

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the  
Commission's Own Motion to Adopt New  
Safety and Reliability Regulations for  
Natural Gas Transmission and Distribution  
Pipelines and Related Ratemaking  
Mechanisms.

Rulemaking 11-02-019  
(Filed February 24, 2011)

**RECOMMENDATIONS OF THE DIVISION OF RATEPAYER ADVOCATES  
REGARDING PG&E'S VIOLATIONS OF RULE 1.1**

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## I. OVERVIEW AND SUMMARY OF RECOMMENDATIONS

In accordance with the oral ruling made in the Order to Show Cause Hearing on September 6, 2013<sup>1</sup> the Division of Ratepayer Advocates (“DRA”) submits these recommendations regarding how the Commission should respond to Pacific Gas and Electric Company’s (“PG&E”) violations of the Commission’s Rule 1.1 of Practice and Procedure.

PG&E’s Rule 1.1 violations are related to its attempted filing of an *errata* to notify the Commission that the maximum allowable operating pressure (“MAOP”) for lines 101 and 147 had been set too high in Decision (“D.”) 11-12-048 (“Operating Pressure Decision” or “Decision”). In the *errata*, PG&E disclosed, among other things, that it had provided incorrect information about the type of pipe in Segment 109 of Line 147, and that the MAOP the Commission had authorized for Line 147 was therefore incorrect.

The pipeline record error impacting the MAOP for Line 147 was discovered by a PG&E gas engineer in October 2012, approximately ten months after the Commission had approved the MAOP for Line 147 in the Operating Pressure Decision. The error was reported to PG&E senior management on November 16, 2012, but PG&E did not tender its “errata” for filing until July 3, 2013 – nearly nine months after PG&E discovered the error, and more than seven months after PG&E senior management had learned of the error.

PG&E’s attorney, Mr. Joseph Malkin, took the stand as PG&E’s sole witness at the September 6, 2013 hearing on the Order To Show Cause. Mr. Malkin testified that he believed at the time that filing an *errata* was an appropriate way for PG&E to correct the information it had provided about Line 147 and to inform the Commission of the correct MAOP. This claim is not credible. Admittedly, the Commission’s processes can be mystifying to the uninitiated. But one would be hard pressed to find a company with more experience practicing before the Commission than PG&E, or counsel with as much Commission experience as Mr. Malkin. Surely PG&E must have known that, as Chief

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<sup>1</sup> 16A RT 2415: 16-24.

Administrative Law Judge Karen Clopton stated at the hearing, it should have filed a petition to modify the Decision in light of the corrected information. In fact, as discussed below, PG&E had an obligation to file such a petition, because to leave the Commission in the dark about the erroneous MAOP for seven months is to mislead the Commission in violation of Rule 1.1 and because the errors in the Decision must be corrected.

In light of PG&E's motivations, which are discussed in more detail below, it is reasonable to conclude that all of PG&E's decisions – to withhold notice of its recordkeeping error, to file an *errata* instead of a petition to modify, to omit critical information in the *errata*, and to file the *errata* at the beginning of a long holiday weekend – were attempts to mislead the Commission, in violation of Rule 1.1. PG&E's explanations for these actions are not credible, and its refusal to answer questions at the Order to Show Cause (OSC) hearing by asserting attorney/client privilege continues this pattern.

While there is ample support in the record for fines, and the deterrent effect of fines merits consideration, DRA does not offer any specific fine recommendation here. Rather – because PG&E's Rule 1.1 violations reveal significant safety concerns regarding PG&E's recordkeeping and reconstruction of its gas pipeline system – DRA proposes two forward-looking measures to significantly reduce the risk of future errors remaining undetected or undisclosed.

Specifically, DRA has previously recommended – and recommends here – that the Commission (1) direct PG&E to develop a comprehensive quality assurance/quality control (“QA/”QC) plan for its Pipeline Safety and Enhancement Plan (“PSEP”);<sup>2</sup> and (2) require independent monitoring of, and public reporting on, PSEP implementation to ensure that the QA/QC Plan is being followed and the work done properly.<sup>3</sup>

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<sup>2</sup> See DRA Motion For QA/QC Plan, filed in this docket on July 8, 2013, pp. 3-5, and attached hereto as Attachment C.

<sup>3</sup> DRA's independent monitor proposals has been articulated in virtually all of the San Bruno-related proceedings. See DRA Opening Brief on Fines and Remedies in I.11-02-016, et seq., May 6, 2013, pp. 36-40, attached hereto as Attachment A, for the most recent iteration of that proposal. See also, DRA Comments on Proposed Decision, R.11-02-019, November 16, 2012, pp. 14-16; DRA Opening Brief, I.

(continued on next page)

The facts revealed by the two Orders to Show Cause starkly demonstrate the need for the Commission to take an active and transparent role in overseeing the reconstruction of PG&E’s gas transmission network and the repopulation of its gas transmission database. The situation the Commission faces today might have been prevented by implementation of an effective QA/QC Plan, use of an Independent Monitor, or both. It is without question that both mechanisms would have contributed to the *earlier detection* of the error and *earlier reporting* of the error to the Commission and the public.

## II. DISCUSSION

### A. **Timing Is Everything: PG&E Violated Rule 1.1 By Failing To Notify The Commission As Soon As It Discovered That It Had Provided Incorrect Information About Line 147**

#### 1. **After Learning That Its Data Assumptions Were Wrong, PG&E Withheld this Damaging Information For More Than Seven Months, Until Hearings and Briefing in the Recordkeeping Investigation Were Completed**

PG&E tells us that on October 18, 2012, a PG&E engineer discovered a discrepancy between the pipe that was in the ground and PG&E’s “documented specifications.”<sup>4</sup> In sum, Segment 109 of Line 147 was not Double Submerged Arc Weld (“DSAW”) pipe, as PG&E’s “validated” records showed – and as PG&E believed when it hydrotested Segment 109 – but was in fact a weaker “AO Smith” pipe.<sup>5</sup> Ultimately, based on this finding, PG&E determined that the pipe’s MAOP should be adjusted from 437 psig to 330 psig.<sup>6</sup>

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*(continued from previous page)*

11-02-016, March 25, 2013, pp. 21-25; and DRA Opening Brief, I.12-01-007, March 11, 2013, pp. 61-66 for other iterations of the proposal.

<sup>4</sup> Verified Statement, ¶¶ 27-28.

<sup>5</sup> Verified Statement, ¶¶ 27-28. The fact that the AO Smith pipe found in Segment 109 was of weaker material than the assumed DSAW pipe is reflected in PG&E’s determination that the pipe had a lower SYMS value and a weaker longitudinal seam, which led it to lower the design MAOP from 437 psig to 330 psig. See Verified Statement, ¶ 38: “Based on the identification of the A.O. Smith pipe, we updated the MAOP validation documentation using the lower SMYS value and lower joint efficiency factor. This resulted in lowering the MAOP for Segment 109 from 437 psig to 330 psig.”

<sup>6</sup> Verified Statement, ¶ 38.

Nearly nine months later, on July 3, 2013 – at the beginning of a long holiday weekend – PG&E finally decided to notify the Commission of the data error and adjustment of the Segment 109 MAOP through an *errata* it attempted to file in this docket. The *errata* was rejected by the Commission’s docket office “a little over a month later.”<sup>7</sup> On August 19, 2013, the Chief Administrative Law Judge (“ALJ”) and the Assigned ALJ issued a ruling directing PG&E to show cause why it should not be sanctioned for violation of Rule 1.1 (Ethics) of the Commission’s Rules of Practice and Procedure (“Rules”).

**2. PG&E’s Line 147/Segment 109 Records Were Wrong Both Before And After MAOP Validation – PG&E Replaced One Wrong Assumption With Another (!)**

On August 30, 2013, PG&E submitted a Verified Statement to the Commission, in response to the August 19, 2013 Assigned Commissioner and Administrative Law Judge’s Ruling opening the other Order to Show Cause (“OSC”) held in parallel with this OSC. The Verified Statement explains that the data regarding Segment 109 of Line 147, which was prepared in October 2011 for the MAOP validation, reflected that Segment 109 was DSAW pipe and that this DSAW identification was based on an engineering “assumption.”<sup>8</sup> The Verified Statement is silent on the fact that Segment 109 was originally identified as “SMLS” or “seamless” in the database, before the October 2011 change to DSAW.<sup>9</sup> The Verified Statement does acknowledge that the same PG&E engineer forgot to identify the DSAW designation as an “assumption” rather than a fact.<sup>10</sup> The Verified Statement also reflects that the time of the change, the PG&E engineer making the change should also have reduced the joint efficiency factor to .8, but instead chose to leave it at 1,<sup>11</sup> which is the proper factor for a seamless pipe, not a DSAW pipe.

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<sup>7</sup> 16A RT 2347: 1-4 (PG&E/Malkin).

<sup>8</sup> Verified Statement, ¶ 35.

<sup>9</sup> The PSEP database on pipe features provided by PG&E in support of its PSEP Application in August 2011 showed that Segment 109 was identified as “SMLS” or seamless in PG&E’s database.

<sup>10</sup> Verified Statement, ¶ 35.

<sup>11</sup> Verified Statement, ¶¶ 35-36.

In this manner, PG&E replaced one incorrect assumption (seamless) with another (DSAW), and then compounded that error by failing to designate DSAW as an assumption, rather than a fact, and failing to adopt the more conservative .8 joint efficiency factor.

### 3. Issuance of the Order to Show Cause Ruling

Rule 1.1 (Ethics) provides:

Any person who signs a pleading or brief, enters an appearance, offers testimony at a hearing, or transacts business with the Commission, by such act represents that he or she is authorized to do so and agrees to comply with the laws of this State; *to maintain the respect due to the Commission, members of the Commission and its Administrative Law Judges; and never to mislead the Commission or its staff by an artifice or false statement of fact or law.* (Emphases added).

The OSC Ruling to investigate PG&E’s possible Rule 1.1 violations was issued because of the concerns raised by PG&E’s use of an *errata*, in lieu of a more formal procedural vehicle, to notify the Commission of a substantive change involving “the accuracy of PG&E’s natural gas transmission pipeline records” which “has been and remains an extraordinarily controversial issue in which the public has an intense interest,”<sup>12</sup> and because of PG&E’s choice of the July 3, 2013 attempted filing date – at the beginning of a long holiday weekend.

The OSC Ruling explained:

The facts stated in PG&E’s July filing [the *errata*] appear to directly implicate this [recordkeeping] issue, particularly the continuing inaccuracy of PG&E’s records and the happenstance means by which this most recent instance of erroneous records was discovered. Submitting this provocative information in a routine-appearing document could be seen as an attempt to mislead the Commission and the public on the significance of this new information.<sup>13</sup>

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<sup>12</sup> August 19, 2013 Chief and Assigned ALJs OSC Ruling, p. 4.

<sup>13</sup> August 19, 2013 Chief and Assigned ALJs OSC Ruling, p. 4.

#### 4. PG&E's Actions Constitute Rule 1.1 Violations

There is no question that the activities identified in the Rule 1.1 OSC Ruling, and PG&E's other activities revealed during both this OSC and the companion OSC on MAOP issues, constitute Rule 1.1 violations. Rule 1.1 requires that PG&E “*maintain the respect due to the Commission, members of the Commission and its Administrative Law Judges; and never ... mislead the Commission or its staff by an artifice or false statement of fact or law.*” (Emphases added).

All of PG&E's actions, from the time it discovered the data error in October of 2012, to its attempted filing of the *errata* on July 3, 2013, including putting its attorney on the stand to explain its actions (and take the blame), while refusing to answer questions about when senior PG&E managers found out about the MAOP error by asserting attorney/client privilege, has reflected a lack of respect for this Commission and an intent to mislead.

Specifically, it seems likely that PG&E has taken these actions to hide the fact that a significant and *current* record error had been discovered while the Recordkeeping Investigation into its past practices was pending, and to buy it time to perform its own investigation, without Commission oversight, in order to craft its own story that minimizes the significance of the error. Nine months after discovery of the error, and after the record in the Recordkeeping Investigation had been closed, it attempted to slip the error by the Commission and the public by filing an *errata* on July 3, 2013, before the long 4<sup>th</sup> of July weekend.

In response to the Rule 1.1. OSC Ruling, PG&E thumbs its nose at this Commission by putting its lead outside counsel for all of the San Bruno-related proceedings, Joseph Malkin, on the stand.<sup>14</sup> Predictably, Mr. Malkin “took the fall” for PG&E, claiming that he was solely responsible for both the decision to style the notice as

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<sup>14</sup> DRA has identified several other instances of PG&E Rule 1.1 violations in the San Bruno Investigations, most of which implicate baseless legal arguments advanced by Mr. Malkin as PG&E's lead attorney in those investigations, or repeated misrepresentations of testimony, also advanced by Mr. Malkin. See, e.g., DRA Opening Brief on Fines and Remedies in I.11-02-016, et seq., May 6, 2013, pp. 22-23.



an *errata*, and to file the notice on July 3.<sup>15</sup> What Mr. Malkin refuses to explain, asserting attorney/client privilege, is why PG&E waited nearly *nine months* before making the filing.

When asked specifically why PG&E did not disclose in the *errata* that the error had been discovered eight months earlier, PG&E's attorney said that including this fact seemed to be "way too much information."<sup>16</sup> PG&E did not disclose this fact until August 30, 2013, when it filed the Verified Statement ordered by a companion OSC Ruling, also issued on August 19, 2013, by Assigned Commissioner Florio and the Assigned ALJ.

What is most interesting about Mr. Malkin's "testimony" is that in his extended *mea culpa* of what he could have done differently to avoid the OSC Ruling,<sup>17</sup> he *never* suggests that he would have notified the Commission *immediately*, or even sooner than PG&E did. While Mr. Malkin agrees that PG&E "had an obligation to alert the Commission and the parties to the errors and corrections,"<sup>18</sup> he doesn't address *when notice should actually have been given*. Thus, both the *errata* and Mr. Malkin steer clear of this issue. But it cannot be ignored.

It is hard to avoid the conclusion that the decision to withhold notice of the data error was intentional and strategic. The evidence in support is pervasive, from PG&E's incentives to withhold the error because of the Recordkeeping Investigation pending at

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<sup>15</sup> 16A RT 2347-2354 (PG&E/Malkin).

<sup>16</sup> 16A RT 2361-2362: 23-5 (PG&E/Malkin):

Q Can you tell us why this pleading [the *errata*] does not include the fact that this discovery was made eight to nine months prior to the date of the pleading?

A For purposes of this pleading, which was to provide notice to the Commission and the parties that there were errors and how they were corrected, that seems to me like way too much information. It was – as I said, the purpose of this was to give notice of the errors and the corrections.

<sup>17</sup> 16A RT 2343-2358 (PG&E/Malkin). Note especially 2357-2358: 24-7, where Mr. Malkin suggests that his primary error was the procedural vehicle – the *errata* - that created the impression that PG&E was "trying to do something sneaky."

<sup>18</sup> 16A RT 2357: 20-23 (PG&E/Malkin); see also 16A RT 2350: 13-15 (PG&E/Malkin) ("... clearly we have to provide notice to the Commission and to the parties.").

the time of its discovery, to the fact that *even the errata did not disclose that PG&E discovered the error last October.*

**5. It Is Fair To Conclude That PG&E Withheld Notice Of Its Error To Avoid Jeopardizing Its Case In The Recordkeeping Investigation, Which Was Still Being Litigated In October 2012**

A review of the Operating Pressure Decision, D.11-12-048, and the PG&E documentation on which the Decision is based, shows that PG&E was well aware that a data error of *this magnitude on one of these lines* – a line that was reputedly exhaustively examined as part of the MAOP validation in D.11-12-048 - would lead the Commission and the public to ask: “If the pipeline data for these lines is inaccurate, how do we know the testing and replacing and recordkeeping efforts currently underway are being done correctly?”

Mr. Malkin, as PG&E’s witness, admitted as much when he testified that he fully expected some sort of a proceeding following from the *errata* to investigate “the state of PG&E’s MAOP validation efforts, its records and the safety of the system.”<sup>19</sup> PG&E was well aware that the public would want to know about this recordkeeping problem, and what it meant for the rest of PG&E’s records. One can reasonably infer that is why PG&E delayed public notice of this error until after the Recordkeeping Investigation was fully briefed.

PG&E’s attempts to explain the delay in terms of the internal investigation it felt it needed to perform,<sup>20</sup> but declines to explain *why* this investigation had to be completed *before* it notified the Commission.<sup>21</sup> It is fair to conclude that this explanation is a red herring. Among other things, PG&E’s “investigation” focused on developing a new

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<sup>19</sup> 16A RT 2350: 15-20 (PG&E/Malkin).

<sup>20</sup> See, e.g., 16A RT 2352: 1-27 (PG&E filed “as quickly as we could” after the investigation was concluded).

<sup>21</sup> There is a legitimate question regarding why the investigation took so long given PG&E’s testimony in the related-OSC that it routinely updates its database with field information. See, e.g., 16B RT 2445-2446: 25-13; and 16B RT 2488: 25-28. Presumably, discovery of database errors as a result of field work is a routine event that should have standard procedures associated with investigation and correction. DRA will explore these issues in more detail in the related OSC.

interpretation of 49 CFR 192.611 – what PG&E terms the “one class out rule” – and identifying segments that fell under PG&E’s new interpretation. However, Segment 109 and the recordkeeping errors found with respect to that Segment could easily have been reported before this “investigation” was complete.

Both The Utility Reform Network (“TURN”) and the City of San Bruno attempted to cross-examine Mr. Malkin regarding PG&E’s reason for insisting on completing its own internal investigation before notifying the Commission. Both raised the issue of the Recordkeeping Investigation and how disclosure of the error would impact that investigation. In both cases, Mr. Malkin avoided answering the question, eventually asserting attorney/client privilege.<sup>22</sup> When San Bruno specifically asked Mr. Malkin to explain why PG&E waited until July to attempt to file its *errata*, he refused to answer, claiming attorney/client privilege:

... to the extent your question is attempting to ask me in essence about what I knew and when I knew it, that -- all of that information, other than -- well, all of that, that information, what I knew and when I knew it, is all derived from attorney-client communications.<sup>23</sup>

The PG&E attorney representing Mr. Malkin then opined that “this line of questioning” - which goes to the very relevant issue of whether PG&E intended to mislead the Commission with its *errata* - “seems far afield from the subject of the order to show cause that we are addressing in this morning’s hearing ...”<sup>24</sup>

The Commission can draw reasonable inferences from PG&E’s explicit refusal to explain why it took so long to notify the Commission after the discovery of the data error. It is reasonable to infer that, among other things, PG&E did not want to jeopardize its defense in the Recordkeeping Investigation. PG&E’s strategic decision to withhold information regarding current data base errors in supposedly “validated” data typifies the

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<sup>22</sup> For the TURN cross exam *see* 16A RT 2365-2368: 13-14 (PG&E/Malkin) and especially 2366:2-21; for the San Bruno cross exam, *see* 16A RT 2390:6-20 (PG&E/Malkin).

<sup>23</sup> 16A RT 2381-2382: 25-15 (PG&E/Malkin).

<sup>24</sup> 16A RT 2383: 8-13 (PG&E/Fiala).

type of omission that the Commission has found is intended to mislead it, in violation of Rule 1.1.<sup>25</sup>

**B. It Is Fair To Conclude That PG&E Knew It Was Obligated To File A Petition To Modify But Chose Not To In An Attempt To Avoid Scrutiny**

As part of his *mea culpa*, Mr. Malkin explains that “it never dawned on me that whatever we called it, whenever we filed it, that something coming from PG&E would escape the scrutiny of particularly those parties who had been most active in the OIIs ...”<sup>26</sup>

This claim is disingenuous. Mr. Malkin and PG&E well know that substantive changes to information relied upon in a decision is not properly the subject of an *errata*. As Chief ALJ Clopton explained at the OSC Hearing, PG&E should have filed a petition to modify:

The only procedural rule applicable to changed facts such as claimed to be present here is Rule 16.4 which sets forth the procedure for seeking to modify an issued Commission decision based on allegations of new or changed facts, a rule under which PG&E chose not to proceed.

Instead, PG&E attempted to file an *errata*, which is not provided for in our rules.<sup>27</sup>

Chief ALJ Clopton went on to explain the “troubling” nature of PG&E’s choice of an *errata* given the critical safety issues addressed in D.11-12-048:

PG&E's procedural choice is particularly troubling because the issues in the pressure restoration decision go to the heart of the safe operation of these natural gas transmission lines.<sup>28</sup>

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<sup>25</sup> See, e.g., Sprint PCS, D.01-08-019; mimeo at 14 (“Without true and complete responses to the data request, the staff's ability to properly assess and act upon Sprint PCS' request for codes was undermined.”). In that case, even if staff could have found the information through other means, and even if the outcome of the matter would not have been resolved differently, the Commission fined Sprint PCS \$200,000 because the violation undermined the regulatory process.

<sup>26</sup> 16A RT 2353-2354:26-2 (PG&E/Malkin).

<sup>27</sup> 16A RT 2335: 18-27 (ALJ Division/Clopton).

<sup>28</sup> 16A RT 2336: 6-10 (ALJ Division/Clopton):

Chief ALJ Clopton is correct that a petition to modify was the appropriate vehicle for notice to the Commission and that PG&E's choice of an *errata* was troubling given the safety significance of the MAOP validation project. Mr. Malkin, as PG&E's witness, disagreed, explaining that *errata* are used to change numbers in rate cases, and "in rate cases there is hardly anything that is more substantive than a number":

And when the company discovered these errors and went through the analysis that is described in Mr. Johnston's verified statement, the conclusion that was reached was that the Maximum Allowable Operating Pressure on Line 101 and Line 147 had to be reduced to comply with the federal code. So that was completely consistent with what the decision authorized [in Ordering Paragraph 2].

So in my judgment, we didn't need to have the decision modified. An amendment is appropriate, but clearly we have to provide notice to the Commission and to the parties. ...

And I thought -- to me, I have seen *errata* used for a variety of circumstances at the Commission some, as ALJ Clopton described this morning, typos. I've also seen it used in rate cases *to change numbers*. And as we all know, in rate cases there is hardly anything that is more substantive than a number. There wasn't anything that exactly fit. To me, *errata* is literally a list of errors and corrections, and that is exactly what we submitted.

Mr. Malkin's explanation is unconvincing. Yes, *errata* are often used to correct numbers in rate cases; but they are not used to make changes that materially change the relief sought by a party, or its recommendation to the Commission. In an open proceeding a party could bring such significant, material changes into the record by submitting revised or supplemental testimony, or by filing an amended application. Further, as both PG&E and Mr. Malkin surely know, *errata* are most often used to correct testimony, *which is not filed with the Commission*. Thus, consistent with the Chief ALJ's observation, there is no provision for *errata* in the Commission's Rules, which govern formal filings.

Most important of all, it is one thing to correct testimony *while the record is being developed*; correcting testimony *after the Commission had a decision based on that testimony* is another. Here, the Commission has already issued a decision authorizing a certain MAOP for Line 147, in December 2011. As soon as PG&E realized that the correct MAOP for Line 147 was not 365 psig, as stated in the Decision, but 330 psig, it should have informed the Commission without delay for two reasons: because the Commission is responsible for ensuring that PG&E operates safely and complies with all safety requirements, and because D.11-12-048 must be modified to authorize the correct MAOP.

Mr. Malkin, as PG&E's witness, stated that in his opinion a petition for modification is unnecessary because Ordering Paragraph 2 of the decision requires PG&E to comply with applicable federal law and regulations. This argument is strained. With safety as its *overriding objective*, the Commission took great pains in D.11-12-048 to establish the appropriate MAOP for lines 101, 132A, and 147 based on the evidence before it. If the MAOP authorized in Ordering Paragraph 1 of that decision was too high, the Commission is entitled to know that, and fix it, as soon as possible. Mr. Malkin effectively argues that there is no need for the Commission to correct a decision authorizing an excessive MAOP based on flawed evidence. But the Commission needs to correct the Decision for several reasons. Among them, if D.11-12-048 is not corrected, if in doubt, PG&E personnel might at some point in the future incorrectly assume that the Commission-authorized MAOP is the correct one. And it is not inconceivable that PG&E would later argue that it could operate Line 147 at the higher, Commission-authorized MAOP.<sup>29</sup>

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<sup>29</sup>By failing to file a petition for modification to change the MAOP, PG&E may also have violated General Order 96-B, Title 5.2 which states:

A utility must file an application, application for rehearing, or petition for modification, as appropriate, in the following circumstances:

- (1) The utility requests modification of a decision issued in a formal proceeding or otherwise seeks relief that the Commission can grant only after holding an evidentiary hearing, or by decision rendered in a formal proceeding ...

Further, PG&E’s decision to change the MAOP internally without seeking correction of the MAOP in the Decision may also constitute a violation of Public Utilities Code Section 761 which states:

...The commission shall prescribe rules for the performance of any service or the furnishing of any commodity of the character furnished or supplied by any public utility, and,... such public utility shall furnish such commodity or render such service within the time and upon the conditions provided in such rules. (*Emphasis added*).

Upon learning that it had made an incorrect assumption about the type of pipe in Segment 109 of Line 147, which was the basis for the MAOP set forth in Ordering Paragraph 1 of the Operating Pressure Decision, PG&E had a duty under Section 761 to inform the Commission, by filing a petition for modification or an application, that it should change the conditions set forth in the December 2011 decision for safe operation of PG&E’s gas transmission system.

**C. The Verified Statement Identifies Other Troubling Recordkeeping Errors That Should Be Addressed By This Commission**

After discovering the errors regarding Segment 109, PG&E conducted a review of the remaining Line 147 data. That review revealed a number of troubling recordkeeping errors.

First, PG&E admits that several other segments in Line 147 that were characterized as seamless in 2011 were actually Single Submerged Arc-Welded (“SSAW”).<sup>30</sup> The Verified Statement reveals that an engineer had noticed this inconsistency in 2011, but that the data – which was used to validate the MAOP for PG&E’s October 2011 filing supporting the Operating Pressure Decision - continued to contain the error until it was re-discovered in the November 2012 “re-look” triggered by identification of the Segment 109 data error.<sup>31</sup>

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<sup>30</sup> Verified Statement, ¶¶ 39-42.

<sup>31</sup> Verified Statement, ¶ 39.

Second, notwithstanding PG&E's unequivocal representations in the afternoon OSC hearings that it routinely updates its data with field information,<sup>32</sup> the Verified Statement reveals that PG&E has failed – until very recently - to do so. In the Verified Statement PG&E admits that several other segments in Line 147 - which were previously characterized as a seam type of “unknown” - were changed after March 5, 2013 to accurately reflect the type of pipe in the ground, consistent with the evidence gleaned from the 2011 hydrostatic test on those segments.<sup>33</sup> Thus, while PG&E had access to field information from the 2011 hydrostatic test of Line 147, it failed to incorporate that information into its database *until this year*, and may not have incorporated it at all but for the leak on Segment 109.

This evidence of PG&E's failure to update its records with field information is directly contrary to PG&E representations made throughout the Recordkeeping Investigation, including representations to the National Transportation Safety Board (“NTSB”)<sup>34</sup> and representations that PG&E made to this Commission on September 6, 2013. The Commission cannot continue to ignore the fact that PG&E's actions are not consistent with its representations to this agency.

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<sup>32</sup> See 16B RT 2446:1-13 (“every time we open up a pipe either to do strength test or for some other operational purposes, we have an opportunity to obtain knowledge about our assets. That's exactly what happened on Line 147”); 2488-2489: 24-10 (“So when we're doing a repair, any time we excavate a pipeline, we will go in and take a look at that pipeline and validate the information that we have. So whether we do it for a leak repair or for opening up for construction reasons, say, to tie a pipeline in to do a pressure test or to do a dig just to do our integrity management system, all of those digs, if you will, all those excavations result in information about the pipeline that is fed back into our information management system so that we constantly keep it up to date and it gives us additional pieces of information.”); and 2493:16-22 (“as we dig up pipe, we may indeed find where our records say one thing and it's something else -- we will be looking for mechanisms in our effort to continuously get better ...”).

<sup>33</sup> Verified Statement, ¶¶ 43-47.

<sup>34</sup> See, NTSB Report, p. 109 (“At the NTSB investigative hearing, PG&E officials testified that if discrepancies between GIS data and actual conditions are discovered by field personnel, field engineers are required to report them to the mapping department, which validates the information. However, the documents provided to the NTSB indicate that PG&E does not use the ECDA process for validating assumed values, determining unknown values, or correcting erroneous values.”). See also, DRA Opening Brief in the Recordkeeping Investigation, I.11-02-016, May 25, 2013, pp. 27-39.



**D. PG&E Has Waived The Attorney/Client Privilege Regarding When PG&E Management Was Informed Of The Line 147 Pipeline Error By Disclosing Partial Information On That Issue**

In the companion OSC regarding whether the Commission’s operating pressure decisions should be stayed, PG&E was ordered to provide the a verified statement setting forth “the exact events, with dates, which revealed PG&E’s errors, and PG&E’s subsequent actions.”<sup>35</sup> To date, PG&E has refused to provide this information in full. At the hearing on the Rule 1.1 OSC, PG&E had its attorney, Mr. Malkin (and only its attorney), testify on behalf of the company, and he declined to answer questions about when he was informed (and by implication, when senior management knew) about the Line 147 data error, asserting the attorney/client privilege.<sup>36</sup> It is far from clear that this information is protected by the attorney/client privilege; even if it is, PG&E has waived it by disclosing partial information, and by offering a variety of explanations for the timing of its disclosure.

At the September 6 hearings, the question of when PG&E’s senior management was informed about the Line 147 data error and why PG&E waited so long to notify the Commission became a key issue.<sup>37</sup> PG&E had provided some information on those questions prior to the hearing in its August 30, 2013 Verified Statement. At the hearing Mr. Malkin addressed these issues further,<sup>38</sup> but on cross-examination he refused to answer questions on the same issue, invoking the attorney/client privilege.<sup>39</sup>

As the City of San Bruno’s attorney observed during its cross-examination of Mr. Malkin, PG&E was using the attorney/client privilege as both a sword and a shield to answer the questions it wanted to answer and to decline to answer the ones it did not like:

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<sup>35</sup> See August 19, 2013 Ruling of Assigned Commissioner and Assigned Administrative Law Judge Directing PG&E To Show Cause Why Operating Pressure Decisions Should Not Be Stayed, p. 6.

<sup>36</sup> 16A RT 2396 (Malkin).

<sup>37</sup> See, e.g., 16A RT 2410 (Commissioner Ferron: “I’m trying to construct a timeline like we all are.”)

<sup>38</sup> See, e.g., 16B RT 2475 (PG&E/Johnson).

<sup>39</sup> See, e.g., 16A RT 2381-2382: 25-15 (PG&E/Malkin).

Q Well, then, I guess I'm confused about how we can assess the penalty for sanctions here. I feel like PG&E is using this attorney-client privilege as a sword and a shield. You're using it when it helps you, and then you want to -- I'm sorry. You're waiving it when it helps PG&E, and then you're using it to protect PG&E. So....<sup>40</sup>

PG&E has disclosed partial information about when its senior management was informed of the Line 147 data error; it should be ordered to disclose the rest. By disclosing partial information on this issue it has waived any attorney/client privilege that may have protected confidential communications on the subject;<sup>41</sup> moreover, PG&E can easily disclose the underlying facts requested without disclosing confidential attorney/client communications about those facts.

Since the hearing, PG&E has disclosed that its Senior Vice President for Gas Transmission Operations, Jesus Soto, Jr., and Executive Vice President for Gas Operations, Nick Stavropoulos, were informed of the data error via e-mail on November 16, 2012.<sup>42</sup> PG&E has not, however, responded to a data request asking whether PG&E's

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<sup>40</sup> 16A RT 2382: 16-23 (San Bruno/Strottman).

<sup>41</sup> See Cal. Evidence Code § 912 (Waiver of privilege) which provides in relevant part:

(a) Except as otherwise provided in this section, the right of any person to claim a privilege provided by Section 954 (lawyer-client privilege) [and other enumerated privileges] is waived with respect to a communication protected by the privilege if any holder of the privilege, without coercion, has disclosed a significant part of the communication or has consented to disclosure made by anyone. Consent to disclosure is manifested by any statement or other conduct of the holder of the privilege indicating consent to the disclosure, including failure to claim the privilege in any proceeding in which the holder has the legal standing and opportunity to claim the privilege.

<sup>42</sup> PG&E Response to SED 006-01. The redacted version of this PG&E partial response to SED-006-01 is attached hereto as Attachment B and a motion to introduce it into evidence will be filed shortly. PG&E has asserted that its data responses to SED cannot be entered into the record of this OSC because the record has been closed: "The evidentiary record was closed on the Rule 1.1 OSC." (September 25, 2013 e-mail with time stamp of 8:16 p.m. from Alejandro Vallejo (PG&E Attorney) to Darryl Gruen (SED Attorney)). PG&E is wrong. Pursuant to an ALJ ruling at the OSC hearing, the record for this OSC will not be closed until the filing of replies:

ALJ BUSHEY: Very good. All right. We'll have opening recommendations, brief recommendations focused on exactly what the Commission should do on September 26th, the responsive pleadings filed and served on October 1st. With the filing of the replies, the matter will be considered submitted to the Commission and the record will be closed on this issue.

16A RT 2415: 16-24.

President, Christopher Johns, was informed of the recordkeeping error, and if so, when.<sup>43</sup> Mr. Stavropoulos and Mr. Soto report to Mr. Johns, so that information is critical to assessing PG&E's Rule 1.1 violation. If PG&E refuses to answer this question, the Commission should presume that Mr. Johns was informed soon after Mr. Soto and Mr. Stavropoulos were informed, i.e., in mid-November, 2012.

### III. CONCLUSION

The evidence shows that PG&E has violated Rule 1.1 and that it is reasonable to conclude that PG&E intentionally delayed disclosing the pipeline data error concerning Line 147 to avoid damaging its position in the Recordkeeping Investigation and perhaps other related cases, including the PSEP Proceeding.

While fines may be appropriate, DRA does not advocate for a specific fine amount here. DRA may comment on proposed fine amounts in Reply Comments.

The facts revealed in this Rule 1.1 Order to Show Cause proceeding, and in the companion Order to Show Cause regarding the MAOPs, demonstrate that PG&E has a long way to go in developing a functional safety culture, and that there is reason for concern about whether PG&E is properly implementing the PSEP. When it comes to the PSEP, it is necessary for the Commission to employ a more active form of oversight than is necessary in most cases.

DRA has proposed in several venues that the Commission hire an Independent Monitor to ensure that PG&E properly implements its PSEP and to report regularly and publicly on its findings. One iteration of that proposal is set forth in DRA's Opening Brief on Fines and Remedies in the combined San Bruno Investigations and is excerpted at Attachment A, hereto.

DRA has also filed a motion in this proceeding asking the Commission to require PG&E to provide a comprehensive QA/QC plan for its PSEP implementation. That motion is attached hereto as Attachment C. There is existing funding that could be made

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<sup>43</sup> See Attachment B, PG&E's partial response to SED 006-01, wherein PG&E fails to answer Question 1(f): "Was Mr. Chris Johns provided this information?"

available for both programs.<sup>44</sup> Among many other benefits, if these two proposals were implemented, data errors like the ones identified in these Order to Show Cause proceedings would be more likely to be identified, and to be brought to the Commission's and the public's attention promptly.

For all of the foregoing reasons, the Commission should adopt both of DRA's recommendations as first steps in taking an active role in comprehensively overseeing PG&E's path to a new safety culture.

Respectfully submitted,

KAREN PAULL  
TRACI BONE

/s/ TRACI BONE

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September 26, 2013

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<sup>44</sup> See, e.g., D.12-12-030, p.128, Ordering Paragraph 9; D.12-12-030 also funded PG&E's Project Management Office with \$28.9 million, which was intended, in part, to provide quality oversight for PG&E's PSEP implementation. See D.12-12-030, p.23 and Late Filed Exhibit ALJ-5, Tables 4 and 5.

**ATTACHMENT A**

**Excerpt from DRA Brief on Fines and Remedies**

**I.11-02-016, *et seq***

**May 6, 2013**

**Page 36-40**

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Investigation on the Commission's Own Motion into the Operations and Practices of Pacific Gas and Electric Company with Respect to Facilities Records for its Natural Gas Transmission System Pipelines.

I.11-02-016  
(Filed February 24, 2011)  
(Not Consolidated)

Order Instituting Investigation on the Commission's Own Motion into the Operations and Practices of Pacific Gas and Electric Company's Natural Gas Transmission Pipeline System in Locations with Higher Population Density.

I.11-11-009  
(Filed November 10, 2011)  
(Not Consolidated)

Order Instituting Investigation on the Commission's Own Motion into the Operations and Practices of Pacific Gas and Electric Company to Determine Violations of Public Utilities Code Section 451, General Order 112, and Other Applicable Standards, Law, Rules and Regulations in Connection with the San Bruno Explosion and Fire on September 9, 2010.

I.12-01-007  
(Filed January 12, 2012)  
(Not Consolidated)

**OPENING BRIEF  
OF THE DIVISION OF RATEPAYER ADVOCATES  
REGARDING FINES AND REMEDIES**

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May 6, 2013

mitigating circumstances, the highest penalty the company can absorb should be imposed on PG&E.

## V. OTHER EQUITABLE REMEDIES

### A. Safety Requires An Independent Third Party Monitor

PG&E's lack of quality control and quality assurance procedures have been extensively noted and criticized by both the NTSB and the IRP Reports. The NTSB Report blamed the installation of the defective segment in Line 132 on PG&E's lack of quality assurance and control in 1956:

.... the probable cause of the [San Bruno explosion] was the Pacific Gas and Electric Company's (PG&E) (1) inadequate quality assurance and quality control in 1956 during its Line 132 relocation project, which allowed the installation of a substandard and poorly welded pipe section with a visible seam weld flaw that, over time grew to a critical size, causing the pipeline to rupture during a pressure increase stemming from poorly planned electrical work at the Milpitas Terminal...<sup>153</sup>

The NTSB found that PG&E's poor quality control was also a factor in the Rancho Cordova installation that resulted in an explosion in 2008, and in PG&E's inadequate emergency response after that explosion:

... the NTSB notes that several of the deficiencies revealed by this investigation, such as poor quality control during pipeline installation and inadequate emergency response, were also factors in the 2008 explosion of a PG&E gas distribution line in Rancho Cordova, California.<sup>154</sup>

The IRP Report noted the importance of quality assurance, which in data projects includes systematic checks for accuracy at multiple stages after data entry has been performed under quality control requirements. It recognized that PG&E's failure to have any quality assurance of its pipeline records after the initial data entry (which was obviously not subject to quality control) allowed the misinformation about Line 132 to persist in the database for decades:

*Data management is important, but it is just one process in the chain. Quality assurance is the framework that runs throughout the entire process. A review by experienced piping engineers who question*

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<sup>153</sup> NTSB Report, p. xii.

<sup>154</sup> See, e.g., NTSB Report, p. 116.

*assumptions and demand substantiation should be a part of the quality assurance for the threat identification and risk ranking process.* At any number of process steps in PG&E's threat identification and ranking processes, a casual review by an experienced piping engineer should have flagged the mischaracterization of the pipe seam type for the Line 132 segments that are the subject of this investigation.<sup>155</sup>

This theme of PG&E's lack of quality control and quality assurance runs throughout the IRP Report.<sup>156</sup>

In light of PG&E's quality assurance and quality control failures, which are pervasive and long-standing, and PG&E's refusal to acknowledge that it has committed any but the most minor of violations,<sup>157</sup> or that it does not have a safety culture,<sup>158</sup> it is unrealistic to expect PG&E to change its culture and develop these programs successfully overnight because of a partial change in management. The Commission must adopt a qualitatively different type of oversight of PG&E's gas operations. And it must maintain this stepped-up oversight until PG&E has demonstrated that it can operate its gas transmission system safely.

The Commission cannot provide this oversight in a vacuum, nor can it provide it by itself. The IRP Report identified the Commission's failure to oversee PG&E's gas operations effectively and opined that the Commission as well as PG&E "must confront and change elements of their respective cultures to assure the citizens of California that public safety is the

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<sup>155</sup> IRP Report, p. 62 (*emphases added*).

<sup>156</sup> See, e.g., IRP Report, p. 8 ("The lack of an overarching effort to centralize diffuse sources of data hinders the collection, quality assurance and analysis of data to characterize threats to pipelines as well as to assess the risk posed by the threats on the likelihood of a pipeline's failure and consequences.") and p. 62 ("PG&E lacks robust data and document information management systems and processes. These hinder the collection, quality assurance/quality control, and analysis of data to fully characterize threats to pipelines as well as assess the risk posed by the threats on the likelihood of a pipeline's failure.") and p. 72 ("The fact the line pipe DSAW seam type was incorrectly recorded as 'seamless' is symptomatic of PG&E's inadequate quality control and quality assurance management. The failure to properly document the seam type designation as DSAW, rather than seamless is not sufficient in itself to have prevented this incident, but had the records been more complete and the characterization been part of a more refined threat identification process, then the tragedy might have been avoided. Without a quality assurance program embedded in the integrity management process— and a feedback loop when anomalies are uncovered or pipelines do fail, mistakes happen. Unheeded lapses in the end-to-end process of pipeline integrity can lead to accidents like San Bruno.").

<sup>157</sup> See discussion in Section III above.

<sup>158</sup> PG&E SB OB, p. 7 ("CPSD's assertions regarding PG&E's ... overall safety culture were mistaken and did not withstand scrutiny by PG&E's expert.").



foremost priority.”<sup>159</sup> The NTSB report found that the Commission’s “failure to detect the inadequacies of PG&E’s pipeline integrity management program” contributed to the San Bruno Explosion.<sup>160</sup> The NTSB made the following finding regarding the Commission’s ability to evaluate or assess the integrity of PG&E’s pipeline system:

Because PG&E, as the operator of its pipeline system, and the California Public Utilities Commission, as the pipeline safety regulator within the state of California, have not incorporated the use of effective and meaningful metrics as part of their performance-based pipeline safety management programs, neither PG&E nor the California Public Utilities Commission is able to effectively evaluate or assess the integrity of PG&E’s pipeline system.<sup>161</sup>

The NTSB followed this conclusion with the recommendation that the Commission take steps to require PG&E “to correct all deficiencies identified as a result of” the San Bruno explosion “as well as any other deficiencies identified through a comprehensive audit” and “verify that all corrective actions are completed.”<sup>162</sup>

In order to (1) comply with the NTSB recommendation to “verify that all corrective actions are completed”; (2) restore public confidence in the Commission’s ability to supervise PG&E; and (3) provide the expertise necessary to ensure that PG&E’s compliance work is implemented in a timely and competent manner, the Commission should establish a method of oversight that employs independent monitors who will actively monitor PG&E’s remedial work and report publicly on their findings. This level of oversight should be maintained until the Commission has found that PG&E has fully complied with its orders regarding testing, replacement, and database upgrades relative to its gas transmission system.

Independent third party monitors are routinely used on large scale public works projects, including the recent retrofits to the Golden Gate Bridge and the current construction of a new Bay Bridge. There, independent monitors are on site, inspecting all aspects of the work being

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<sup>159</sup> IRP Report at 8 and 18-22.

<sup>160</sup> NTSB Report at xii.

<sup>161</sup> NTSB Report, p. 126, Finding No. 25.

<sup>162</sup> NTSB Report, p. 130, Recommendation to the Commission.

performed on a daily basis as an additional check to ensure the public is getting what it is paying for.

Similarly, it is not uncommon for independent monitors to be employed in response to destructive oil and gas pipeline incidents, including the 2006 British Petroleum oil spills in Alaska<sup>163</sup> and the 1999 rupture of a Shell and Olympic Oil Company pipeline.<sup>164</sup> An independent monitor with expertise in risk assessment, pipeline integrity management, and data management systems was employed to review the implementation of remedial plans agreed to by El Paso Natural Gas Company as part of a 2007 Consent Decree resolving an action brought by the federal government against the company after a pipeline explosion that killed twelve people.<sup>165</sup>

To establish an independent monitor process, the decision resolving these investigations should direct the parties to meet and confer and invite them to file joint comments proposing an independent monitor process acceptable to the majority of them. At a minimum, the decision should require the parties' joint proposal to include these elements:

- A hiring process for the independent monitors that ensures their independence;
- PG&E will hire and pay for the independent monitors;
- The independent monitors will conduct and present all analyses and recommendations publicly and independently of any suggestions or conclusions of PG&E, the Commission, or other interested parties;
- Quarterly public reporting by the independent monitors to a joint meeting of PG&E, the Commission, and other interested parties;
- The independent monitors will notify PG&E, the Commission, and other interested parties in writing within 10 days of discovery of any potential non-compliance with the requirements of the PG&E's gas safety implementation plan or that presents a potential, but not immediate, threat to public safety;

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<sup>163</sup> See pp. 30-31 of British Petroleum's consent decree with the U.S. Environmental Protection Agency at <http://www.epa.gov/compliance/resources/decrees/civil/cwa/bpnorthslope-cd.pdf>.

<sup>164</sup> See <http://www.epa.gov/compliance/resources/cases/civil/cwa/olympicshell.html>.

<sup>165</sup> Consent Decree in *US v El Paso Natural Gas Co.* (Dist. Ct. New Mexico) at 12 and *et seq.*, available at [http://emerginglitigation.shb.com/Portals/f81bfc4f-cc59-46fe-9ed5-7795e6eea5b5/r\\_El\\_Paso\\_Natural\\_Gas\\_Consent\\_DecreeFinal.pdf](http://emerginglitigation.shb.com/Portals/f81bfc4f-cc59-46fe-9ed5-7795e6eea5b5/r_El_Paso_Natural_Gas_Consent_DecreeFinal.pdf)

- The independent monitors will notify PG&E, the Commission, and interested parties in writing within 24 hours of any condition that poses a potential and immediate threat to public safety; and
- PG&E's contracts with independent monitors shall prohibit an independent monitor from accepting work from PG&E while performing the duties of an independent monitor.

Proposed Findings of Fact and Conclusions of Law necessary to implement this third party independent monitor proposal are set forth in the appendices to DRA's Opening Briefs in both the Recordkeeping and San Bruno Explosion Investigations.

## VI. CONCLUSION

For all the reasons set forth herein, the Commission should adopt the recommendations summarized in Section I.B above.

Respectfully submitted,

KAREN PAULL  
TRACI BONE

/s/ TRACI BONE

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May 6, 2013

**ATTACHMENT B**  
**PG&E Partial Response To SED-006-01**

**PACIFIC GAS AND ELECTRIC COMPANY  
Gas Pipeline Safety OIR-OSC  
Rulemaking 11-02-019  
Data Response**

|                        |                                     |                   |                                 |
|------------------------|-------------------------------------|-------------------|---------------------------------|
| PG&E Data Request No.: | SED_006-01                          |                   |                                 |
| PG&E File Name:        | GasPipelineSafetyOIR_DR_SED_006-Q01 |                   |                                 |
| Request Date:          | September 18, 2013                  | Requester DR No.: | 006                             |
| Date Sent:             | September 24, 2013                  | Requesting Party: | Safety and Enforcement Division |
| PG&E Witness:          | N/A                                 | Requester:        | Darryl Gruen                    |

*PG&E is providing this response pursuant to Public Utilities Code §583 because this response and/or the attached documents contain information that should remain confidential and not be subject to public disclosure as it contains one or more of the following: critical infrastructure information that is not normally provided to the general public, the dissemination of which poses public safety risks (pursuant to the Critical Infrastructures Information Act of 2002, 6 U.S.C. §§131-134); personal information pertaining to PG&E employees below director level; customer information; or commercially sensitive/proprietary information.*

**QUESTION 1**

For this set of questions, please refer to the Verified Statement of Pacific Gas and Electric Company's Vice President of Gas Transmission Maintenance and Construction in Response to Ruling of Assigned Commissioner and Administrative Law Judge in R.12-02-019. Please specifically refer to paragraph 27, which states, "On October 18, 2012, our crew exposed the pipe in the area of the leak on Line 147. Our pipeline engineer on site visually investigated and realized that the long-seam weld of the exposed section of pipe appeared to be of the early vintage A.O. Smith variety.

- a. Please provide the name of the individual who made these observations concerning the exposed section of pipe.
- b. Was Mr. Jesus Soto provided this information?
- c. If yes, please provide the date when Mr. Soto was first provided with this information. If there are written communications or documents on this subject, please provide those showing the communications to Mr. Soto.
- d. Was Mr. Nick Stavropoulos provided with this information?
- e. If yes, please provide the date when Mr. Stavropoulos was first provided this information. If there are written communications or documents on this subject, please provide those showing the communications to Mr. Stavropoulos.
- f. Was Mr. Chris Johns provided this information?

- g. If yes, please provide the date when Mr. Johns was first provided this information. If there are written communications or documents on this subject, please provide those showing the first time Mr. Johns was provided with this information. Please also provide all communications to Mr. Johns concerning the observations indicating that the original pipe specifications for this segment were in error.
- h. Did any PG&E employee (current or former), agent or contractor know or believe that this pipe was of the A.O. Smith variety before October 18, 2012?
  - a. If so, who?
  - b. If so, what date?
  - c. If so, please explain and provide all documentation in support of this answer.
- i. Did a PG&E employee (current or former), agent or contractor at PG&E know or believe that PG&E's records about this piece of pipe were inaccurate before October 18, 2012?
  - a. If so, who?
  - b. If so, what date?
  - c. If so, please explain and provide all documentation in support of this answer.

**ANSWER 1 (PARTIAL)**

- a. The pipeline engineer identified in the Verified Statement is [REDACTED]. [REDACTED] a contract employee providing field engineer support, was also present and also thought that the pipe appeared to be of the A.O. Smith variety.
- b. Yes.
- c. Mr. Soto received written notification of the discrepancy on November 16, 2012. This communication is attached as GasPipelineSafetyOIR\_DR\_SED\_006-Q01Atch01-CONF.
- d. Yes.
- e. Mr. Stavropoulos received the same written notification as Mr. Soto. See GasPipelineSafetyOIR\_DR\_SED\_006-Q01Atch01-CONF.

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**From:** Singh, Sumeet  
**Sent:** Friday, November 16, 2012 7:56 PM  
**To:** Soto, Jesus (SVP); Stavropoulos, Nickolas  
**Subject:** Fwd: L-147 MP 2.2 Brittan Ave & Rogers Ave, San Carlos--Pipe Specification Discrepancy

FYI boss...I will provide you with the root cause analysis results by early next week.

In the meantime, please let me know if you have any questions. Thank you.

Sumeet

Sent from my iPhone

Begin forwarded message:

**From:** "Singh, Sumeet" <S1St@pge.com>  
**Date:** November 16, 2012 7:48:31 PM PST  
**To:** "Harrison, David" <DLHf@pge.com>  
**Cc:** "Brown, Rick (GSO)" <RCB3@pge.com>, [REDACTED],  
[REDACTED] Gas Ops Support <GasOpsSupport@pge.com>,  
"Raymundo, William" <WLR1@pge.com>, [REDACTED],  
"Hogenson, Todd  
(GT&D)" <TRH4@pge.com>, "Campbell, Ben (Hydrotest)" <BCC3@pge.com>,  
[REDACTED],  
[REDACTED] Berkovitz, Trista (GSO)"  
<TxB6@pge.com>, "Medina, Joe A" <JAMn@pge.com>  
**Subject:** Re: L-147 MP 2.2 Brittan Ave & Rogers Ave, San Carlos--Pipe Specification Discrepancy

All,

I have discussed and reviewed this issue with David and concur with the recommendation below.

Also, additional diligence and root cause analysis is being conducted to identify the source records and information used for the pipe specifications so that appropriate corrective actions can be performed.

Please let me know if you would like to discuss further. Thank you.

Sumeet

Sent from my iPhone

On Nov 16, 2012, at 2:44 PM, "Harrison, David" <DLHf@pge.com> wrote:

Rick,  
The MAOP Validation group has been reviewing this situation and we feel a pressure reduction from 365 psi is not required.

The pipeline has been tested for 8 hours and can operate "one class out" according to our current polices regardless of a joint efficiency of 0.8 or 1.0. We are doing additional diligence to investigate the pipe specifications and the source of this pipe.

Let me know if you have additional questions.  
Thanks David

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**From:** Brown, Rick (GSO)  
**Sent:** Friday, November 16, 2012 12:03 PM  
**To:** [REDACTED] Harrison, David; Gas Ops Support; [REDACTED] Raymundo, William; Hogenson, Todd (GT&D); Campbell, Ben (Hydrotest)  
**Cc:** [REDACTED] Berkovitz, Trista (GSO)  
**Subject:** RE: L-147 MP 2.2 Brittan Ave & Rogers Ave, San Carlos--Pipe Specification Discrepancy

All -

I am not clear on how a decision will be made regarding actions, if any, on this L147 section. L147 is a key crossover during the 12 clearances we still have remaining on the Peninsula this winter. Whoever is leading the decision, can you please let GSP know if there is reduction in L147 operating pressure or availability so we can assess impacts?

Thanks,  
Rick

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**From:** [REDACTED]  
**Sent:** Wednesday, November 14, 2012 7:27 PM  
**To:** [REDACTED] Harrison, David; Gas Ops Support; [REDACTED] Raymundo, William; [REDACTED] Hogenson, Todd (GT&D); Campbell, Ben (Hydrotest); Brown, Rick (GSO)  
**Cc:** [REDACTED]  
**Subject:** L-147 MP 2.2 Brittan Ave & Rogers Ave, San Carlos--Pipe Specification Discrepancy  
**Importance:** High

All,

A recent leak repair effort on L-147 at MP 2.2 near the intersection of Brittan Ave & Rogers Ave in San Carlos has revealed pipe specification that are inconsistent with the current data in the PG&E system. The current PFL for L-147 (dated May 2012) and the GIS database currently show the 20" pipeline in this area as 20"OD x 0.250"WT DSAW with a SMYS value of 42,000 psi and a JE = 1.0. We now have visual confirmation that this is AO Smith Type 1 seamed pipe, per the attached photos.



This segment of 20" pipeline was installed and hydrotested in 1957 under GM 136776, and was recently hydrotested with the PSEP effort in October of 2011 under T-43B. L-147 was released from the post-San Bruno "CROP" (Conditional Reduced Operating Pressure) last winter as part of the L-101 restoration effort and pressure was increase to an MOP of 365 psig. L-147 is currently operating at an MOP of 300 psig to allow more operational flexibility on the Peninsula GT System due to the abundance of Clearances this construction season.

Utilizing currently accepted SMYS (33,000 psi) and JE (0.8) values for AO Smith pipe, per the latest version of the "Resolving of Unknown Pipeline Features" document, L-147 will be operating at 55.3% SMYS in a Class 3 HCA at its current MOP of 365 psig. In addition, this pipeline segment was tested to near 600 psig during T-43B, which would have put this segment of the pipeline at greater than 90% SMYS depending on the elevation.

I am unsure of the implications of this discovery, but wanted to be sure all affected groups were notified – MAOP Validation, PFL Build, Integrity Management, Regulatory Compliance, PSEP Pipe Replacement, and Planning. Please contact me for any additional information or questions on this, I'd like to set up a conference call discussion to determine any next steps in addressing the above.

Thank you,

[REDACTED]

[REDACTED]

Pipeline Engineer | Gas Operations - Pacific Gas and Electric Co. | 6121 Bollinger Canyon Rd, San Ramon

[REDACTED]

**ATTACHMENT C**  
**DRA Motion For QA/QC Plan**  
**R.11-02-019**  
**July 8, 2013**

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the  
Commission's Own Motion to Adopt  
New Safety and Reliability Regulations  
for Natural Gas Transmission and  
Distribution Pipelines and Related  
Ratemaking Mechanisms.

Rulemaking 11-02-019  
(Filed February 24, 2011)

**MOTION OF THE DIVISION OF RATEPAYER ADVOCATES  
FOR A RULING DIRECTING PACIFIC GAS AND ELECTRIC COMPANY  
TO PROVIDE QUALITY ASSURANCE AND QUALITY CONTROL PLANS  
FOR THE DEVELOPMENT AND IMPLEMENTATION OF ITS UPDATED  
PIPELINE SAFETY PLAN ("PSEP")**

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July 8, 2013

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## I. INTRODUCTION AND SUMMARY

In accordance with Rule 11.1 of the Commission's Rules of Practice and Procedure, the Division of Ratepayer Advocates ("DRA") hereby requests that the Commission direct Pacific Gas and Electric Company ("PG&E") to provide documentation of the quality assurance and quality control processes used at each step in the development and implementation of its pending "update" to the Pipeline Safety Enhancement Plan ("PSEP") approved by the Commission last December in Decision ("D.") 12-12-030.

Quality assurance has been defined as "all those planned and systematic actions necessary to provide adequate confidence that a structure, system or component will perform satisfactorily in service."<sup>1</sup> Quality assurance and quality control procedures are a set of fundamental requirements in any complex investigation, engineering, or construction project, where opportunities exist for mistakes and miscalculations to propagate undetected throughout a project. It is especially important to have a solid plan for controlling errors where public safety is at risk. While an effective QA plan will significantly reduce errors it is prudent to assume that some errors will still occur in complex projects. Those errors should be caught and promptly corrected by quality control procedures. A well-crafted QA/QC plan is an indispensable risk reduction tool that should provide steps for both detecting and correcting residual errors before safety is compromised. It is essential to public safety as well. Accordingly, DRA requests that the Commission direct PG&E to provide a Quality Assurance and Quality Control Plan (QA/QC Plan) to ensure that the Commission and the public can have confidence that the PSEP will be carried out with minimal errors. The QA/QC Plan should cover

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<sup>1</sup> See D.88-12-083, 1988 Cal. PUC Lexis 886, fn. 6 (on page 6 of Lexis version) (citing the definition of quality assurance in the federal regulations governing the construction of nuclear power plants). The decision recounts a history of problems with PG&E's quality assurance programs for the design and construction of the Diablo Canyon nuclear power plant. Among other things, the decision recounts that: "The Nuclear Regulatory Commission suspended the operating license for Diablo Canyon on November 19, 1981, and mandated that PG&E develop an Independent Design Verification Program to review the design of all safety-related structures, systems, and components." (Id. at p. 11.) Although the PSEP involves PG&E's gas transmission system rather than a nuclear power plant, DRA can think of no reason that quality assurance should be defined any differently in the context of a major gas transmission project.

both (1) the *development* of the updated PSEP (which PG&E will soon submit to the Commission in an application pursuant to D.12-12-030) and (2) the *implementation* of the updated scope of PSEP that is authorized by the Commission.

DRA also requests that the Commission commit to a careful review of the Updated PSEP, including (1) the quality assurance and quality control elements of the project, and (2) the underlying data used to develop the updated PSEP.

In Decision (“D.”) 12-12-030, approving PG&E’s PSEP, the Commission ordered PG&E to “file an expedited application 30 days after completing its validation of Maximum Allowable Operating Pressure (“MAOP”) and pipeline records search work.” The decision directed PG&E to include in the Updated PSEP Application a corrected and updated pipe segment database (“PSEP Database”)<sup>2</sup> and to “update its Implementation Plan authorized revenue requirements and related budgets.”<sup>3</sup> We will refer to this updated implementation plan to be submitted by PG&E consistent with this direction as the “Updated PSEP Application”.

Pursuant to D.12-12-030, the Energy Division held a workshop on March 26, 2013 for PG&E and interested parties to discuss “[t]he specific showing that PG&E will be required to provide in its application.”<sup>4</sup> During the March Workshop, and in follow-up data requests, DRA has sought to understand how PG&E will ensure that the Updated PSEP will be based on accurate information and is consistent with CPUC directives, industry best practices, and relevant quality standards. Achieving these goals requires a quality assurance (“QA”) plan that defines proactive processes to prevent errors, and the quality control (“QC”) procedures that will be used to uncover and correct errors on a reactive basis. This Motion refers to all QA and QC plans, processes, procedures, data collection, data analysis, and reporting collectively as “QA/QC Activities.”

PG&E represents that it is performing QA/QC activities as part of its validation of the maximum allowable operating pressure (“MAOP validation”), and it has provided

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<sup>2</sup> D.12-12-030, *mimeo*, p. 115.

<sup>3</sup> D.12-12-030, *mimeo*, Ordering Paragraph 11, p. 129.

<sup>4</sup> D.12-12-030, *mimeo*, p. 115.

documentation to DRA that explains that effort. However, the Commission, in D.12-12-030, required PG&E to update the PSEP revenue requirement figures as part of its Updated PSEP Application and this requires performing additional steps after MAOP validation. All seven steps required to develop the Updated PSEP are depicted in Attachment A to this Motion. Despite several requests for information about QA/QC plans for its PSEP, PG&E has not provided to DRA evidence that it has a comprehensive QA/QC Plan, or that it is performing significant QA/QC activities in developing the Updated PSEP for the steps that follow MAOP validation.

Because it is critical that PG&E have an adequate QA/QC Plan for the extensive pipeline work it is undertaking, DRA requests that the Commission issue an order directing PG&E to perform QA/QC activities at each of the steps shown in Attachment A, in accordance with a QA/QC Plan that must be included in its Updated PSEP Application. The QA/QC Plan should also address implementation of the PSEP work authorized by the Commission. DRA also requests that the Commission have its staff or consultants perform independent QC activities for the first five steps.<sup>5</sup>

A proposed ruling consistent with this Motion is attached as Attachment B.

## **II. DISCUSSION**

### **A. PG&E Has a History of Failing To Perform QA/QC**

#### **1. NTSB and IRP Report Findings**

PG&E's historic lack of quality assurance and quality control procedures have been extensively noted and criticized by both the National Transportation Safety Board ("NTSB") and the Independent Review Panel ("IRP") hired by this Commission. The NTSB Report blamed the installation of the defective segment in Line 132 on PG&E's lack of quality assurance and control in 1956:

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<sup>5</sup> DRA commits to performing QC activities on Steps 6 and 7 of PG&E's updated PSEP plan (see Attachment A). Steps 6 and 7 relate to the cost of the Updated PSEP.

.... the probable cause of the [San Bruno explosion] was the Pacific Gas and Electric Company's ... (1) inadequate quality assurance and quality control in 1956 during its Line 132 relocation project, which allowed the installation of a substandard and poorly welded pipe section with a visible seam weld flaw that, over time grew to a critical size, causing the pipeline to rupture during a pressure increase stemming from poorly planned electrical work at the Milpitas Terminal...<sup>6</sup>

The NTSB found that PG&E's poor quality control was also a factor in the Rancho Cordova installation that resulted in an explosion in 2008, and in PG&E's inadequate emergency response after that explosion:

... the NTSB notes that several of the deficiencies revealed by this investigation, such as poor quality control during pipeline installation and inadequate emergency response, were also factors in the 2008 explosion of a PG&E gas distribution line in Rancho Cordova, California.<sup>7</sup>

The IRP Report noted the importance of quality assurance, which in data projects includes systematic checks for accuracy at multiple stages after data entry has been performed under quality assurance requirements. It recognized that PG&E's failure to have any quality assurance of its pipeline records after the initial data entry (which was obviously not subject to quality control) allowed the misinformation about Line 132 to persist in the database for decades:

Data management is important, but it is just one process in the chain. Quality assurance is the framework that runs throughout the entire process. A review by experienced piping engineers who question assumptions and demand substantiation should be a part of the quality assurance for the threat identification and risk ranking process. At any number of process steps in PG&E's threat identification and ranking processes, a casual review by an experienced piping engineer should have flagged the mischaracterization of the pipe seam type for the Line 132 segments that are the subject of this investigation.<sup>8</sup>

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<sup>6</sup> NTSB Accident Report NTSB/PAR-11/01 PB2011-916501, adopted August 30, 2011, p. xii.

<sup>7</sup> See, e.g., NTSB Report, p. 116.

<sup>8</sup> Report of the Independent Review Panel San Bruno Explosion, June 24, 2011, p. 62 (*emphases added*).



This theme of PG&E's lack of QA/QC activities runs throughout the IRP Report.<sup>2</sup>

Inadequate quality assurance and quality control on major projects is not a new problem for PG&E, and it is not limited to its gas operations. Inadequate quality assurance and quality control led to safety problems and enormous cost overruns during PG&E's construction of the Diablo Canyon nuclear power plant in the 1980s. In its decision approving a multibillion dollar settlement in that case, the Commission acknowledged Nuclear Regulatory Commission findings that PG&E had inadequate quality assurance practices. The decision also includes a summary of DRA testimony regarding PG&E's inadequate quality assurance and quality control on the project.<sup>10</sup> The sad story of the Diablo Canyon nuclear plant should serve as a reminder that inadequate QA/QC can endanger the public and cost ratepayers and shareholders literally billions of dollars.

## **2. QA/QC Problems with PG&E's Initial PSEP**

In its original PSEP application, PG&E requested funding for a Program Management Office (PMO), including a Quality Assurance/Quality Control (QA/QC) team:

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Available at: [http://www.cpuc.ca.gov/PUC/events/110609\\_sbpanel.htm](http://www.cpuc.ca.gov/PUC/events/110609_sbpanel.htm)

<sup>2</sup> See, e.g., IRP Report, p. 8 ("The lack of an overarching effort to centralize diffuse sources of data hinders the collection, quality assurance and analysis of data to characterize threats to pipelines as well as to assess the risk posed by the threats on the likelihood of a pipeline's failure and consequences.") and p. 62 ("PG&E lacks robust data and document information management systems and processes. These hinder the collection, quality assurance/quality control, and analysis of data to fully characterize threats to pipelines as well as assess the risk posed by the threats on the likelihood of a pipeline's failure.") and p. 72 ("The fact the line pipe DSAW seam type was incorrectly recorded as 'seamless' is symptomatic of PG&E's inadequate quality control and quality assurance management. The failure to properly document the seam type designation as DSAW, rather than seamless is not sufficient in itself to have prevented this incident, but had the records been more complete and the characterization been part of a more refined threat identification process, then the tragedy might have been avoided. Without a quality assurance program embedded in the integrity management process— and a feedback loop when anomalies are uncovered or pipelines do fail, mistakes happen. Unheeded lapses in the end-to-end process of pipeline integrity can lead to accidents like San Bruno.").

<sup>10</sup> See D. 88-12-083 in Applications 84-06-014 and 85-08-025, 1988 Cal. PUC LEXIS 886; 30 CPUC2d 189; 99 P.U.R.4th 141 (December 19, 1988, amended June 16, 1989).

“ . . . responsible for establishing processes and procedures to evaluate overall project and program performance on a regular basis to provide confidence the projects adhere to relevant quality standards. This team will also monitor specific project results and perform test procedures on project components to determine if they comply with *relevant quality standards*.”<sup>11</sup>

Ratepayer funding for this QA/QC team was authorized by D.12-12-030.<sup>12</sup> In its original PSEP application, PG&E did not define the *relevant quality standards* it used in developing the application, nor did it provide the QA/QC processes and procedures used. DRA therefore performed its own QC review of steps 4, 5, 6, and 7 depicted in Attachment A. As the record of this proceeding shows, multiple errors were found in each of these steps, resulting in mis-prioritization of segments, inefficient project design, excessive PSEP costs, and misallocation of costs between ratepayers and PG&E shareholders.<sup>13</sup> Some of these errors result from the use of pipeline feature and pressure test data known to be flawed, and D.12-12-030 aimed to eliminate these errors by requiring the Update Application based on data corrected through the MAOP validation process.<sup>14</sup> But other errors were not attributable to incomplete or flawed segment level data, and these errors will not be resolved by the MAOP validation process. In particular, many of the outcomes (i.e. whether to test or replace a line segment) in PG&E’s initial PSEP Database were inconsistent with PG&E’s stated Decision Tree logic. In addition, high priority Phase 1 projects included low priority Class 1 and 2 non-HCA segments in contradiction to clear direction from the CPUC.<sup>15</sup> The result of these errors was delayed

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<sup>11</sup> PG&E Application dated August 26, 2011 in this rulemaking, Chapter 7, p.7-11, emphasis added.

<sup>12</sup> PG&E’s PMO request for \$34.8 million was reduced in D.12-12-030 to \$28.9 million due to blanket adjustments to the 2011 and 2012 budget requests and escalation.

<sup>13</sup> A summary is provided in DRA’s Opening Brief in this proceeding dated May 14, 2012. See Section IV (A), pages 49-67. DRA’s review methods and detailed findings were cataloged in the testimony of DRA witness Roberts in Hearing Exhibit 144. Errors related to steps 4, 5, 6, and 7 are found in sections 3, 4, 5, and 6 of this testimony respectively. These errors were discovered as part of DRA’s efforts to determine the reasonableness of PG&E’s cost request, rather than resulting from a rigorous QC evaluation, and thus are not a comprehensive catalog of all errors.

<sup>14</sup> D.12-12-030. See pp. 114-115 and Finding of Fact 34, p.119.

<sup>15</sup> D-11-06-017, Ordering Paragraph 4, p. 31. This included more segments than adjacent segment deemed to be justified by D.12-12-030, Conclusion of Law 20, p. 123.

mitigation of some of the highest priority pipelines, and an increase in the scope and cost of Phase 1 of the PSEP. These errors were not uncovered in the limited review of the PSEP Application by Jacobs Consultancy, under the direction of the Commission's Consumer Safety and Protection Division ("CPSD"), which is now called the Safety and Enforcement Division ("SED").<sup>16</sup>

**B. While PG&E Represents It Is Performing QA/QC for MAOP Validation, Its Efforts for the Balance of the Updated PSEP Appear Insufficient**

As stated in D.12-12-030, "the purpose of accurate records is not limited to calculating MAOP."<sup>17</sup> Given DRA's time-consuming experience working with the PSEP data in PG&E's original application, DRA raised the issue of how to ensure the quality of the Updated PSEP at the March 2013 Workshop. During this Workshop, DRA presented a flow chart depicting its understanding of the development process for the Updated PSEP. Attachment A reflects a revised version of that flow chart, which depicts seven stages in the development of the Updated PSEP, from the MAOP validation at Step 1, to the calculation of revised ratepayer PSEP obligations at Step 7. Steps 1 to Step 5 as depicted in Attachment A result in a database, the PSEP Database, which determines both the prioritization and cost of PSEP projects.<sup>18</sup> In each of these five steps, pipeline feature and pressure test data is entered, manipulated, supplemented, or otherwise revised such that errors can be introduced into the PSEP Database. It is normal practice in database development for some level of QA/QC to be performed whenever data is managed in a manner whereby errors can be introduced. Absent PG&E employing such practices in its development of the PSEP Database, it is possible, and even likely, that PG&E's new PSEP Database – which PG&E intends to rely upon to determine which pipeline segments will be tested and/or replaced, and the priority and cost of that work – will

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<sup>16</sup> See December 23, 2011 report filed in this docket.

<sup>17</sup> D.12-12-030, p.95.

<sup>18</sup> D.12-12-030 specified the mitigation costs, and cost allocation methods to be used in the Update Application, so pipeline features and pressure test data in the PSEP database are the primary variables driving PSPS costs.

contain significant errors. Clearly, that is not an acceptable outcome from a public safety perspective or a ratemaking perspective.

Using the flow chart, DRA explained its concerns regarding the lack of QA/QC activities proposed by PG&E to prevent errors, detect errors, and correct data for each step of the PSEP Database development process. DRA asked PG&E to provide evidence to DRA documenting the QA/QC activities used in the development of the Updated PSEP, including any written procedures relied upon by PG&E.

PG&E provided its first response to DRA on April 9, 2013. It provided a summary of PG&E's QA/QC process, and two associated procedures, but this response only related to steps 1 and 2 of the Updated PSEP development process, the MAOP validation. In addition, these documents bore no dates, serialized document control numbers, or signatures which would indicate that they were PG&E management-approved procedures. Based on a follow-up DRA data request, PG&E provided more extensive documentation of its QA/QC procedures to DRA on May 17, 2013. The response included nine documents related to MAOP validation, including eight with dates, seven with revised numbers, and five with revision control sheets.<sup>19</sup> While these display inconsistency in document control procedures, and none of the documents are signed or numbered, it does appear that PG&E established QA/QC procedures in 2011 for MAOP Validation, and has updated them through 2012.<sup>20</sup> As with PG&E's first response, these procedures only addressed the first two steps in the development of the Updated PSEP.

DRA's follow-up data request explicitly asked for procedures used to verify the accuracy of the Updated PSEP, and the procedures used to group pipe segments into projects.<sup>21</sup> PG&E response to the first request, which covers all steps in Attachment A, was:

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<sup>19</sup> A "revision control sheet" is part of a formal procedure or software program which catalogs the history of changes or revisions to the file.

<sup>20</sup> In addition to the lack of dates or revision numbers on some procedures, one document includes a "document version control" sheet rather than the "revision control sheet" used on the other procedures.

<sup>21</sup> See DRA Data Request DRA-TCR-1 dated May 3, 2013, questions 2 and 5.

“PG&E is in the process of documenting procedures that are being used to ensure the PSEP Update Application uses only accurate and complete data. PG&E will provide the procedures when they are finalized and approved.”<sup>22</sup>

This response clearly indicates that PG&E was in the process of documenting actions being performed or that already have been performed, rather than implementing a process that included a proactive QA/QC Plan. This process is not consistent with the basic quality assurance process, which begins with a written plan, followed by actions to accomplish the plan, and finally QC checks to ensure the plan’s goals were achieved. The lack of a documented QA/QC plan when PG&E is this far along in the process of updating the PSEP is a critical shortcoming that must be considered in the review of the quality assurance documents PG&E ultimately provides.

PG&E subsequently provided a procedure titled “Update Filing Work Papers Preparation” dated June 18, 2013, which could guide PG&E PSEP engineers preparing the work papers and aid the Commission and parties in reviewing them.<sup>23</sup> This single procedure fails however to provide the required level of quality assurance for the Update Application for the following reasons:

1. It addresses only one element of the application, workpapers.
2. It does not provide a comprehensive quality assurance plan.
3. It is not approved by the level of management ultimately responsible for pipelines.<sup>24</sup>
4. Where QC activities are provided, insufficient detail is provided.

Regarding the final reason, only three quality control steps are mentioned in the procedure, in each case with a single sentence such as “for quality control, the work of

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<sup>22</sup> PG&E Response dated May 17, 2013 to DRA Data Request DRA-TCR-1 dated May 3, 2013, question 2.

<sup>23</sup> PG&E Supplemental Response dated May 24, 2013 to DRA Data Request DRA-TCR-1 dated May 3, 2013, question 2.

<sup>24</sup> The document was provided unsigned, but has a signature block for Todd Hogenson, Director of PSEP Engineering. The record in this proceeding including PG&E’s original testimony, rebuttal testimony, and hearing transcripts clearly indicate that Mr. Hogenson is responsible for only one element of PSEP. The procedure also lacked the reference number (e.g. PG&E Hydrostatic Testing Procedure A-37) and/or revision control sheet found on other PG&E management approved documents. PG&E provided a signed copy of this procedure with revision control sheet on July 2, 2013, in response to a DRA request.

the data validator shall be checked by a second person.”<sup>25</sup> While mentioning quality control is a good first step, it fails to provide any guidance to PG&E engineers regarding how to perform quality control, and it fails to document the outcome of the QC checks.

PG&E’s response to DRA regarding procedures used to group pipe segments into projects indicated that “PG&E does not have specific written management procedures to group pipe segments into PSEP projects,” and provided references to the original application where this process is described.<sup>26</sup> In essence, PG&E is reiterating the position it took in the original PSEP proceeding that project design requires the use of engineering judgment, and that this subjective judgment process is not guided by any written procedures. Such a position means that PG&E has no documented QA/QC activities for Step 5 in Attachment A. While D.12-12-030 states that “adjustments [to the mitigations defined by PG&E’s PSEP Decision Tree] based on sound engineering practice...do not require further Commission review,” PG&E has yet to demonstrate that the engineering judgment it applies to the PSEP is equivalent to “sound engineering practice.”<sup>27</sup> PG&E should be required to document the QA/QC activities it will use to ensure that sound engineering practices are consistently applied when designing PSEP projects.

On June 28, 2013, DRA obtained a copy of PG&E’s response to an SED data request related to PSEP quality assurance which indicated that PG&E had many relevant documents it had not provided in response to DRA’s data requests.<sup>28</sup> However, even the 39 documents provided to SED do not appear to provide a comprehensive PG&E management approved QA/QC Plan covering development of the Updated PSEP. PG&E’s response to SED also indicates the following:

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<sup>25</sup> In the other two cases the line is “the data is reviewed for quality control by an internal analyst.”

<sup>26</sup> PG&E Response dated May 17, 2013 to DRA Data Request DRA-TCR-1 dated May 3, 2013, question 5.

<sup>27</sup> D.12-12-030, Finding of Fact 32, p.119.

<sup>28</sup> It is troubling that PG&E appears not to take seriously the Commission’s Rules of Practice and Procedure and the Public Utilities Code Section 309.5(e) when it provided an incomplete answer to DRA’s data request.

1. PG&E has a document control system in which key procedures are numbered, dated, and subjected to revision control. However, this system is not being used for PSEP documents,
2. PSEP is being implemented using draft procedures still under development,
3. PG&E's QC activities are focused on construction, but are lacking for project engineering or data processing such as creation and maintenance of the PSEP database,
4. PG&E views quality assurance as an auditing function, rather than a proactive process used to ensure first-time quality. PG&E appears to have a lack of understanding of QA/QC.
5. PG&E's QA/QC team includes internal staff, Project Management Office (PMO) staff, and independent quality consultants, but it is not clear who is responsible for the quality of PSEP project engineering or the Update Application.<sup>29</sup>

PG&E's failure to provide QA/QC documentation to date, and the shortcomings of what it has provided, is inconsistent with its recent Compliance Report, which states that "the PSEP PMO since inception has established procedures to independently monitor work performed by employees to ensure its adherence to PG&E standards and thereby assure quality."<sup>30</sup> This report mentions specific construction activities subjected to this independent quality monitoring, but QA/QC activities must address every element of PSEP, including the critical planning and engineering activities used to develop the Updated PSEP and that ultimately drive safety and cost.

**C. If the Commission Wants To Expedite Implementation of the PSEP, It Is Especially Important To Ensure that the Updated PSEP Be As Accurate As Possible Prior to Commission Review**

The Commission directed PG&E to expedite preparation of the Updated PSEP application.<sup>31</sup> While it is important to move forward with the highest priority remedial actions as quickly as possible, successful implementation of the PSEP requires an accurate PSEP Database. The Commission should therefore take all steps reasonably

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<sup>29</sup> These observations are based on an expedited and limited review by DRA. If PG&E provides its QA/QC plans as part of its Updated PSEP Application as requested in this Motion, the Commission and the parties will be able to review those plans more thoroughly and determine whether they are adequate.

<sup>30</sup> PG&E PSEP Compliance Report filing in R.11-02-019 dated April 30, 2013, p. 16.

<sup>31</sup> D.12-12-030, *mimeo*, p. 115.

necessary to ensure that PG&E provides an accurate Updated PSEP. As discussed above, a primary objective of this Motion is to require PG&E to demonstrate that its PSEP QA/QC Plan and activities are sufficient by documenting them in its forthcoming Updated PSEP application.

However, in light of PG&E's historic quality assurance and quality control failures described above, it is unrealistic to expect PG&E to implement a fully effective quality assurance program while implementing the PSEP. Consequently, the Ruling requested here should also establish independent review of each step in the development of its Update Application. The first five steps in the development of that application as required by D.12-12-030 should be reviewed by Commission staff with the relevant skills (probably SED), with the help of outside experts if necessary.<sup>32</sup> DRA developed methods and tools to independently verify the proposed costs of PSEP projects during its review of the original PSEP application, and commits to reviewing the last two steps of the Update Application (steps 6 and 7) related to costs. Both reviews should use methods that produce statistically significant findings.

**D. To Provide Safe Service, PG&E Must Employ Quality Assurance Throughout Its PSEP Operations**

As previously discussed, PG&E's original PSEP as approved by D.12-12-03- included the creation of a QA/QC team and the establishment of QA/QC procedures and processes. To date, however, PG&E has failed to provide evidence of a comprehensive QA/QC Plan for the Updated PSEP. The Commission should clarify, in its Ruling on this Motion, that PG&E is required to define the relevant quality standards used by the PMO QA/QC team, the processes and processes used, and the results of QC checks for every step in the Updated PSEP, consistent with its obligation pursuant to Section 451 of the Public Utilities Code to provide safe service. PG&E should be reminded – now, while it is developing its Update PSEP -- that Quality Assurance and Quality Control should be systematically employed in all of its PSEP operations. Finally, the Commission's review

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<sup>32</sup> D.12-12-030, Ordering Paragraphs 8 and 9, pp. 127-128.



of the Updated PSEP Application should include review of the QA/QC Activities to be used during implementation of the plan.

### III. CONCLUSION

DRA respectfully requests that the Commission issue a ruling directing PG&E to provide a plan for performing quality assurance and quality control for every step in the development and implementation of its Updated PSEP. The Updated PSEP as described in Attachment A should include the QA/QC Plan that will be used by PG&E to ensure that the Commission and the public can have confidence that the Updated PSEP is developed and implemented with minimal errors. The QA/QC Plan should provide a clear explanation of the QA/QC plans and processes, including citations to relevant industry standards and established PG&E procedures. It should also list of the names and titles of personnel responsible for carrying out the plan with specific oversight roles. Finally, the Commission should require independent review of the QA/QC Plan presented in the Updated PSEP Application.

A proposed ruling is attached.

Respectfully submitted,

/s/ KAREN PAULL

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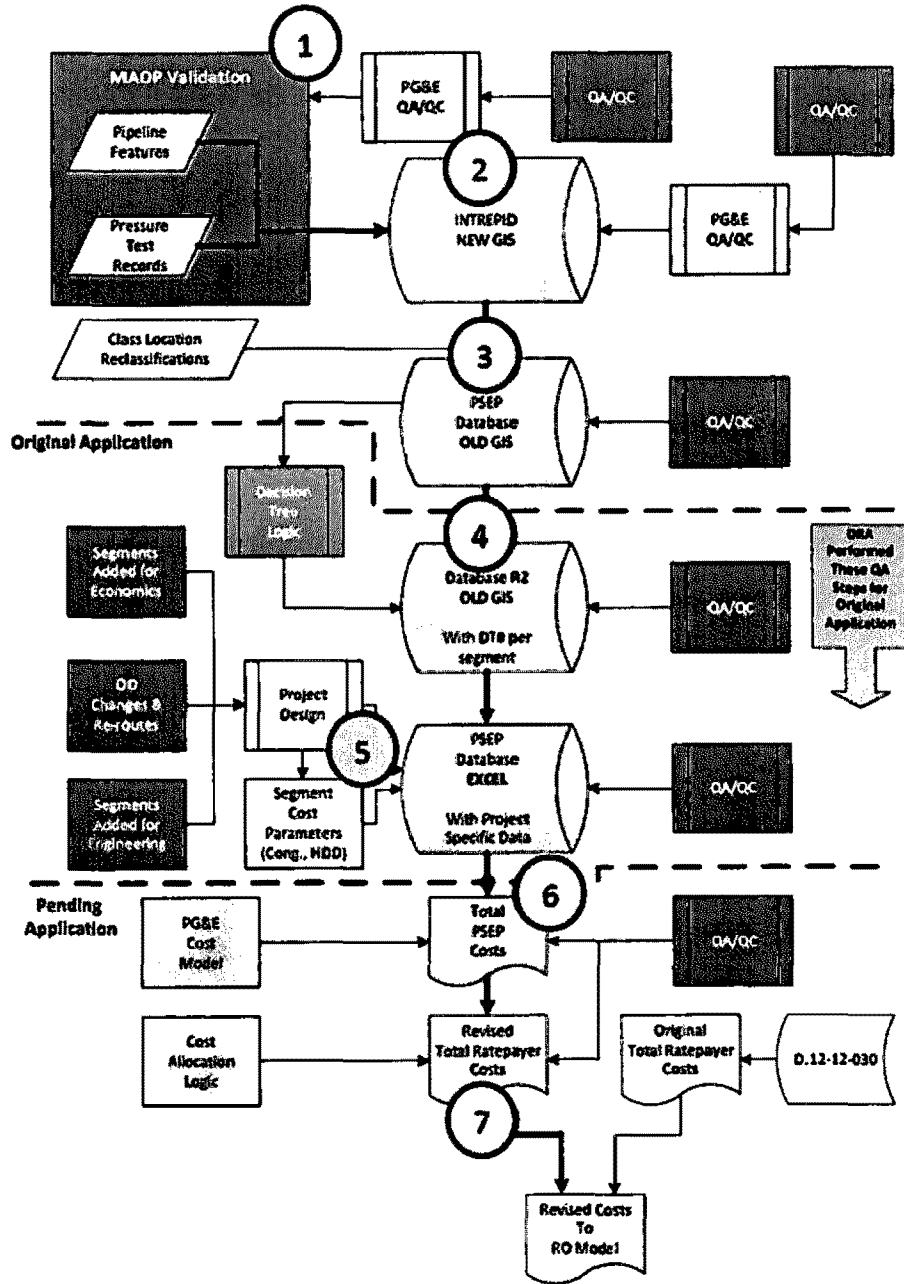
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# ATTACHMENT A

## PG&E Pipeline Data & PSEP Update Reference Process Flow



## ATTACHMENT B

### PROPOSED RULING DIRECTING PACIFIC GAS AND ELECTRIC COMPANY TO PROVIDE QUALITY ASSURANCE AND QUALITY CONTROL PLANS FOR THE DEVELOPMENT AND IMPLEMENTATION OF ITS UPDATED PSEP

On July 8, 2013 the Division Of Ratepayer Advocates (“DRA”) filed a “Motion Of The Division Of Ratepayer Advocates For A Ruling Directing Pacific Gas And Electric Company To Provide Quality Assurance And Quality Control Plans For The Development And Implementation Of Its Updated Pipeline Safety Plan (“PSEP”)” (“DRA Motion”). The motion is granted.

Decision (“D.”) 12-12-030, approving PG&E’s PSEP, ordered PG&E to “file an expedited application 30 days after the conclusion of its MAOP validation and records search work that includes an updated pipe segment database” (“Updated PSEP Application”).<sup>1</sup> Pursuant to D.12-12-030, Energy Division held a workshop on March 26, 2013 for PG&E and interested parties to discuss “[t]he specific showing that PG&E will be required to provide in its application” (“March Workshop”).<sup>2</sup>

The DRA Motion describes its good faith efforts at the March Workshop and thereafter to understand PG&E’s plans to perform quality assurance and quality control to ensure that its Updated PSEP is based on accurate information and includes adequate QA/QC Plans. DRA has demonstrated good cause for a Commission ruling on this matter.

PG&E’s historic lack of quality assurance and quality control procedures have been extensively noted and criticized by both the National Transportation Safety Board (“NTSB”) and the Independent Review Panel (“IRP”) hired by this Commission. The NTSB Report blamed the installation of the defective segment in Line 132 on PG&E’s lack of quality assurance and control in 1956:

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<sup>1</sup> D.12-12-030, *mimeo*, p. 115.

<sup>2</sup> D.12-12-030, *mimeo*, p. 115.

.... the probable cause of the [San Bruno explosion] was the Pacific Gas and Electric Company's ... (1) inadequate quality assurance and quality control in 1956 during its Line 132 relocation project, which allowed the installation of a substandard and poorly welded pipe section with a visible seam weld flaw that, over time grew to a critical size, causing the pipeline to rupture during a pressure increase stemming from poorly planned electrical work at the Milpitas Terminal...<sup>3</sup>

The NTSB found that PG&E's poor quality control was also a factor in the Rancho Cordova installation that resulted in an explosion in 2008, as was PG&E's inadequate emergency response after that explosion:

... the NTSB notes that several of the deficiencies revealed by this investigation, such as poor quality control during pipeline installation and inadequate emergency response, were also factors in the 2008 explosion of a PG&E gas distribution line in Rancho Cordova, California.<sup>4</sup>

The IRP Report noted the importance of quality assurance, which in data projects includes systematic checks for accuracy at multiple stages after data entry has been performed under quality control requirements. It recognized that PG&E's failure to have any quality assurance of its pipeline records after the initial data entry (which was obviously not subject to quality control) allowed the misinformation about Line 132 to persist in the database for decades:

Data management is important, but it is just one process in the chain. Quality assurance is the framework that runs throughout the entire process. A review by experienced piping engineers who question assumptions and demand substantiation should be a part of the quality assurance for the threat identification and risk ranking process. At any number of process steps in PG&E's threat identification and ranking processes, a casual review by an experienced piping engineer should have flagged the

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<sup>3</sup> NTSB Report, p. xii.

<sup>4</sup> See, e.g., NTSB Report, p. 116.

mischaracterization of the pipe seam type for the Line 132 segments that are the subject of this investigation.<sup>5</sup>

This theme of PG&E's lack of quality assurance and quality control runs throughout the IRP Report.<sup>6</sup>

The DRA Motion raises the issue of whether PG&E is performing adequate quality assurance and quality control ("QA/QC") in its development of the Updated PSEP. We agree with DRA that accurate prioritization and costing of PSEP projects are very important, and that the Commission should take all steps reasonably necessary to ensure that PG&E provides an Updated PSEP that is accurate and complete as filed. Further, we agree with DRA that it is necessary for PG&E to perform QC/QA for all steps in its development of the PSEP Database, but that this action alone is insufficient to ensure the accuracy and completeness of the Updated PSEP. Given PG&E's historic lack of effective QA/QC, the Commission must provide independent quality control of the Updated PSEP proposal.

Consequently, we direct PG&E to perform quality assurance and quality control throughout PSEP implementation, and specifically for all steps in the development of the Updated PSEP, as depicted in DRA's flowchart, which is Attachment A here. All QA/QC activities shall be consistent with relevant quality assurance standards, and PG&E will provide a program-specific Quality Assurance Plan designed to prevent errors

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<sup>5</sup> IRP Report, p. 62 (*emphases added*).

<sup>6</sup> *See, e.g.*, IRP Report, p. 8 ("The lack of an overarching effort to centralize diffuse sources of data hinders the collection, quality assurance and analysis of data to characterize threats to pipelines as well as to assess the risk posed by the threats on the likelihood of a pipeline's failure and consequences.") and p. 62 ("PG&E lacks robust data and document information management systems and processes. These hinder the collection, quality assurance/quality control, and analysis of data to fully characterize threats to pipelines as well as assess the risk posed by the threats on the likelihood of a pipeline's failure.") and p. 72 ("The fact the line pipe DSAW seam type was incorrectly recorded as 'seamless' is symptomatic of PG&E's inadequate quality control and quality assurance management. The failure to properly document the seam type designation as DSAW, rather than seamless is not sufficient in itself to have prevented this incident, but had the records been more complete and the characterization been part of a more refined threat identification process, then the tragedy might have been avoided. Without a quality assurance program embedded in the integrity management process— and a feedback loop when anomalies are uncovered or pipelines do fail, mistakes happen. Unheeded lapses in the end-to-end process of pipeline integrity can lead to accidents like San Bruno.").

from occurring, and to correct them when they occur. PG&E's quality control checks must use methods that provide statistically significant findings. We also direct PG&E to clearly and completely document these QA/QC activities in the Updated PSEP Application.

We also agree that in light of PG&E's historic quality assurance and quality control failures described above, it is unrealistic to expect PG&E to implement a fully effective quality assurance program without effective oversight. Consequently, the Commission's Safety and Enforcement Division ("SED") will perform independent quality control of the Updated PSEP and the underlying updated PSEP Database per Steps 1 through 5 of Attachment A using methods that provide statistically significant findings. Since DRA developed methods and tools to evaluate cost elements of PG&E's original PSEP application, the Commission will rely on DRA to perform independent quality control of the Updated PSEP and the underlying PSEP Database per Steps 6 and 7 of Attachment A. The evaluations by SED and DRA should use methods that provide statistically significant findings.

The DRA Motion has shown good cause to issue a ruling ordering PG&E to perform and document the quality assurance and quality control steps used in the development of its PSEP Update Application, and clarifying related issues. Accordingly, the DRA Motion is granted.

IT IS RULED THAT the Motion Of The Division Of Ratepayer Advocates For A Ruling Directing Pacific Gas And Electric Company To Provide Quality Assurance And Quality Control Plans For The Development And Implementation Of Its Updated PSEP is granted.

1. PG&E shall perform quality assurance and quality control ("QA/QC") activities per all relevant quality standards on all PSEP activities consistent with its obligation pursuant to Section 451 of the Public Utilities Code to provide safe service. This obligation requires PG&E to develop a QA/QC Plan for its Updated PSEP, and to perform QA/QC activities on all seven steps in the development of its Updated PSEP, as depicted in DRA's flowchart, which is Attachment A here.

2. PSEP QA/QC activities will be performed consistent with a comprehensive QA/QC Plan to prevent errors, and to find and correct those that occur.

3. PG&E's Updated PSEP Application shall document and describe the specifically relevant quality standards applicable, the procedures and processes followed, and results of quality control ("QC") checks. The documentation must include an overall QA/QC plan, and discussion of how PSEP project design is consistent with "sound engineering practice." QA/QC documents will show the date of issuance, revision number, and clear indication of the level of management approval. QC checks will use methods that provide statistically significant findings.

4. The Commission directs SED to perform quality control of the Updated PSEP and the underlying PSEP Database per Steps 1 through 5 of Attachment A using methods that provide statistically significant findings. The Commission's assessment of PG&E QA/QC activities will be served on parties in this proceeding.

5. The Commission acknowledges that DRA intends to perform quality control for Steps 6 and 7 of the Updated PSEP and the underlying PSEP Database using methods that provide statistically significant findings. DRA's findings will be served on parties in this proceeding as testimony per the schedule to be announced in a scoping ruling.

(END)