manager, Distribution Department

  
\_\_\_\_\_  
**Steven Groeber**  
Director, Field Operations & Work Planning

15(c-2)



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**INITIATION OF A  
PRESSURE OPERATION**

Effective Date: March 23, 2011

Bulletin Number: #227  
Supersedes: DD Bulletin dated February  
15, 2009

**To: All Field Operations Supervision**

**I. Purpose**

The following describes the proper discussions, approvals and notifications to initiate a Pressure Operation of the distribution system "out of hours". During normal working hours most discussions, approvals and notifications will be made in a similar fashion. All Pressure Operations must be approved by one of the following:

- o Manager of Field Service Department
- o Manager of Distribution
- o Director of Field Operations and Work Planning
- o Vice President of Field Operations

**II. Definition**

- **FIRST RESPONDER** – term used to describe the first trained responder to arrive on scene of an emergency, accident, natural or human-made disaster, gas leak, fire or similar event. Such people may be PGW personnel, firefighters, police, other law enforcement or emergency medical services, or lay rescuers to deal with the situation and protect life and property.
- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.

**III. Procedure**

The Field Operations Supervisor on location will assess the need for a Pressure Operation in pressure of the distribution system based on maintaining the safety or minimizing the hazard for people and property. In an out of hours situation it is most important to get personnel **MOVING** to appropriate locations since many employees must report from home in order to accomplish the Pressure Operation quickly and safely.

**As soon as the supervisor on location can identify the need or potential need for a Pressure Operation**

**The Supervisor on location shall,**

1. Notify the Dispatcher of the approximate location of the leak.
2. Notify the Dispatcher of any known details of the job. Request the Dispatcher to notify the Pressure Force crew (on detail) to report to location.
3. Notify and confirm the need for the Pressure Operation with the Staff on Reserve



**FIELD OPERATIONS  
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**INITIATION OF A  
PRESSURE OPERATION**

Effective Date: March 23, 2011

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15, 2009

4. Request assistance from PECO and PFD if necessary

**The Dispatcher shall:**

1. Notify the Pressure Force Supervisor on Call
2. Once the need for Pressure Operation is determined, if the Pressure Force Supervisor determines any additional manpower needs, the dispatcher will assist with the notification of required resources for Pressure Force personnel
3. Notify the Staff on Reserve
4. Notify the Manager of the Distribution Department
5. Notify any additional required personnel, material and equipment needed to accomplish the work.

**The Staff on Reserve shall,**

1. Notify the Pressure Force Supervisor on call of the requirements and for him to make proper arrangement for the Pressure Operation.
2. Discuss and confirm the need for the Pressure Operation with the Managers of Distribution and/or the Manager of Field Service Department. Either one can approve the Pressure Operation. Try to have a conference call with both but continue with notifications even if one is unavailable.
3. Notify the Director of Field Operations and Work Planning and Vice President of Field Operations.
4. Assess all the needs in the field relating to the job and advise the dispatchers to MOVE personnel, material and equipment as necessary. Consider all outside notifications necessary for the emergency.
5. Report to the job location.

**The Pressure Force Supervisor shall,**

1. Assess the parameters of the Pressure Operation using high pressure Distribution System Valve and Regulator maps.
2. Determine the number of Pressure Force crews, FSD Technicians and Supervisors needed.
3. Confirm with the Dispatchers that all required personnel were notified.
4. Dispatch Pressure Force crews to the valve locations as determined using high pressure Distribution System Valve and Regulator maps.
5. When possible, review the operational maps outside the Distribution Dispatching office for any abnormal system conditions that might affect the Pressure Operation. Make sure that all valves involved in the Pressure Operation can be operated. Refer to Distribution Department Bulletin # 281 "Inoperable & Closed Control Valves".

# Appendix A-16

16. PGW has reviewed its Operator Qualification program to determine whether its program required modification to address issues described in the Joint Petition for Settlement ¶ 23a-s.

- Cross-References: Prayer for Relief at ¶ (r) Settlement, ¶ 23(p).

# Appendix A-17

17. PGW has modified its emergency procedures to include a section related to “blowing gas.”
- (a) Bulletin 212, which established procedures for use during leak response and investigation, has been revised to incorporate the following passages in sections III.A (General Requirements) and III.B.3 (Evacuation Procedure) respectively:
    - (i) “If you suspect that the source of the leak involves any portion of PGW’s system that would require a Pressure Operation, notify Dispatching immediately.”
    - (ii) “If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.”
  - Supporting Documentation:
    - (a) Excerpts from Bulletin 212.
  - Cross-References: Prayer for Relief at ¶ (s); Settlement, ¶ 23(q).



17(a)



### III. Procedure

#### A. General Requirements

- **ACTION MUST ALWAYS BE TAKEN TOWARD PROTECTING PEOPLE FIRST AND THEN PROPERTY.**
- **All requirements listed throughout this procedure represent minimum requirements and are not meant to limit the Operator in making decisions where experience, safety and common sense indicates otherwise.**
- **All employees responsible for conducting leak investigations must be qualified per PGW Operator Qualification Plan.**
- Employees must wear all required personal protection equipment per PGW Policies.
- Odor complaints are to be dispatched promptly regardless of their source.
- Any delay in arrival to the location of the complaint must be reported to the Dispatcher immediately.
- Conduct all odor complaint investigations as if a hazard exists until it is determined otherwise. Determine the extent of the hazard (leak) by making appropriate GDI checks, observations and tests.
- Review all information given on the order.
- If possible, enter all buildings through the main entrance.
- If available, interview the caller for relevant information.
- If during the initial leak investigation it is determined that a hazard exists, call the Dispatcher immediately providing details of the existing hazard.
- **Mobile phones must be turned off before entering properties for the leak investigation.** All communications must be conducted outside in a natural gas free atmosphere.
- **If you suspect that the source of the leak involves any portion of PGW's system that would require a Pressure Operation, notify Dispatching immediately.**
- Foreign Odors - on a wide spread foreign odor incident, when instructed by a Dispatcher or Supervisor, the leak investigation can be limited to one premise and a check of structures (boxes) directly outside that premise ("one house check", see definitions). If gas readings are discovered follow the complete leak investigation procedure.
- Leak indications may come from sources other than natural gas (marsh gas, gasoline spills, etc.).
- If there are other "First Responders" agencies (PFD, PPD) on location, discuss with them as to their actions already completed and any findings of their investigation.
- Immediately establish a communications chain to share pertinent information with all PGW Fire Responders and any other First Responder agencies.



FIELD OPERATIONS  
DISTRIBUTION/FIELD SERVICES  
DEPARTMENTS

LEAK RESPONSE AND INVESTIGATION  
PROCEDURE

Effective April 21, 2011

Bulletin Number #212  
Dated September 15, 2008

|                                 |  |
|---------------------------------|--|
| <p>Inside Leaks and Repairs</p> | <p>to provide the customer information of City agencies which can help.</p> <p>FSD Training will track and maintain records of all repairs that were completed. All temporary repairs will have follow-up by a positive, documented phone call to the customer. Call will be documented on the BCCS customer contact screen and separate FSD list.</p> <p><b>Note:</b> a temporary repair discovered <i>on any subsequent visit</i> is considered a Class A hazard and requires a temporary shut off as described above.</p> <p>All information pertaining to a piping or appliance hazardous condition must be recorded on the Hazard Screen of AIMS.</p> |
|---------------------------------|--|

III.B.3 Evacuation Procedure (minimum requirements)

- Enter the premise and take a GDI reading in the general atmosphere. If the reading detected is 40 % LEL (2% gas) or higher, **EVACUATE (INCLUDING YOURSELF) & VENTILATE THE PREMISE** and notify Dispatching.
- Evacuate a premise whenever the judgment is made that people or properties are in jeopardy.
- Do not re-enter the property until the source of leak has been located, made safe or repaired and the LEL levels are reduced to a safe level.
- Eliminate or minimize all sources of ignition. If possible, shut off the supply of gas. Attempt to shut off gas from the curb box to the property.
- Request Dispatching to notify PECO for assistance
- Establish a Safety Perimeter. Restrict people from entering the Safety Perimeter. Restrict access into the Safety Perimeter to PGW employees required to perform their duties.
- Call for assistance from the Fire Department (call 911) through the Dispatcher. The PFD and PPD will assist you with evacuating and maintaining the Safety Perimeter.
- Evacuate the adjoining properties and move the occupants outside the safety perimeter. Consider the worst case scenario.
- **If the source of the leak or strong odor of gas requires a Pressure Operation, consider moving outside the established Safety Perimeter.**
- Continue to report any more evacuation(s) and call for more assistance.

# Appendix A-18

18. PGW has re-trained its Pressure Force work crews regarding the use of critical valves.

(a) PGW has promulgated Bulletin 281 regarding the use of critical valves.

- Supporting Documentation:

(a-1) Bulletin 281.

(a-2) Pressure Force Sign-In Sheet (June 2011)

- Cross-References: Prayer for Relief at ¶ (t);  
Settlement, ¶ 23(r).

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**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

**PRESSURE FORCE  
EMERGENCY VALVES  
OPERATIONAL CONDITION**

Date: March 24, 2011

Bulletin #281  
Supersedes: New

**I. Purpose**

This bulletin is an overview of PGW emergency valves (10-35 psig or higher systems) and valve maintenance schedule. Inoperable and closed control valves are also listed as of the date shown at the top of the bulletin. This bulletin will be updated on an annual basis in time for preparation of the Capital Budget.

**II. Definitions**

- **PRESSURE OPERATION** – A procedure to reduce distribution system pressure by controlling the flow of gas to a portion of the system.
- **AIMS** - Advanced Intelligent Mobile System: PGW's computer dispatch and work management system.

**III. Active Emergency Valves (by Type) in PGW's 10-35 psi and Higher Systems**

| Emergency Valve Purpose                   | Count |
|---|-------|
| Control                                   | 1060  |
| Street Regulator Station Emergency Inlet  | 251   |
| Street Regulator Station District Inlet   | 205   |
| Street Regulator Station Monitor Inlet    | 169   |
| Street Regulator Station District Outlet  | 16    |
| Street Regulator Station Monitor Outlet   | 13    |
| Street Regulator Station Bypass           | 185   |
| Street Regulator Station Emergency Outlet | 6     |
| Bypass                                    | 28    |
| Blow off                                  | 185   |
| Hi-Flo                                    | 2     |

**IV. Valves Maintenance Schedule and Inspections Update**

All main control valves and street regulator station valves in PGW's 10-35 psi and higher systems are inspected once a year. The following information is electronically recorded and stored in the AIMS work management system during the inspection process:

- Valve Inspection date
- Amount of operation (Full, Half, Less than half, or None)
- Position of the valve (Open, Closed, or Closed & Locked)
- Condition of the adjacent main, valve tag, and valve frame cover
- Condition of valve test points (if any)



Date: March 24, 2011

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- Any type of maintenance that was done to the valve (Grease and ease, adjust gland, etc)
- Any type of future maintenance that could be required – maintenance orders

Main Valves Inspection Schedule:

| Valve Number | Amount of Operation |           |
|--------------|---------------------|-----------|
|              | Even Years          | Odd Years |
| Even         | Full                | Half      |
| Odd          | Half                | Full      |

Street Regulator Station Valves Inspection Schedule:

| If valve belongs to street regulator station... | ...done with:     | Month       |
|---|-------------------|-------------|
| Inlet & Outlet Valves                           | Clean or Overhaul | Various     |
| All Other Valves                                | 3rd Inspection    | May or June |

Valve Inspections Update:

Total of 332 active emergency valves were inspected in the period spanning from 01/01/2011 to the date of this bulletin. All remaining 1788 valves are going to be inspected before 12/31/2011.

**V. Inoperable Control Valves**

- A.** The following categories of valves have been established to minimize system disruptions, minimize affected street regulator stations and customer interruptions during pressure Operation, in accordance with 49 CFR Part 192.181 and 49 CFR Part 192.747 .
- B.** The following operating characteristics should be considered when assigning an emergency distribution system valve to one of the categories.
1. Total number of customers and the type of customers as hospitals, schools, commercial, and industrial users that would be affected.
  2. Time required for available personnel to perform a pressure operation.
  3. Time required for reducing system pressure in the area by means as exhausting to another system or to the atmosphere.
  4. Time required for restoration of service to the customers.
  5. Weather restrictions and ability to temporary shut down street regulator stations
- C.** Inoperable Valves - The following actions should be considered if a valve is found inoperable.
1. Repair the valve to make it operable.





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DISTRIBUTION DEPARTMENT**

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2. Designate another valve or valves to substitute for the inoperable valve. Consideration should be given to the following:
  - a. Updating records for emergency shutdown and future maintenance requirements.
  - b. Informing employees of the change to the isolation or emergency shutdown plan.
3. Replace the valve.

| Class | Description  |
|-------|--|
| A     | Critical, replace as soon as possible  |
| B     | Important, addressed as second priority  |
| C     | Non-essential, inspected annually for atmosphere readings, piping/vault conditions |

| Class | Pressure   | Valve # | Alternative Valve | Size | Location             | DMM   | Action              |
|-------|------------|---------|-------------------|------|----------------------|-------|---------------------|
| A     | 10-35 psig | 1142    | 1062<br>2054      | 12"  | 28th & Grays Ferry   | N4-72 | Replace             |
| B     | 10-35 psig | 1487    | 1486              | 36"  | 22nd & Arch          | M4-77 | Repair/Replace      |
| B     | 10-35 psig | 1488    | 754               | 20"  | 22nd & Arch          | M4-77 | Repair/Dig-up       |
| B     | 10-35 psig | 1988    | 982               | 8"   | Byberry & Lewis      | B9-57 | Continue Inspecting |
| C     | 10-35 psig | 855     | 856               | 16"  | Castor & Cottman     | F8-91 | Inspect Only        |
| C     | 10-35 psig | 910     | 632               | 30"  | Bustleton & Lardner  | H7-19 | Inspect Only        |
| C     | 10-35 psig | 915     | 1012              | 8"   | Rising Sun & Cottman | F7-36 | Inspect Only        |
| C     | 10-35 psig | 979-A   | Blow-off          | 2"   | Grant & Krewstown    | D8-68 | Inspect Only        |
| C     | 10-35 psig | 1006    | Cut & Cap         | 6"   | Belgrade & LeFevre   | J7-99 | Inspect Only        |
| C     | 10-35 psig | 1076-A  | Blow-off          | 4"   | 22nd & Arch          | M4-77 | Inspect Only        |
| C     | 10-35 psig | 1507    | Cut & Cap         | 36"  | Castor & Balfour     | K7-95 | Inspect Only        |

Note:

When conducting out-of-hours pressure operations, review the operational maps (6X-107) outside the Distribution Dispatching office for any atypical system conditions that might affect the operation. Also, make sure that all valves involved in the pressure operation can be operated before dispatching Pressure Force crews. If a valve is determined to be inoperable, send the crew to the designated alternative valve.

**VI. Closed Main Valves**

The Distribution 10-35 psig and higher systems continue to operate with the assumption that all main control valves are open, with the exceptions listed below. Also, bypass valves are always assumed closed and are therefore not listed.



**FIELD OPERATIONS  
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| Valve #  | Location                                | Pressure System |
|----------|---|-----------------|
| 840      | Thompson & Lehigh<br>(Reading RR)       | 10-35 psig      |
| 901, 902 | Castor & Balfour                        | 10-35 psig      |
| 986      | Navy Yard<br>(Building 736)             | 10-35 psig      |
| 1110     | Large & Orthodox                        | 10-35 psig      |
| 1152     | Venango & Mascher                       | 10-35 psig      |
| 1206     | Wissahickon & Roberts<br>(SEPTA)        | 10-35 psig      |
| 1329     | Cotton & Main                           | 10-35 psig      |
| 1359     | 3001 Castor Ave.<br>(Franklin Smelting) | 150 psig        |
| 1471     | Woodhaven and Medford                   | 10-35 psig      |
| 1644     | Milnor & Disston<br>(Army Exchange)     | 10-35 psig      |
| 1697     | Formerly Airport Motel                  | 60 psig         |
| 1731     | 30th & Morris                           | 10-35 psig      |
| 1740     | 57th & Lindbergh<br>(U.S. Gypsum)       | 10-35 psig      |
| 1748     | Princeton & Milnor                      | 10-35 psig      |
| 2003     | Butler & Belgrade                       | 150 psig        |
| 2020     | 2100 Oregon                             | 150 psig        |
| 2060     | Thompson & Tioga                        | 10-35 psig      |

**VII. Associated Documentation**

**A. Relevant Code**

1. 49 CFR Part 192.181 Distribution Line Valves.
2. 49 CFR Part 192.747 Valve Maintenance: Distribution Systems

**B. Related Documents**

1. Distribution Department Bulletin #63 - Notification Procedure of a Potential Emergency Involving a Pressure Operation
2. Distribution Department Bulletin #98 – Pressure Force Inspection & Maintenance Schedules
3. Distribution Department Bulletin #212 - Leak Response and Investigation Procedure
4. Distribution Department Bulletin #227 – Initiation of a Pressure Operation
5. Distribution Department Bulletin #228 - Pressure Control Operation Outline Procedure.
6. Distribution Department Bulletin #230 - Organization for Emergency Operations.



**FIELD OPERATIONS  
DISTRIBUTION DEPARTMENT**

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7. Distribution Department Bulletin #238 – Procedure for Inspection of Control Valves, District Regulators and Industrial Regulators in the Distribution System

**C. Handbooks**


1. Pressure Force Handbook
2. Dispatching Manual (Section V – pages 41-44)

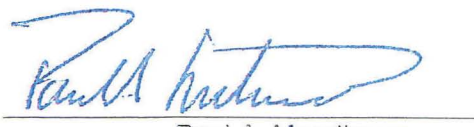
**VIII. Transaction Listing**

TR-2011-21

Prepared by Burhan Awad  
3/24/11

Approved:

  
Steven A. Groeber  
Director, Field Operations & Work Planning

  
Paul A. Mondimore  
Vice President, Field Operations

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FIELD OPERATIONS - BULLETINS # 63, 230 227, 281

Meeting:

Date: June 2011

|                 | Print            | Sign             |      |
|-----------------|------------------|------------------|------|
| ✓ <sub>1</sub>  | Michael Cosgrove | Michael Cosgrove | 6/24 |
| ✓ <sub>2</sub>  | Joseph James     | Joe James        | 6/24 |
| ✓ <sub>3</sub>  | Joseph Kerr      | Joseph Kerr      | 6/27 |
| ✓ <sub>4</sub>  | Adhler Serrano   | Adhler Serrano   | 6/27 |
| 5               | Louis Woods      | Louis Woods      | 6/27 |
| 6               | AARON FAUST SR   | Aaron Faust Sr   | 6/27 |
| 7               | DAN HARRIS       | Dan Harris       | 6/30 |
| ✓ <sub>8</sub>  | DAVID PIERSON    | David Pierson    | 6/30 |
| ✓ <sub>9</sub>  | ANTHONY DINA     | Anthony Dina     | 6/30 |
| ✓ <sub>10</sub> | ROBERTO GONZALEZ | Roberto Gonzalez | 6/30 |

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Prisoner Love

# Appendix A-19

19. PGW will confirm to the Commission within sixty (60) days of the date of the Order approving this Settlement Agreement that it has consolidated emergency procedures into one manual that covers responsibilities for all departments.

- Cross-References: Prayer for Relief at ¶ (u) Settlement, ¶ 23(s).