



**Portland General Electric Company**

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**Cece L. Coleman**

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November 19, 2021

Via Electronic Filing

Public Utility Commission of Oregon  
Attn: Filing Center  
201 High Street Southeast, Suite 100  
P.O. Box 1088  
Salem, Oregon 97308-1088

Re: NC 395 - Public Utility Commission of Oregon v. Portland General Electric  
Company

Dear Filing Center:

Enclosed for electronic filing today in the above-captioned docket is documentation regarding PGE's revised policy pursuant to Order No. 21-334.

Should you have any questions or need anything further, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Cece L. Coleman".

Cece L. Coleman  
Assistant General Counsel

CLC:kb  
Enclosures



**Portland General Electric Company**  
121 SW Salmon Street • Portland, OR 97204  
portlandgeneral.com

November 19, 2021

Public Utility Commission of Oregon  
P.O. Box 1088  
Salem, OR 97308-1088

Re: Response to Stipulation and Final Order No 21-334 in Docket NC 395

To Whom It May Concern:

The following represents PGE's revised procedures (policy) in response to OPUC Order No. 21-334 and the Stipulation adopted therein in docket NC 395, on October 21, 2021. The following is also consistent with and has been incorporated into the policy that PGE previously provided on August 18, 2018 in Docket NC 383, under Commission Order No. 18-222 (See the attached redlined version of *PGE's Line Locating Improvements & Procedure document, Rev. 2, 11/19/21*).

The investigation of this complaint, in collaboration with the OPUC, resulted in an internal review of PGE's damage prevention program and procedures. The review focused on compliance with Chapter 952 of the OARs and lessons learned as a result of the complaint filed in NC 395. Our review has identified ways to strengthen PGE's internal quality assurance processes and those of PGE's locate service providers (LSPs).

Action items have been identified to address circumstances, similar to those identified in the complaint, with the intent to avoid occurrences that pose potential risk to safety and/or property damage. PGE has worked closely with our LSPs, internal locate technicians, OUNC one-call center, our ticket management services, and the OPUC staff to find appropriate means and methods to identify and timely manage a more meaningful exchange of information within the locate ticket process.

PGE is committed to continuous improvement measures, including but not limited to setting expectations that are focused on confirming the precise location and directions noted on a locate ticket, to ensure the locate technician understands the request and needs of the ticket requester, and exercises the proper communication skills, in addition to their technical skills, to accomplish the requested locate successfully.

We have reviewed our program's quality assurance measures and established new performance standards to obtain confirmation that our internal and external locaters understand and deliver services to meet the expectations established by both Division 952 of the OARs and the Commission. We will track results and benchmark findings associated with these new performance standards to drive continuous improvements as we go along.

PGE is committed to remaining a leader when it comes to compliance with the Oregon Dig laws and will continue to be an active participant with the OUCC, OUNC, MUCC, CGA, and the OPUC to promote safety related to excavation issues. We will continue our work with our service providers to ensure they too are committed and accountable to educate, improve, and deliver results that meet the intent of the rules, and maintain focus on the safety of our public, private, and commercial customers who utilize the 811 locate ticket process.

Thank you for your direction and partnership in our ongoing commitment to safety and damage prevention.

Sincerely,

*Larry Melzer*

Larry Melzer (Nov 19, 2021 16:12 PST)

Larry Melzer

Supervisor, Construction Management Contract Services & Inspection  
Portland General Electric Company

[The remainder of this page was intentionally left blank; the Summary of Enhanced Processes adopted by PGE in response to Order No. 21-334 is attached]

# Summary of Enhanced Processes Adopted by PGE to comply with Order 21-334

The content below reflects PGE's detailed responses to each of the areas identified in the stipulation (subpart E, sections 1-7) as they were adopted in Order No 21-334, along with an additional section (Section 8) that outlines some continuous improvement efforts that PGE is committed to undertake in 2021/2022.

## **1) Description of the purpose of the policy and commitment thereof by leadership, management, and employees.**

The driver behind the implementation of this policy is PGE's focus on safety and the desire to reduce or avoid dig-in incidents that threaten the safety of workers and the public, damages to property, interruptions of service to our customer, and costly repairs to or replacements of utility facilities. PGE's leadership, management, and employees are dedicated to putting safety first and achieving compliance with the OARs established by the OUNC, through both effective communication and engagement. We are equally committed to hiring LSPs that share our commitments toward safety and compliance through these means. We believe that it is through adherence to established practices and procedures, the use of data analysis, and implementation of industry best practices, that PGE can combat the risk that the dig laws are designed to prevent.

## **2) Identification of the means and systematic process of receiving, recording, and dispatching all notification information as collected by the OUNC's one-call vendor.**

PGE's damage prevention program employs UtiliSphere—an automated, compatible 811 ticket management platform—to receive tickets and information as collected by the OUNC on their UtiliSphere platform, to process, screen, record, route and dispatch each ticket directly to PGE's LSP through their separate Q-Manager software. The specific steps of the process are more fully described in the section below regarding *Line Locating Procedures for PGE Service Provider*.

## **3) Identification of the means to ensure notification management software is compatible in order to receive all notification information administered by the OUNC's one-call vendor.**

There are frequent (usually weekly) communications between the OUNC, PGE's LSP and PGE's Geospatial IT departments to ensure compatibility of systems/software. PGE provides geospatial updates to all users every two weeks.

## **4) Identification of the notifications and types of responses for marking underground facilities**

PGE and our contracted LSP are accountable for all standard (2 full business days), emergency (as quickly as possible), and design/pre-survey (10 business days) locate requests. Types of responses from the LSP for marking include: 1) Update ticket status providing ticket detail information for marked or absence of facilities; 2) email notice to requestor providing ticket

status and 3) an Electronic Positive Response (“EPR”)—provides detailed ticket information including confirmation of marking status, site photos and related communications(e.g.: documentation of phone conversations or email exchange with requestor), via email to the requestor when email address provided.

#### **5) Identification of the tasks assigned to participants by title or position and their roles and responsibilities in the workflow process**

- OUNC (Oregon Utility Notification Center) receives locate requests from the excavator, either by phone via OUNC call center or through the automated UtiliSphere platform. The OUNC then notifies PGE through UtiliSphere platform of each request to locate, providing details and location information (polygon) provided by the requestor. The OUNC is the office of record for all tickets and attachments submitted by the requestor for a 90-day period.
- Locate requests are then routed directly to PGE as the operator through PGE’s UtiliSphere platform and then routed to the LSP through its Q-manager automation system in quarter-minute sections based on established PGE district codes. Prior to marking, the operator reviews the ticket for completeness and ensures that all information on the request is complete. If the operator determines that a request is not clear, the operator contacts the primary or alternate point of contact on the ticket to obtain clarification on the marking instructions. The operator notes clarification and communication exchange with the requestor on the ticket.
- The operator marks the underground facilities or indicates facilities are clear of the proposed excavation area, attaches all communications and photos, and closes the ticket in Q-manager which then communicates through the UtiliSphere platform and triggers a notification to the excavator, providing an updated status of the ticket.
- PGE’s Supervisor of Construction Management Contract Services & Inspection is ultimately accountable for ensuring the workflow process is monitored and modified procedures, as needed, to adapt to new issues that arise. PGE also ensures that its contracts with its LSPs contain scopes of work sufficiently detailed to comply with PGE’s procedures and Division 952 of the OARs and implements corrective actions with PGE’s employees or PGE’s contracted LSP’s when deemed necessary and appropriate.

#### **6) Identification of the technology or systems and methods used throughout the policy that enabled the completion of identified tasks**

PGE utilizes the UtiliSphere platform that is 811 System compatible for ticket and mobile workforce management to enable automated ticket processing, screening, recording, routing, and dispatching. PGE and its LSPs utilize ARCFM Viewer and/or MyWorld geospatial map data to identify the location of PGE’s underground facilities. Tickets are routed using Q-Manager to either the LSP or PGE’s Power Quality Department to perform the locate and complete the ticket in the UtiliSphere platform, which then triggers a notification to the excavator with an updated status of the ticket.

## **7) Establish criteria for periodic review of effectiveness and identification of best practices**

PGE considers the following criteria to determine effectiveness and identification of best practices:

Monthly scheduled meetings to review leading and lagging indicators associated with labor resources, training, and skill development, including review of ticket volume, timeliness, escalated tickets, QA/QC inspections, total damages, and safety incidents.

- Ongoing reviews of LSP's safety, training, and OJI (On the Job Inspection) programs.
- Enhanced review of damage investigations; including tracking of timeliness of incident response, accuracy and completeness of reports, and number of at faults.
- Participation in the OAR/ORS, MUCC and CGA Committee meetings to stay aligned with best practices.
- Annual review of the current practices outlined in the most current version of *PGE's Line Locating Improvements & Procedure document*, to revise and adopt best practices as needed.

## **8) Continuous improvement efforts for 2021/2022**

- PGE is conducting pilot programs with excavators to acquire GPS data on installation of underground facilities to integrate data collected to PGE's geospatial platforms for record of underground electrical facilities.
- Piloting a LSP map field correction process to integrate with PGE's geospatial information.
- Continue to research and leverage technology to implement process improvements.



## Purpose

The purpose of this document is to capture PGE's Line Locating Practices and Procedures for consistent program management, documentation of continuous improvement practices and adherence to the Oregon ~~Statute ORS~~Administrative Rules for the Oregon Utility Notification Center, Chapter 952-001-0004. ~~After reviewing PGE's and PGE's LSP policies and procedures, PGE has addressed and introduced improvements into this written procedure.~~

## Commitment of PGE leadership, management, and employees

The driver behind the implementation of this policy is PGE's focus on safety and the desire to reduce or avoid dig-in incidents that threaten the safety of workers and the public, damages to property, interruptions of service to our customer, and costly repairs to or replacements of utility facilities. PGE's leadership, management, and employees are dedicated to putting safety first and achieving compliance with the OARs established by the OUNC, through both effective communication and engagement. We are equally committed to hiring LSPs that share our commitments toward safety and compliance through these means. We believe that it is through adherence to established practices and procedures, the use of data analysis, and implementation of industry best practices, that PGE can combat the risk that the dig laws are designed to prevent.

## References

OAR 952-001-001  
OPUC Chapter 860 Division 24 Safety Standards  
LSP Master Purchase Agreement  
PGE's Work Practice  
PGE's Safety Manual  
PGE Repair/PSLD Policy for Facility Damage Calls (Attachment A)

## **Damage prevention Program's Enhanced Processes Adopted by PGE to comply with Order 21-334 overview.**

### **Criteria for periodic review of effectiveness and identification of best practices**

- PGE considers the following criteria to determine effectiveness and identification of best practices:
  - Monthly scheduled meetings to review leading and lagging indicators, associated with labor resources, training and skill development, including review of ticket volume, timeliness, escalated tickets, QA/QC inspections, total damages, and safety incidents.
  - Ongoing reviews of LSP's safety, training, and OJI (On the Job Inspection) programs.
  - Enhanced review of damage investigations; including tracking of timeliness of incident response, accuracy and completeness of reports, and number of at faults.
  - Participate in the OAR/ORS, MUCC and CGA Committee meetings to stay aligned with best practices.
  - Annual review of the current practices outlined in PGE's Line Locating Improvements & Procedure document, to revise and adopt best practices as needed.

### **Identification of the technology or systems and methods used throughout the policy that enabled the completion of identified tasks**

PGE utilizes the UtiliSphere platform that is 811 System compatible for ticket and mobile workforce management to enable automated ticket processing, screening, recording, routing, and dispatching. PGE and its LSPs utilize ARCFM Viewer and/or MyWorld geospatial map data to identify the location of PGE's underground facilities. Tickets are routed using Q-Manager to either the LSP or PGE's Power Quality Department to perform the locate and complete the ticket in the UtiliSphere platform, which then triggers a notification to the excavator with an updated status of the ticket.

### **Identification of the means to ensure notification management software is compatible in order to receive all notification information administered by the OUNC's one-call vendor.**

There are frequent (usually weekly) communications between the OUNC, PGE's LSP and PGE's Geospatial IT departments to ensure compatibility of systems/software. PGE provides geospatial updates to all users every two weeks.

### **Identification of the means and systematic process of receiving, recording, and dispatching all notification information as collected by the OUNC's one-call vendor.**

PGE's damage prevention program employs Utilisphere—an automated, compatible 811 ticket management platform—to receive tickets and information as collected by the OUNC on their UtiliSphere platform, and to process, screen, record, route and dispatch each ticket directly to PGE's LSP through their separate Q-Manager software. The specific steps of the process are more fully described in the section below regarding *Line Locating Procedures for PGE Service Provider*.



### Identification of the notifications and types of responses for marking underground facilities

PGE and our contracted LSP are accountable for all standard (2 full business days), emergency (as quickly as possible), and design/pre-survey (10 business days) locate requests. Types of responses from the LSP for marking include:

1) an updated ticket status, providing ticket detail information for either marked facilities or the absence of facilities;

2) emailed notice to requestor providing ticket status, and

3) an Electronic Positive Response (“EPR”)—providing detailed ticket information including confirmation of marking status, site photos and related communications (e.g., documentation of phone conversations or email exchange with requestor), via email to the requestor when email address provided.

### Identification of the tasks assigned to participants by title or position and their roles and responsibilities in the workflow process

- OUNC (Oregon Utility Notification Center) receives locate requests from the excavator, either by phone via OUNC call center or through the automated Utilisphere platform. The OUNC then notifies PGE through Utilisphere platform of each request to locate, providing details and location information (polygon) provided by the requestor. The OUNC is the office of record for all tickets and attachments submitted by the requestor for a 90-day period.
- Locate requests are then routed directly to PGE as the operator through PGE’s Utilisphere platform and then routed to the LSP through its Q-manager automation system in quarter-minute sections based on established PGE district codes. Prior to marking, the operator reviews the ticket for completeness and ensures that all information on the request is complete. If the operator determines that a request is not clear, the operator contacts the primary or alternate point of contact on the ticket to obtain clarification on the marking instructions. The operator notes clarification and communication exchange with the requestor on the ticket.
- The operator marks the underground facilities or indicates facilities are clear of the proposed excavation area, attaches all communications and photos, and closes the ticket in Q-manager which then communicates through the UtiliSphere platform and triggers a notification to the excavator, providing an updated status of the ticket.
- PGE’s Supervisor of Construction Management Contract Services & Inspection is ultimately accountable for ensuring the workflow process is monitored and procedures modified, as needed, to adapt to new issues that arise. The Supervisor also ensures that PGE’s contracts with its LSPs contain scopes of work sufficiently detailed to comply with PGE’s procedures and Division 952 of the OARs and implements corrective actions with PGE’s employees or PGE’s contracted LSP’s when deemed necessary and appropriate.

### Establish criteria for periodic review of effectiveness and identification of best practices

PGE utilizes the following criteria to determine the effectiveness of its program and to identify new best practices:

- Monthly scheduled meetings to review leading and lagging indicators associated with labor resources, training, and skill development, including review of ticket volume, timeliness, escalated tickets, QA/QC inspections, total damages, and safety incidents.
- Ongoing reviews of LSP's safety, training, and OJI (On the Job Inspection) programs.
- Enhanced review of damage investigations; including tracking of timeliness of incident response, accuracy and completeness of reports, and number of at faults.
- Participation in the OAR/ORS, MUCC and CGA Committee meetings to stay aligned with best practices.
- Annual review of the current practices outlined in the most current version of PGE's Line Locating Improvements & Procedure document to revise and/or adopt new best practices, as needed.

## Line Locating Procedures for PGE Service Provider

### 1 Identify the Work Area

#### 1.1 One-Call Request for Location of Underground Facilities (OUNC 811)

- Refer to OPUC Chapter 860 Division 24 Safety Standards

#### 1.2 PGE's LSP review of the Ticket

1.2.1 Confirm the date, time and using the Company's maps and records, determine if a visual examination is required. Determine completion deadlines for the following ticket types:

- Standard notification – LSP to complete within 2 business days
- Emergency notification- LSP Respond as Quickly as possible
- Design/Pre-Survey notification - Within 10 business days after a designer notifies the Oregon Utility Notification Center (OUNC) of a proposed project, the operator of the underground facility shall mark with reasonable accuracy all its locatable underground facilities.
- Policy has been implemented (see *Attachment A - Repair/PSLD Policy for Facility Damage Calls*) that puts responsibility on Repair Dispatch/PSLD to notify LSP within 15 minutes of a PGE crew arriving on site that has responded to a dig-in. A notification to the CS&I's email mailbox is to follow, including simultaneous notification to PGE service providers by CS&I and an acknowledgement receipt

from LSP. This action will provide an enhanced review of damage including tracking of timeliness of incident response, accuracy and completeness of reports, and number of at faults.

1.2.2 LSP reviews maps, records and dig site location of work, to determine PGE has utility assets at the location of the ticket. If assets are documented, a visual examination is required at the excavation site to mark the location of facilities or identify absence of facilities at the location as the ticket defines.

1.2.3 If a visual examination is not required, LSP informs the requester through positive response notification. LSP is responsible and accountable for the method and adequacy of excavator notification and marks the ticket accordingly.

1.2.4 LSP verifies the work area matches the description of the ticket.

1.2.5 The description is required to include the date, location, type of work and contact information for the excavator or designer. PGE design sketches will be attached to all locate requests. This will allow the LSP to have access to a PGE design sketch without having to request it prior to leaving for the field or while in the field.

### 1.3 Quality Assurance by LSP

1.3.1 Field Check Audit Process: LSP's quality assurance program is focused on creating a culture that drives exceptional behaviors and performance and consists of an internal quality audit process detailed below.

LSP Audit Process:

1.3.1.1 The documentation created through pre- excavation photos is immediately delivered electronically to the quality audit process, which uses Field Check software to document findings

1.3.1.2 The documentation is then received by Field Check Auditors who review the photos and other supporting documentation. An audit consists of a review of the work completed comparing facility records with the photos to ensure that all known facilities are properly accounted for.

1.3.1.3 If quality failures are noted during the audit process, a field quality auditor or supervisor is immediately dispatched back to the job site for corrective action. The electronic audit process is supplemented by field auditors performing worksite visits where they review and validate the locate quality.

1.3.1.4 Through the audit process, Contractor uses a focused approach, rather than the traditional random audit. With this approach we can target technicians based on Field Check results and experience levels, as well as the facility type where we focus on high profile locations to enhance quality performance and reduce damages.

1.3.1.5 The results and findings from completed audits are summarized and reviewed weekly by PGE's LSP through a quality review board process (QRB). These

review board sessions are conducted with the technician, supervisor and manager reviewing the details of the findings, identifying the root cause and taking required corrective actions. Quality errors resulting in damages are reviewed by senior management with local field management on a weekly basis.

1.3.1.6 The review process is focused on eliminating damages by determining the root cause and taking corrective actions. PGE's LSP performance meetings occur on a monthly cadence. Reporting includes but is not limited to, total number of locate requests, damage ratio (number of damages/1000 tickets) and a quality assurance (QA) locator report.

1.3.2 Field Audit Process: The electronic audit process is supplemented by field quality auditors performing worksite visits where they review and validate the locate quality and accuracy.

1.3.2.1 Through our audit process, we use a focused approach, rather than the traditional random audit. With this approach we target technicians based on Field Check results and experience levels as well as the facility type focusing on high-risk locations to enhance quality performance and reduce damages.

1.3.2.2 The results and findings from completed audits are summarized and reviewed weekly by Contractors management through a quality review board (QRB) process. These review board sessions are conducted with the technician, supervisor and manager reviewing the details of the findings, identifying the root cause and taking required corrective actions. Quality errors resulting in damages are reviewed by senior management with local field management on a weekly basis. The review process is focused on eliminating damages by determining the root cause and taking corrective actions.

1.3.3 Technical Proficiency Reviews (TPR): Upon graduating from training, or anytime corrective action is deemed necessary due to questionable quality, a TPR may be performed on a technician. Designed to observe and document the employee's technical capabilities, these reviews cover all aspects of the National Utility Locating Contractors Association (NULCA) and service's provider's training programs/documentation and are designed to enable coaching and skill-gap training to improve performance.

1.3.4 Job Safety Observations (JSO): LSP also employs a JSO application to ensure that employees are working in a safe and efficient manner. All employees are required to receive a JSO at least once each 30 calendar days. Inspection of their work vehicle, tools, and work habits is tied to both safety and quality assurance.

#### 1.4 White Paint

1.4.1 For PGE Locate requests, LSP verifies a Verify PGE representative marked the work area to delineate excavation location.

1.4.2 White paint is not required to delineate work area if the operator can precisely determine the direction, length, and location of the proposed work by referring to a locate ticket. If locate description does not precisely note the direction, length, and location of the excavation the LSP will contact the requester's contacts immediately by phone or email and will document the ticket accordingly.

1.4.3 When needed, before beginning the work, a PGE representative and LSP operator meet at the work site to exchange information that delineates work area.

#### 1.5 No Facilities in Work Area

1.5.1 If there are no facilities in the work area:

1.5.1.2 Locate ticket is commented "No PGE facilities"

1.5.1.2 Locator paints inside or near the work area "No PGE"

### 2. DIAGNOSTIC CHECK OF THE LINE LOCATE EQUIPMENT

#### 2.1 Check the Equipment

2.1.1 A diagnostic test is required to be performed prior to use daily.

2.1.2 The steps for this process may vary by type of line locating equipment. Supervisor inspects monthly

### 3. PERFORM LINE LOCATING

#### 3.1. Line Locating Methods

3.1.1. Perform line locations by using visual keys (risers, valve boxes, regulator stations, vent points, etc.) when present and both of the following methods:

- Electronic line locators or acoustic pipe tracers
- Documentation
- When facilities cannot be identified by documentation, visual keys are to be used as the second method. In areas where documentation cannot be referenced with existing landmarks, electronic equipment may be used independently. If the facility cannot be located electronically, the LSP shall inform the requester, who shall pothole the excavation site.

3.1.3 Anytime lines are potholed by PGE, accurate measurements shall be taken and documented along with any appropriate documentation to correct any discrepancies.

3.1.4 Once completed, the Unusual Operating Condition (UOC) documentation or electronic equivalent will then be forwarded to PGE Engineering for updating of the map(s).

3.1.5 Estimated facility depths will not be provided to contractors or customers with paint markings.

### 4. UNDERGROUND FACILITIES WILL BE MARKED WITH THE FOLLOWING INFORMATION:

(As per OAR 952-001-0070 (7))

<i>Symbology</i>	<i>To Indicate</i>
Red	Electric power lines, cables or conduit, and lighting cables
Yellow	Gas, oil, steam, petroleum, or other hazardous liquid or gaseous materials
Orange	Communications, cable TV, alarm or signal lines, cables, or conduits
Blue	Water and irrigation lines, sewers, drainage facilities, or other drain lines
White	Pre-marking of the outer limits of the proposed excavation or marking the centerline and width of proposed lineal installations of buried facilities
Pink	Temporary survey markings
Purple	Slurry and reclaimed
White with Red Dot	PGE Special Testers

#### 4.1 Line Markings:

- Substation polygons are noted by code with the One Call Center. Requested locates that would normally go to PGE service providers, are to be located by PGE Special Testers. The polygons for substations and other critical facilities will be created established with a 50-ft buffer zone outside the fence of the substation. Inside substation polygons, locates are required for all excavation work and are performed by PGE Special Testers.
- PGE Special Testers paint their locate marks with white paint and a red dot in the white mark to eliminate confusion caused by when a special tester put red marks on the ground, as PGE's service provider also puts red marks on the ground for power. This delineates the locate marks, and reduces risk in critical areas
- LSP, at a minimum, will place markings within the proposed area and extend the markings 2 feet outside the area.
- NOTE: Placing markings 2 feet outside the area may not always be practical due to accessibility. If accessibility is impractical, the excavator must be informed that there are facilities that extend outside the proposed work area and the additional 2 feet will be marked if specifically requested. This must be documented on the original ticket
- Markings should be approximately 18 inches long and 1 inch wide
- Markings shall not exceed 50 feet spacing
- For service lines on private property, use 2-inch painted dots, with a maximum of 10 feet spacing on hard surface only

- At street crossings, place markings on each side of the street, with at least one mark in the middle of the street, provide additional marks as necessary
- "Offset" markings/staking should clearly indicate the direction, distance and path of the facility
- Communications/electric facility markings must contain the lettering of the utility to distinguish Company facilities from other utilities
- Facilities installed in a casing/sleeve must be identified as such, when known
- Mark substructures such as vaults, pits, etc., that are physically larger than the obvious surface indication to define the parameters of the structure.
- Critical PGE facilities, as identified by GIS, are located by PGE Special Testers such as Substation getaways, critical feeders, outside substations.
- In certain situations where locators cannot locate a primary or secondary conductor, the locator will contact the area supervisor who will then contact PGE Power Quality and request a special tester to assist.

#### 4.2 Approved Marking Materials

- In paved areas - approved paint
- In unpaved areas - approved paint, stakes, flags, whiskers
- NOTE: Site conditions such as wet surfaces and overgrown vegetation should be considered. Appropriate markings materials shall be used for visibility.

#### 4.3 Inaccurate Line Markings

4.3.1 When inaccurate line markings are found at a job site, remove or paint over. When appropriate, use these colors for these surface areas:

- Black spray paint for asphalt

#### 4.4 Trouble Locate Investigation

4.4.1 Notification When the facility has been determined as unlocatable, the following reporting process will be used.

4.4.1.1 Company/contractor will notify the PGE representative that a trouble locate exists with PGE facilities that may conflict with the excavator's work area.

4.4.1.2 A trouble locate request will be submitted to PGE's Power Quality Specialists as soon as practical to minimize wait time and job delay. This creates a work order for a PGE Special Tester.

4.4.1.4 At a minimum, the company will comply with all state laws and regulations prior to potholing.

#### 4.3.2 Investigation

4.3.2.1 Trouble locates will be investigated as soon as possible by the Contractor's supervisor and locate technician.

4.3.3 Removal of marks

4.3.3.1 Remove and/or cover over inaccurate line markings with black paint, dots, or any markings laced to determine trouble locate area to avoid confusion from approved markings.

5. LOCATING DEVICES

5.1. Radio detection

5.1.1. Service provider uses radio detection RD7100 precision underground service and utilities locator.

5.2. Marker Balls Used by PGE

5.2.1. Marker balls are small self-contained transmitters that can be located by a compatible locator receiver.

5.2.2. The marker balls mode shall be selected on the approved compatible locator receiver utilizing a manufacture approved frequency (HZ).

5.2.3. Marker ball mode uses antenna in a "peak" configuration.

5.2.4. Prior to utilizing the marker ball, verify the unit is operational by turning it on and utilizing the appropriate receiver to test for signal strength.

5.2.5. Always use operator approved marking procedures to identify the location when utilizing a marker ball to locate pipe, fittings, squeezes, etc.

5.3. Standards Electronic technology Improvements

5.3.1. PGE Standards department to researched options for installing tracer wire in conduit/vaults, and modifications to existing vaults/lids with external ground lug along with the use of marker balls.

6. PROVISION OF INFORMATION PRIOR TO MAPPING

6.1 Unmapped Services

6.1.1 The intent of this procedure is to provide visual and written information to Line Locating personnel in cases where a service line has been installed but the information has not yet been entered into the GIS mapping system.

6.1.2 Symbols are provided in Field Check software that can provide additional facility location information. These symbols can mean facilities have been installed, replaced, retired, and provide additional information. The Work Request (WR) box, under layers, must be selected to view these symbols. The WR can also be used to view additional facility documentation.

6.1.3 For residential locations, options include but are not limited to:



- Marking paint, whiskers, curb markers, etc.

6.1.4. Mapping updates from PGE GIS department to both OUNC and PGE service providers have been increased to a frequency from quarterly to bi-monthly for OUNC, and from monthly to bi-weekly for PGE's LSPs.

## 7. CRITICAL FACILITY PROCEDURE

### 7.1 Excavation around Critical Facilities

#### 7.1.1 If the requested work area crosses critical facilities

7.1.1.1 Critical facilities for PGE are inside of substations and outside of substations with a 50ft buffer zone.

- OUNC after receiving the locate request, verifies polygons in their mapping system and if a polygon exists within these parameters, rejects the ticket, which then notifies PGE Power Quality to proceed with sending a PGE special tester to complete the locate request.

## 8. DOCUMENTATION & RECORD RETENTION

### 8.1 Documentation

9.1.1 In cases where the One-Call Center is closed, or not available PGE locates their own facilities for emergency locates. 48hr locate requests can be generated 24hrs/day, 7 days/week. Upon receipt, each locate request will be recorded and each locate will be performed within the required time frame. This process may also be used if the facility has not been located within the time specified by law and the excavator wishes to contact PGE directly to help resolve the issue.

### 8.2 Record retention

8.2.1 Record retention is 6 years.

## ATTACHMENT A: REPAIR/LDCC POLICY FOR FACILITY DAMAGE CALLS

PGE Repair Dispatch and LDCC (Line Dispatch Crew Coordination) are accountable for notifying PGE LSP immediately when a damage call is received. This policy is put into place to prevent discrepancies on "who's at fault" and to have a PGE service provider damage investigator on-site prior to the repair being made and the damaged location backfilled. Safety and PGE's commitment to reduce the number of disputes on dig-ins are the drivers of this policy. PGE has an obligation to the OPUC to act on reducing damage to PGE underground conductors and to increase the accuracy of PGE service provider markings in the field.

When a PGE underground conductor is damaged in the field, the excavator or requester calls Repair Dispatch (or LDCC) and the following procedures take place:

- An outage record is created, and a crew/or Repairman is dispatched
- Once onsite, the damaged conductor or facility is identified and verified to be a PGE conductor or facility
- Crew or Repairman shall take photos to define the dig in location and depth and attach to the work order for future reference
- The crew or Repairman calls Repair Dispatch, or LDCC to request a crew and/or equipment needed
- Repair Dispatch or LDCC requests an emergency locate through the OUNC system (One Call)
- Within 15 minutes of receiving the call from the PGE first responder (confirming that it is a PGE facility), Repair Dispatch calls PGE LSP with the locate ticket number, nearest address, and makes a request for a PGE service provider damage investigation
- Repair Dispatch makes a log comment detailing the locate ticket number, time of the call, and specific details on the damaged conductor
- Repair Dispatch take a screen shot of the outage and sends via email to the CS&I damage prevention mailbox (CSI.DamagePrevention@pgn.com)