PACIFIC GAS AND ELECTRIC COMPANY
Wildfire Mitigation Plans
Rulemaking 18-10-007
Data Response

PG&E Data Request No.:	CalAdvocates_043-Q10		
PG&E File Name:	WildfireMitigationPlans_DR_CalAdvocates_043-Q10		
Request Date:	February 25, 2021	Requester DR No.:	CalAdvocates-PGE-2021WMP-09
Date Sent:	March 2, 2021	Requesting Party:	Public Advocates Office
PG&E Witness:		Requester:	Alan Wehrman

SUBJECT: ASSET INSPECTIONS

The following questions related to PG&E's 2021 Wildfire Mitigation Plan (WMP) Update.

QUESTION 10

P. 618 of PG&E's 2021 WMP states,

> Among other things, quality assurance could mean establishing baseline metrics and measures of program performance to highlight outliers in any inspection process step. Quality controls can be established to identify inspection personnel who report abnormally high or low rates of corrective findings in the field. This could also mean identifying inspection personnel who experience abnormal rates of changes of their initial findings (increased or decreased priority of findings, rejection of findings).

a. Regarding the statement, "Quality controls can be established to identify inspection personnel who report abnormally high or low rates of corrective findings in the field," does PG&E have specific, objective criteria for what constitutes "abnormally high or low rates of corrective findings"?

b. If the answer to part (a) is yes, please provide such criteria.

c. Regarding the statement, "This could also mean identifying inspection personnel who experience abnormal rates of changes of their initial findings," does PG&E have specific, objective criteria for what constitutes "abnormal rates of change"?

d. If the answer to part (c) is yes, please provide such criteria.

e. Describe the quality control procedures PG&E has established to verify the work of inspection personnel who report abnormally high or low rates of corrective findings in the field.

f. State the number of inspection personnel who, in 2019, experienced abnormal rates of change of their initial findings.

g. State the number of inspection personnel who, in 2020, experienced abnormal rates of change of their initial findings.

h. For the cases in parts (f) and (g), what short-term corrective actions were taken in response?

i. For the cases in parts (f) and (g), what long-term corrective actions were taken in response?

ANSWER 10

a. Yes.

b. System Inspection (SI) Quality Control (QC) uses a quartile analysis to identify outliers. The quartiles divide the dataset into four groups of approximately equal size.

- Q1 (25th), Q2 (50th), Q3 (75th) percentiles

- Q3 – Q1 = IQR (dispersion in middle 50% of the data)

- Any data values less than Q1 – 1.5 IQR and Q3 + 1.5 IQR are considered outliers

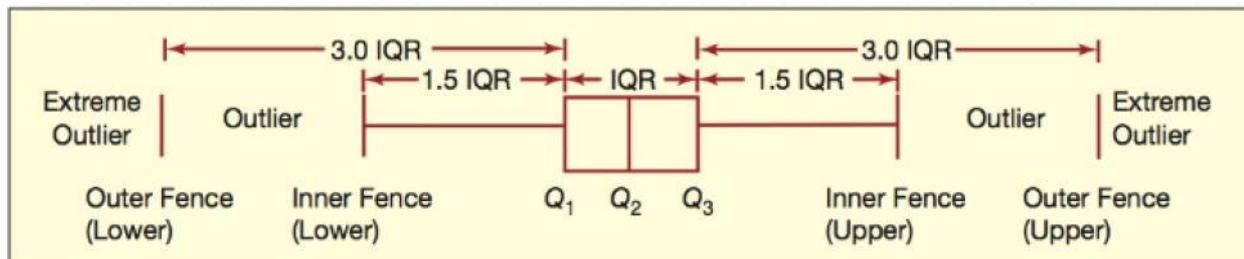- Any data values less than Q1 – 3 IQR and Q3 + 3 IQR are considered extreme outliers

Image Credit: Doane, D. P., & Seward, L. W. (2019). *Applied statistics in business and economics*. Boston: McGraw-Hill/Irwin.

c. No. SI QC is building out the "Rate of Change" analysis in Q1 2021 and will implement in Q2 2021. SI QC is exploring the use of Control Charts, specifically, the "X Bar and R", and/or "I and MR" charts. This should give us an enhanced ability to proactively identify signals of instability, even when the performance outcomes are within the range of expectation.

d. Not Applicable.

e. In addition to conducting QC Assessments, an integral piece of the Quality Control program is the on-going tracking and trending of system outliers for inspector work quality. These key metrics are a combination of inspector Productivity, Notification Find Rate and Accuracy.

   This information is used as a guide by the Execution team/Vendors to easily identify which inspectors may be high risk. The Execution team/Vendors can then appropriately target and conduct their internal quality verification checks.

Outlier data is also used by QC Analyst to draw sample size for the Routine QC "Outlier" inspector records. Outlier sampling is done by segregating all Outlier inspector records in each sample population and picking 5% of each inspector's record for QC using the random function.

Each Specialist will be assigned a set number of Divisions or MWC each month based on volume of work. The Division or MWC will be rotated between QC Specialists each month to promote unbiased reviews and allow different Specialists to assess the same Inspector over time.

Work is dispatched to the Specialist via the online web application by the QC Business Analyst. An online web application form is generated for each equipment ID to be assessed. The form gets pre-populated with asset basic data that will be used for reporting.

QC Specialist downloads the Equipment Inspection PDF record via the url provided in the online web application form.

QC Specialist runs SAP report for all open notifications for the equipment ID so existing notification can be verified for accuracy compared to the inspection.

The QC Specialist reviews the entire Inspection log for overall accuracy and completeness, verifying the following:

- Use of the correct inspection form for the asset structure type.

- Photo quantity and quality.

- Review and confirm conditions marked as "Yes" for each section are applicable and comments are accurately noted.

- Review and confirm conditions marked as "No" for each section are not applicable and have not been skipped in error.

- All required Record Keeping and Declaration items have been identified and noted.

- All existing notifications at location have been reviewed and records updated in SAP.

- All new compelling abnormal field conditions identified have been logged into an existing notification or a new notification with correct FDA and priority assignment.

- That the inspector did not fail to identify or missed reporting on a compelling abnormal field condition present during the initial inspection.

All discrepancies found during QC review will be recorded in detail under the specific Inspection checklist section. Specialist will provide detailed objective evidence supporting their finding(s) and list procedural or guidance documentation references where applicable.

QC Specialists will suggest recommended corrections/corrective actions as "Follow Up" items in the QC form when applicable. Impacted reference documentation will be noted.

Discrepancies are divided into two different classifications:

- Observation – minor documentation error or a low risk requirement failure that will not necessitate an update to the inspection record, creation of a new notification or a re-inspection of the structure.

- Non-Conformance – major deficiency in record keeping or failure of inspector to properly assess and document an abnormal field condition per the stated requirements. A non-conformance will require a follow up action to remediate the deficiency or correct the condition.

If a QC Specialist needs additional clarification related to a non-conformance issue before finalizing it, they should discuss the item with the QC Work stream lead. The Lead will engage the correct SMEs with the assistance of the QC Manager to disposition the non-conformance appropriately.

Once the QC Specialist has completed the initial assessment, records that have discrepancies are routed for peer review and approval. Based on subject matter expertise or workload, peer reviewers will be assigned appropriately by the initial QC Specialist. Records with no discrepancies migrate to "Completed" status without requiring any additional peer review.

f. Not Applicable. We did not have a procedure implemented in 2019.

g. The process for calculating and tracking rates of change was not implemented in 2020. It is to be implemented in 2021. See answer to question "c".

h. Not applicable.

i. Not applicable.