

# **APPENDIX A**

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 to Determine Violations of Public Utilities Code Section 451, General Order 112, and Other Applicable Standards, Laws, 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)

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)

**REPLY BRIEF  
OF THE CONSUMER PROTECTION AND SAFETY DIVISION  
ON FINES AND REMEDIES**

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As the Director of the Commission’s Safety and Enforcement Division, which for purposes of this case is identified by its former name, the Consumer Protection and Safety Division (“CPSD”), I hereby submit this Reply Brief on Fines and Remedies. In this brief, I reply primarily in opposition to the opening brief on fines and remedies submitted by the Respondent, Pacific Gas and Electric Company (“PG&E”). I also provide a comparison of the penalty proposals submitted by the four intervenor parties, namely, the City of San Bruno (“San Bruno”), the Commission’s Division of Ratepayer Advocates (“DRA”), the City and County of San Francisco (“San Francisco”), and The Utility Reform Network (“TURN”).

## **I. REPLY TO PG&E**

### **A. I Strongly Dispute PG&E’s Contention that CPSD’s Penalty Proposal is “Excessive” or Otherwise Unlawful**

In a brief filed on May 24, 2013, PG&E challenged as “excessive” my recommendation that the Company be required to fund out of shareholder monies a total of \$2.25 billion in remedial actions to make its gas system safe. In its brief, PG&E also described at length various measures the Company, under its new management, has taken since the tragic explosion of Line 132 on September 9, 2010.

While it is true that PG&E, under firm direction by this Commission, has made a strong and commendable effort since San Bruno to make its system safer, two points must be emphasized in response. First, none of this can excuse the decades of violations of fundamental safety rules and principles that led up to the tragedy at San Bruno, for which PG&E has yet to acknowledge. Second, despite the changes PG&E has made under its new management, these are only the beginning of what needs to be done in order to make the PG&E gas system safe. Based on my own evaluation, I estimate that PG&E will need to spend as much as \$3 billion to \$4 billion, in total, to bring this massive gas system into a state where we can say it is safe.

My proposal is that PG&E be required by this Commission to absorb, as a shareholder expense – *not to be recovered through the rates paid by its gas or electric customers* – a total of \$2.25 billion in safety investments on its gas system.

If adopted by the Commission, this would be by far the largest penalty ever imposed on a public utility in the history of the United States. This is indeed a very large penalty, but contrary to PG&E’s arguments it is certainly *not* excessive in light the record of PG&E’s wrongdoing in this case, compounded by PG&E’s lack of genuine remorse.

But, large as it is, this penalty of \$2.25 billion in shareholder-funded investment in the gas system will not be enough to make the entire system safe. As I already have stated above, the total price tag for this effort is in the range of \$3 billion to \$4 billion.

Where will this extra money come from? That will be for the Commission to decide in future rate cases, as the dollars are expended.

My proposed penalty of \$2.25 billion is informed in substantial part by the Overland Report (Joint-51), which demonstrates that PG&E could absorb a penalty of this magnitude without jeopardizing the safety of its operations and its financial viability. (*See* CPSD Opening Brief, pp. 52-54.)

I view this as the maximum financial penalty this Commission reasonably can impose on PG&E. I also feel quite strongly that the penalty should be in the form of shareholder-funded safety investments in the PG&E gas system. The alternative of imposing a traditional “fine” on PG&E, payable to the State General Fund, would not do anything to advance safety on the system. I believe the Commission owes it to the victims of the San Bruno tragedy to do something very significant, not only to sanction PG&E for past misconduct and neglect, but also to advance public safety. These are the reasons why I propose a \$2.25 billion penalty, in the form of shareholder-funded investments in safety improvements on PG&E’s gas system.

Again, I emphasize, \$2.25 billion will not get the job done. It represents only about half of the investment needed in order to make the PG&E gas system truly safe. But I do not believe the Commission should attempt to impose a higher penalty amount, in light of the Overland Report and its suggestion that a penalty higher than \$2.25 billion would actually *jeopardize*, rather than *improve*, public safety.

The Commission should not be persuaded by PG&E’s rhetorical arguments that this penalty, if adopted, would be “excessive” under governing law, or constitute a violation of the federal or state constitutions. These are not legitimate arguments against the penalty I have recommended in this case.

**B. PG&E Continues to Manifest a Conspicuous and Disturbing Lack of Remorse for Its Many Failures Leading Up To The Tragedy At San Bruno**

PG&E’s brief on penalties displays a chilling lack of remorse for the many failures that led up to the tragedy in San Bruno. I believe the lack of remorse by PG&E in its brief only

serves to reinforce the need for the Commission to impose the very substantial \$2.25 billion penalty I have proposed.

PG&E's lack of remorse is particularly evident in the section of its brief entitled "Severity of the Offense." Although PG&E commences that section of the brief with a statement of "regret" for the incident in San Bruno, the gist of PG&E's argument is "don't blame us." PG&E attempts to refute the record evidence in this case showing its culpability in installing patently defective pipe in the Crestmoor neighborhood in 1956, in the midst of what was then being developed as a residential neighborhood. This early lapse then was compounded by PG&E's failure over the ensuing years to inspect the pipe or even to keep adequate records.

PG&E's statements of "regret" ring hollow in the face of this continuing lack of any sincere remorse whatsoever for the Company's past shortcomings. If there was ever any doubt about the need for a very large penalty in this case, any such doubt is removed by the unrepentant tone of PG&E's brief. It is time to throw the book at PG&E.

## **II. PENALTY PROPOSALS**

### **A. CPSD's Penalty Proposal**

As stated in CPSD's opening brief on fines and remedies, we urge the Commission to use its equitable powers to order PG&E to take the steps needed to ensure its system is safe without unduly burdening the ratepayers. CPSD continues to recommend PG&E be penalized \$2.25 billion for all three San Bruno-related OIIs at shareholder expense. The Commission should order PG&E to spend the entirety of this penalty on safety improvements for its gas transmission and distribution systems to prevent such disastrous events from recurring.

CPSD supports a flexible apportionment of the penalty, so long as funds are used exclusively to improve the safety of PG&E's gas transmission or distribution systems. As indicated in CPSD's opening brief, these funds may be used on Phase I and Phase II of the Pipeline Safety Enhancement Plan ("PSEP"). For the purposes of clarity, the funds also may be used to carry out the shareholder-funded safety improvements required by this Commission's decision concerning PG&E's Gas Accord V Settlement (Decision 11-04-031). The penalty funds may be used to develop safety management systems. It is also CPSD's intent that this money be available to remediate any gas pipeline right-of-way encroachments (without prejudice to CPSD's right to pursue future enforcement actions against PG&E for any such encroachments). These examples of expenditures are illustrative but not exhaustive. Any bona

vide safety enhancement to PG&E's gas transmission or distribution system made at shareholder expense may be eligible to satisfy the \$2.25 billion penalty.

Oversight is required to ensure that PG&E spends the penalty funds appropriately. The Commission should order all expenses be subject to third-party auditing. To ensure the integrity of the audits, CPSD will select the auditors and oversee the auditing process. Any costs incurred by CPSD for the auditing should be reimbursed by PG&E as a shareholder expense, as part of the \$2.25 billion penalty.

In the interest of predictability throughout the auditing process, the Commission should admonish PG&E as to certain ineligible expenditures. Any payments made to compensate victims or the City of San Bruno cannot be used to satisfy the penalty. Any administrative costs associated with the San Bruno incident, including those associated with implementing the Commission's decisions, likewise should be excluded. Any expenses related to customer notification will not be considered eligible, nor will PG&E's legal fees. Likewise, other expenses previously approved for rate recovery are not eligible to satisfy the penalty. While this list is not exhaustive, it provides PG&E sufficient guidance to determine what expenditures will be deemed eligible.

**B. Comparison of CPSD's Penalty Proposal with the Penalty Proposals Submitted by the Intervenor Parties**

Table 1, below, summarizes the penalty proposals submitted by CPSD and the intervenors in these proceedings. Each proposal also contains remedies not included in the table. These remedies are specific recommendations for improving PG&E's natural gas system in addition to the penalties.

Most of the proposals plead for a set of penalties totaling approximately \$2.25 billion. However, both the City of San Bruno's proposal and DRA's proposal may exceed that amount. The City of San Bruno has specified a fine of \$1.25 billion, payable to the State General Fund, and requested the PSEP costs be incurred by shareholders without assessing a total dollar amount for the PSEP costs. Under the City of San Bruno's proposal, the unknown PSEP cost could elevate the total penalty above the estimated \$2.25 billion that CPSD believes PG&E is capable of absorbing without jeopardizing safe operations. The DRA has specified a fine of \$550 million, payable to the State General Fund, and estimates the cost of PSEP Phase I to be

\$1.989 billion (\$800 million of which has already been disallowed in Decision 12-12-030) for a total of \$2.539 billion. CPSD is concerned with the safety implications of hampering PG&E’s financial integrity, and therefore we stand by our proposal that the maximum penalty in this case be set at \$2.25 billion.

While the proposals of the other intervenor parties seek a penalty of approximately the same magnitude CPSD has recommended, the structure of CPSD’s proposal ensures each dollar is spent improving the safety of PG&E’s gas system. It is for this reason that I urge the Commission to adopt CPSD’s proposed penalty.

<b>Table 1: Penalty Proposal by Party</b>	
<b>Party</b>	<b>Penalty Proposal</b>
CPSD	<ul style="list-style-type: none"> <li>• \$2.25 billion shareholder expense for safety improvements</li> <li>• No civil penalties</li> </ul>
City of San Bruno	<ul style="list-style-type: none"> <li>• PSEP I &amp; II at shareholder expense</li> <li>• \$1.25 billion civil penalty</li> </ul>
City and County of San Francisco	<ul style="list-style-type: none"> <li>• \$2.25 billion total shareholder expense               <ul style="list-style-type: none"> <li>○ Large portion for safety improvements</li> <li>○ Remainder as a civil penalty</li> </ul> </li> </ul>
DRA	<ul style="list-style-type: none"> <li>• Approx. \$2.539 billion total               <ul style="list-style-type: none"> <li>○ PSEP I at shareholder expense (\$1.989 billion total)</li> <li>○ \$550 million civil penalty</li> </ul> </li> </ul>
TURN	<ul style="list-style-type: none"> <li>• Approx. \$2.25 billion total               <ul style="list-style-type: none"> <li>○ PSEP I at shareholder expense</li> <li>○ Remainder as a civil penalty (at least \$670 million)</li> </ul> </li> </ul>

### **III. RESPONSE TO PG&E’S CLARIFICATION OF PROPOSED REMEDIES**

#### **A. CPSD’s Detailed Reply to PG&E Concerning Remedies Is Contained in Appendix A to this Reply Brief**

The extensive shortcomings in PG&E’s safety systems and compliance with the law call for extensive changes to their operations. CPSD included a list of proposed remedies in its Opening Fines and Remedies Brief. PG&E responded to these remedies in PG&E’s Coordinated Reply Brief, Appendix B, and the Proposed Remedies table. To ensure a clearly organized response to PG&E, CPSD created the attached table in Appendix A, by adding one column to

PG&E's Appendix B. This column is entitled "CPSD Comments re PG&E Response and Edits." Entries in this column respond to PG&E's proposed edits to CPSD's original proposed remedy.

Where CPSD's response results in modification of CPSD's original proposed remedy, the modifications are indicated (underlined text is added, strikethrough text is removed) in Column 2, entitled "Revised Party Proposal".

Appendix B to this reply brief lists CPSD's finalized proposed text from Column 2 of Appendix A. These proposed remedies are the product of extensive analysis of the shortcomings in PG&E's operations and are considered necessary by CPSD to ensure the safety of the people of California. CPSD strongly recommends the Commission adopt the recommended remedies listed in Appendix B in their entirety.

**B. The Commission Should Reject PG&E's Proposal to Apply the Government Auditing Standards**

PG&E proposes modifying CPSD's auditing proposal so that it is consistent with the Government Auditing Standards issued by the United States Government Accountability Office ("GAGAS"). (*See* PG&E Coordinated Reply Brief, p. 102.) For the reasons discussed below, CPSD opposes this proposed modification to CPSD's remedies proposal.

The purpose of GAGAS is to audit the government, not PG&E. By its own wording, "[t]hese standards are for use by auditors of government entities and entities that receive government awards and audit organizations performing GAGAS audits." (*See* PG&E'S Request for Official Notice, Exhibit 12, p. 5.)

Furthermore, GAGAS guidance for auditing does not contemplate recordkeeping audits. In fact, the types of GAGAS audits include financial audits and attestation engagements, neither of which is pertinent to the auditing of PG&E's safety related records. (*See* PG&E'S Request for Official Notice, Exhibit 12, pp. 14-16.) The final type of GAGAS audit is for "Performance Audits," but GAGAS lists a number of types of professional standards that mesh with it, none of which include recordkeeping standards. (*See* PG&E'S Request for Official Notice, Exhibit 12, pp. 17, 23-24.)

Fundamentally, it is within this Commission's discretion to choose whatever audits it wishes to employ. We are aware of no Commission precedent endorsing the use of GAGAS for any audits. Using a recent and pertinent example, Commission Resolution L-436 does not require using GAGAS, even though it requires disclosure of safety related auditing records.



(See Resolution No.: L-436, p. 1.)

In short, it is up to the Commission, in its own discretion, to determine the appropriate scope of audits. Here, GAGAS is not appropriate, given PG&E's specific auditing needs that must be carefully considered.

**C. CPSD Accepts PG&E's Clarification That It Will Take Up to Three Years for PG&E to Achieve Compliance with Generally Accepted Recordkeeping Principles, Level 3, as CPSD Has Recommended**

PG&E agrees to undertake to achieve Level 3 information maturity scores under the Generally Accepted Recordkeeping Principles ("GARP"), but clarifies that it will take the Company up to three years to do so. CPSD agrees with PG&E's proposed clarification and recommends that the Commission require PG&E to meet this deadline. CPSD reserves the right to audit PG&E during the intervening time, in order to ensure PG&E is on schedule to achieve this commitment. CPSD provides additional response to PG&E on this point in Appendix A.

**IV. CONCLUSION**

For the reasons explained here and in CPSD's prior briefs in this case, I ask that the Commission penalize PG&E a total of \$2.25 billion, to be paid in the form of shareholder-funded investments to enhance the safety of the PG&E gas system. None of this \$2.25 billion should be paid by PG&E's gas or electric ratepayers. All legitimate, Commission-supervised safety investments should qualify toward the penalty amount. Finally, this entire program of safety

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investments should be subject to after-the-fact audit by an independent auditing firm at PG&E's shareholder expense, to ensure that PG&E invests this money appropriately and in accordance with the Commission's directives.

Respectfully submitted,

/s/ EMORY J. HAGAN, III

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**APPENDIX A**  
**CPSD Rebuttal Brief Remedies Table**

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
	<p><b><i>INTRODUCTION</i></b></p> <p>CPSD created the table in Appendix A by adding one column to the PG&amp;E’s Coordinated Reply Brief Appendix B, the Proposed Remedies table. The fifth column is entitled “CPSD Comments re PG&amp;E Response and Edits”. Entries in this column respond to PG&amp;E’s proposed edits to CPSD’s original proposed remedy (by row).</p> <p>Where CPSD’s response results in modification of the original proposed remedy, CPSD shows the modifications to the remedies it proposed in its Opening Fines and Remedies Brief in Column 2, entitled “Revised Party Proposal”.</p> <p>CPSD Appendix B in this Rebuttal Brief takes the edits made in Column 2 of the table below, and proposes them without edits shown. CPSD recommends the Commission adopt the recommendations of Appendix B in their entirety.</p>			

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.A.1	<p>PG&amp;E should pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD, for the cost of verification audits and inspections to ensure compliance with the other remedies. PG&amp;E should also pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD in the near term to provide needed technical expertise as PG&amp;E proceeds with its hydrostatic testing program, in order to provide a high level of technical oversight and to assure the opportunity for legacy piping characterization through sampling is not lost in the rush to execute the program.</p>	<p>PG&amp;E agrees with this proposal. The Government Auditing Standards issued by the U.S. Government Accountability Office contain appropriate protocols for conducting audits. PG&amp;E expects CPSD to follow these government-sanctioned standards to ensure high quality audits.</p>	<p>PG&amp;E should pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD in the near term to provide needed technical expertise as PG&amp;E proceeds with its hydrostatic testing program, in order to provide a high level of technical oversight and to assure the opportunity for legacy piping characterization through sampling is not lost in the rush to execute the program.</p>	<p>Oppose. Although PG&amp;E claims it agrees with CPSD’s proposal, CPSD never proposed GAO standards. Moreover, CPSD rejects PG&amp;E’s proposed changes on the grounds that:</p> <p>a) There is no reason to include an auditing standard <i>proposed by PG&amp;E</i> in a remedy that is designed to determine whether PG&amp;E has complied with the Commission’s required remedies.</p> <p>b) Auditing is part of the Commission’s legal jurisdiction. As such, CPSD will use its own auditing standard(s) designed for the purpose of recordkeeping and safety audits.</p> <p>c) CPSD will not limit pool of available auditors by restricting itself to the criteria set out in the Government Auditing Standard.</p> <p>CPSD reserves the right to appoint auditors and subject matter experts at its sole discretion, to undertake the proposed safety and recordkeeping audits.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.A.2	PG&E should reimburse CPUC/CPSD for the cost of conducting all three of the present investigations.	PG&E agrees with this proposal.	None.	None.
4.A.3	PG&E should apply the remainder of the \$2.25 billion penalty to the PSEP cost and expenses for Phases I and II until it reaches the maximum amount of the penalty.	PG&E continues to disagree with the \$2.25 billion penalty as appropriate. However, if the CPUC adopts that amount, then the counting toward the \$2.25 billion should occur in the following order: (1) PSEP Phase 1 disallowances and PG&E's actual spending as detailed in Table 1 of Appendix A (PG&E's May 16, 2013 response to General Hagan's request for financial information); (2) PG&E's forecast spending as detailed in Table 1 for upcoming work and Operational Commitments. And then, if necessary, (3) PSEP Phase 2 disallowances ordered by the Commission; and (4) any remaining amount to meet the \$2.25 billion maximum will offset PSEP Phase 1 and 2 authorized dollars.	PG&E should apply the remainder of the \$2.25 billion penalty to the PSEP cost and expenses for Phases I and II until it reaches the maximum amount of the penalty <b>in the following order: (1) PSEP Phase 1 disallowances and PG&amp;E's actual spending as detailed in Table 1; (2) PG&amp;E's forecast spending as detailed in Table 1 for upcoming work and Operational Commitments. And then, if necessary, (3) PSEP Phase 2 disallowances ordered by the Commission; and (4) any remaining amount to meet the \$2.25 billion maximum will offset PSEP Phase 1 and 2 authorized dollars.</b>	<i>Refer to CPSD response brief</i>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.1	<p>PG&amp;E's <del>should revise its</del> pipeline construction <del>and installation procedures and training to ensure that they</del> <u>standards should meet</u> <del>and</del> <u>or</u> exceed all legal requirements and industry standards for identifying and correcting pipe deficiencies and strength testing.</p>	<p>PG&amp;E is implementing this recommendation<sup>1</sup> through updated training and procedures. See San Bruno OII Ex. PG&amp;E-1a at 13-4 to 13-6.</p>	<p>PG&amp;E's <del>should revise its</del> pipeline construction <u>standards should</u> <del>and installation procedures and training to ensure that they meet</del> <u>or</u> exceed all <b>relevant</b> legal requirements and industry standards for identifying and correcting pipe deficiencies and strength testing.</p>	<p>CPSD accepts PG&amp;E's proposed edits with the exception of the insertion of "relevant" because this term is highly subjective and tends to unnecessarily obscure an otherwise clearly stated remedy.</p>

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<sup>1</sup> For all recommendations that PG&E agrees with and is implementing, PG&E is taking independent action to meet the objectives of the recommendation. These actions may exceed what is recommended.  
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Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.2	<p>PG&amp;E should revise <a href="#">its GTMRMP section 2 of RMP-06</a> to <del>fully and</del> robustly meet the data gathering requirements of 49 CFR Part 192.917(b) and ASME-B31.8S, and to do so without limiting its data-gathering to only that data which is “readily available, verifiable, or easily obtained” by PG&amp;E.</p>	<p>PG&amp;E agrees that its data gathering practices should be reviewed to confirm that they meet or exceed regulatory and industry consensus guidance, and should be revised if necessary. This recommendation is being implemented through our review of Integrity Management and through Project Mariner (formerly described as the Gas Transmission Asset Management Project (GTAM)). See San Bruno OII Ex. PG&amp;E-1c, Chapter 4.E.</p> <p>PG&amp;E is substantially increasing the amount, types, quality, and accessibility of information collected and maintained electronically regarding our pipelines; improving systems for collecting, validating, and retaining pipeline data; and increasing the traceability of materials used in the construction and maintenance of transmission pipelines. In addition, through the MAOP validation effort, PG&amp;E is building detailed pipeline features lists down to the individual component level for all of our transmission pipelines.</p>	<p>PG&amp;E should revise <del>section 2 of RMP-06</del> its integrity management procedures to <del>fully and</del> robustly meet the data gathering requirements of 49 C.F.R. Part 192.917(b) and ASME_B31.8S; <del>and to do so without limiting its data-gathering to only that data which is “readily available, verifiable, or easily obtained” by PG&amp;E.</del></p>	<p>CPSD accepts the minor edit in the first 3 lines, but objects to the deletion of the last 5 lines. During the Records OII, PG&amp;E’s records were found to be generally unavailable in reasonable amount of time to PG&amp;E’s employees for a number of reasons. CPSD plans to include in future audits a check of the reasonable availability and ability to verify records after PG&amp;E has had time to retrieve and organize all of its transmission pipeline records. The inclusion of this language in the remedy puts PG&amp;E on notice that it is expected to retrieve and organize all of its transmission pipeline records.</p>



Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.3	<p>PG&amp;E should perform a complete company_-wide record search <del>ensure to populate</del> its GIS database <del>includes with</del> all <u>identified gas transmission</u> pipeline leak history, including closed leak, information not already transferred to the GIS.</p>	<p>PG&amp;E agrees with the recommendation that it gather and integrate all gas transmission leak history into its GIS. PG&amp;E is implementing this recommendation by converting all paper records and databases documenting gas transmission leak history into a single electronic database. See San Bruno OII Ex. PG&amp;E-1c at 4-39.</p>	<p>PG&amp;E should perform a complete company_-wide record search <del>ensure to populate</del> its GIS database <del>includes with</del> all <u>identified gas transmission</u> pipeline leak history, including closed leak, information not already transferred to the GIS.</p>	<p>CPSD accepts PG&amp;E's edits</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.4	<p>PG&amp;E should revise its Integrity Management training to ensure that missing data is represented by conservative assumptions, and that those assumptions are supportable, per the requirements of ASME B31.8S. <u>As required by Ordering Paragraph 1 of D. 11-06-017, PG&amp;E should be required to fully document any engineering-based assumption it makes for data that is missing, incomplete or unreliable. Such assumptions must be clearly identified and justified and, where ambiguities arise, the assumption allowing the greatest safety margin must be adopted.</u></p>	<p>PG&amp;E agrees that it should ensure that missing data is represented by conservative assumptions. PG&amp;E’s practice has been, and continues to be, to use conservative assumptions that reflect the most conservative pipeline specifications for pipe procurement standards in place at the time of the construction project, a practice that is consistent with ASME B31.8S guidance. <i>See</i> San Bruno OII Ex. PG&amp;E-1, Chapter 5. PG&amp;E has taken steps to review its data to ensure the adequacy of its conservative assumptions. Records R.T. 1485-87 (PG&amp;E/Keas); Records OII Ex. CPSD-67 (PG&amp;E Response to Data Request 89, Question 1).</p>	None.	<p>Since PG&amp;E views Turn’s proposed remedy 2A duplicative of CPSD’s 4.B.4, CPSD proposes incorporating the 2A language into this remedy.</p> <p>CPSD disagrees with PG&amp;E’s representation that it has been and continues to use conservative assumptions that reflect the most conservative pipeline specifications. During hearings, CPSD showed numerous examples of incorrect assumptions or missing data in PG&amp;E’s GIS data base and, by extension, in its integrity management data base. Therefore, PG&amp;E’s statement in its response that “ it has been and continues to use conservative assumptions that reflect the most conservative pipeline specifications . . . ” is incorrect.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.5	<p>PG&amp;E should revise its <del>GTIMPRMP section 2 of RMP-06</del>, and related training, to ensure <del>full and</del> robust data verification processes are enacted and implemented.</p>	<p>PG&amp;E is implementing this recommendation through a review of our Integrity Management program and through enhanced data collection and validation processes in Project Mariner, and will revise its integrity management procedures (which will replace Risk Management Procedures, or RMPs) to ensure that data verification processes meet or exceed requirements of 49 C.F.R. Part 192, Subpart O and ASME B31.8S. See San Bruno OII Ex. PG&amp;E-1c at 4-37 to 4-38.</p>	<p>PG&amp;E should revise <u>its integrity management procedures</u>, <del>section 2 of RMP-06</del>, and related training, to ensure <del>full and</del> robust data verification processes are enacted and implemented.</p>	<p>CPSD accepts PG&amp;E's edits.</p>
4.B.6	<p>PG&amp;E should revise its threat identification and assessment procedures and training, including its Baseline Assessment Plans, to fully incorporate all relevant data for both covered and non-covered segments, including but not limited to potential manufacturing and construction threats, and leak data.</p>	<p>PG&amp;E is implementing this recommendation through our review of Integrity Management. See San Bruno OII Ex. PG&amp;E-1c, Chapter 4.E. Through the MAOP validation effort, PG&amp;E is compiling comprehensive pipeline features lists that reflect data on all transmission pipelines at the component-by-component level, which will facilitate data gathering of the required data for covered and non-covered segments.</p>	<p>None.</p>	<p>None.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.7	<p>PG&amp;E should re-label its system MAOP nomenclature <u>in accordance with to avoid confusion with the MOP term of art as used by 49 C.F.R., Part 192.917(e)(3)</u>.</p>	<p>PG&amp;E agrees with this recommendation, and is revising its system MAOP nomenclature in accordance with 49 C.F.R. Part 192.</p>	<p>PG&amp;E should re-label its system MAOP nomenclature <u>in accordance with to avoid confusion with the MOP term of art as used by 49 C.F.R., Part 192.917(e)(3)</u>.</p>	<p>CPSD adopts PG&amp;E's edits.</p>
4.B.8	<p>PG&amp;E should permanently cease the self-suspended practice of regularly increasing pipeline pressure <u>up to above</u> a "system MAOP" to eliminate the need to consider manufacturing and construction threats. In addition, <u>PG&amp;E should analyze all segments that were subjected to the planned pressure increases to determine the risk of failure from manufacturing threats due to PG&amp;E's pressure spiking practice such threats should now be considered by PG&amp;E to be unstable</u> under 49 C.F.R., Part 192.917(e)(3), <u>and perform further integrity assessments as warranted.</u> Each assessment <u>should be documented and retained for the life of the facility.</u></p>	<p>PG&amp;E agrees with this recommendation, and has permanently ceased the practice of increasing pipeline pressure in certain high consequence area (HCA) pipe segments with identified manufacturing threats to the highest pressure experienced in the five years predating identification of the HCA. See San Bruno OII Ex. PG&amp;E-1c at 4-25.</p> <p>PG&amp;E has analyzed all HCA segments formerly subjected to this practice to determine the risk of failure from these defects pursuant to 49 C.F.R. Part 192.917(e)(3). This analysis, called an Engineering Critical Assessment (ECA), evaluates whether latent manufacturing or construction related defects have become unstable and would further require an integrity assessment.</p>	<p>PG&amp;E should permanently cease the self-suspended practice of regularly increasing pipeline pressure <u>up to above</u> a "system MAOP" to eliminate the need to consider manufacturing and construction threats. In addition, <u>PG&amp;E should analyze all segments that were subjected to the planned pressure increases to determine the risk of failure from manufacturing threats due to PG&amp;E's pressure spiking practice such threats should now be considered by PG&amp;E to be unstable</u> under 49 C.F.R., Part 192.917(e)(3), <u>and perform further integrity assessments as warranted.</u></p>	<p>CPSD accepts PG&amp;E's proposed edits but, in doing so, sees a need for documentation of the proposed analyses and therefore adds: Each assessment should be documented and retained for the life of the facility.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.9	<p>PG&amp;E should revise its threat identification and assessment procedures and training to ensure that HCA pipeline segments that have had their MAOP increased are prioritized for a suitable assessment method (e.g., hydro-testing), per the requirements of 49 CFR Part 192.917(e)(3)-(4).</p>	<p>PG&amp;E agrees with implementing this recommendation, but disagrees with the statement that its HCA segments “had their MAOP increased.” PG&amp;E’s former practice of raising pressures to historic five year high levels did not result in increases in pipeline MAOP. See San Bruno OII Ex. PG&amp;E-1c at 4-24 (PG&amp;E’s practice was to raise pressure to MAOP).</p> <p>As discussed in response to CPSD Recommendation 4.B.8, PG&amp;E has analyzed all HCA segments formerly subjected to this practice to determine the risk of failure from these defects pursuant to 49 CFR Part 192.917(e)(3). This analysis, called an Engineering Critical Assessment (ECA), evaluates whether latent manufacturing or construction related defects have become unstable and would further require an integrity assessment.</p>	<p>PG&amp;E should revise its threat identification and assessment procedures and training to ensure that HCA pipeline segments with identified manufacturing threats <del>that have had their MAOP increased</del> are prioritized for a suitable assessment method (e.g., hydro-testing), per the requirements of 49 C.F.R. Part 192.917(e)(3)-(4).</p>	<p>CPSD accepts PG&amp;E’s proposed edits.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.10	PG&E should revise its threat identification and assessment procedures and training to ensure that cyclic fatigue and other loading conditions are incorporated into their segment specific threat assessments and risk ranking algorithm, and that threats that can be exacerbated by cyclic fatigue are assumed to exist per the requirements of 49 CFR Part 192.917(b).	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1c at 4-37 to 4-39.	None.	None.
4.B.11	PG&E should revise its risk ranking algorithm to ensure that PG&E’s weighting factors in its risk ranking algorithm more accurately reflect PG&E’s actual operating experience along with generally reflected industry experience.	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a, at 13A-3 to 13A-4; San Bruno OII Ex. PG&E-1c, Chapter 4.E.	None.	None.
4.B.12	PG&E should revise its threat identification and assessment procedures and training to ensure that PG&E’s weighing of factors in its risk ranking algorithm and the input of data into that algorithm corrects the various systemic issues identified in the NTSB report and the CPSD/PHMSA 2011 Risk Assessment Audit.	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a, at 13A-4; San Bruno OII Ex. PG&E-1c, Chapter 4.E.	None.	None.

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.13	PG&E should revise its threat identification and assessment procedures and training to ensure that the proper assessment method is being used to address a pipeline's actual and potential threats.	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a, at 13A-4; San Bruno OII Ex. PG&E-1c, Chapter 4.	None.	None.
4.B.14	PG&E should review and implement its Inspection, Testing, and Maintenance procedure applicable to stations to ensure that integrity of equipment, wiring and documentation and identification of electrical components does not deteriorate to unsafe conditions.	PG&E is implementing this recommendation and reviewing its inspection, testing, and maintenance procedure applicable to stations (including the Milpitas Terminal) to ensure the integrity of electrical equipment, wiring, documentation, and identification of electrical components. See San Bruno OII Ex. PG&E-1a at 13A-4. However, the state of equipment, wiring, and documentation and identification of electrical components at the Milpitas Terminal were not deteriorated or otherwise unsafe. See San Bruno OII Ex. PG&E-1, Chapter 8.E.1.	PG&E should <u>review</u> <del>make revisions to its equipment retention policy</del> <u>Inspection, Testing, and Maintenance procedure applicable to stations</u> to ensure that integrity of <u>electrical</u> equipment, wiring and documentation and identification of electrical components does not deteriorate to unsafe conditions <del>such as occurred at the Milpitas Terminal, described herein. If PG&amp;E does not have an applicable equipment retention policy then it should formulate one.</del>	CPSD accepts PG&E's proposed edits and includes language to ensure the procedure is implemented.

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.15	PG&E should revise its SCADA system to reduce the occurrence of “glitches” and anomalies in the control system that desensitizes operators to the presence of alarms and other inconsistent information.	PG&E agrees with and is implementing this recommendation. <i>See</i> San Bruno OII Ex. PG&E-1a at 13A-4 to 13A-5; San Bruno OII Ex. PG&E-1, Chapter 8.F.2.	None.	None.
4.B.16	PG&E should reevaluate SCADA alarm criteria with the goal of reducing unnecessary alarm messages.	PG&E agrees with and is implementing this recommendation. <i>See</i> San Bruno OII Ex. PG&E-1a at 13A-4 to 13A-5; San Bruno OII Ex. PG&E-1, Chapter 8.F.2.	None.	None.
4.B.17	PG&E should revise its control systems, including SCADA, to ensure that all relevant information, including redundant pressure sensors, is considered.	PG&E agrees that its SCADA system should make available all relevant information, and is implementing this recommendation through its Valve Automation Program. <i>See</i> San Bruno OII Ex. PG&E-1a at 13A-5. PG&E does not agree that redundant information is necessarily relevant. <i>See</i> San Bruno OII Ex. PG&E-1, Chapter 8.E.6.	PG&E should revise its control systems, including SCADA, to ensure that all relevant information, <del>including</del> <b>redundant pressure sensors</b> , is considered. <b><u>PG&amp;E is performing this through its Valve Automation Program.</u></b>	CPSD opposes PG&E’s edits. Even if PG&E implements a valve automation program, redundant pressure sensor data will be available and should be incorporated into control systems, including SCADA. Redundant information from alternate sources is important and relevant in emergency situations like the one that occurred at Milpitas Station when data from a primary (and only) source became unreliable.



Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.18	PG&E should install more pressure sensors and have them closely spaced and use the additional information to incorporate leak or rupture recognition algorithms in its SCADA system.	PG&E agrees with this recommendation and is currently performing a pilot program to test the feasibility of performing real time leak and line break detection using SCADA information. PG&E will review the results of that pilot before proposing the installation of more pressure sensors through a system-wide program. See San Bruno OII Ex. PG&E-1a at 13A-5.	<u>Depending on the results of the leak and line break detection pilot program, PG&amp;E should may</u> install more pressure sensors and have them closely spaced and use the additional information to incorporate leak or rupture recognition algorithms in its SCADA system.	CPSD opposes PG&E's edits. Clearly, the proposed remedy has merit because PG&E has already begun a pilot program. CPSD believes the goal, as stated in the proposed remedy, which is based on known and proven technology and basic math, is valid and necessary to create a safe transmission system.
4.B.19	PG&E should program its PLCs to recognize that negative pressure values are erroneous and require intervention to prevent valves from fully opening.	PG&E believes that the redundant pneumatic pressure limiting system (such as the system at the Milpitas Terminal) is the appropriate countermeasure in situations where regulator valves open unintentionally. PG&E does not believe that programming PLCs to disregard pressure information (even if it is likely invalid) is a prudent practice. See San Bruno OII Ex. PG&E-1a at 13A-5 to 13A-6; San Bruno OII Ex. PG&E-1, Chapters 8.C.2 & 8.E.8.	Oppose.	The proposed remedy is appropriate and necessary in light of the problems encountered by PG&E at the Milpitas Station. The goal is not to program the PLC to disregard pressure information, as PG&E states. The remedy is to program the PLC to see a negative pressure as reason to signal a problem in the system and to take the necessary steps to prevent the valves from fully opening, i.e. continue to operate valves to control pressures.

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.20	<p>PG&amp;E should replace the three pressure controllers which malfunctioned on September 9, 2010.</p>	<p>PG&amp;E is implementing enhanced functionality to the PLCs at Milpitas Terminal which will render the valve controllers unnecessary, at which point all valve controllers will be removed. See San Bruno OII Ex. PG&amp;E-1, Chapter 8.E.</p>	<p>PG&amp;E should <u>remove</u> <del>replace</del> the three pressure controllers which malfunctioned on September 9, 2010.</p>	<p>CPSD recognizes PG&amp;E's proposed changes to the Milpitas Terminal. However, as long as the three controllers are in the system, which could potentially be years, they pose a risk to safety. Therefore, the remedy should remain as stated unless PG&amp;E demonstrates that the controllers have already been removed from the system.</p>
4.B.21	<p>PG&amp;E should review its work clearance process to ensure that abnormal operating conditions that may arise during the course of work are anticipated and responses to those conditions are detailed. Additionally, PG&amp;E should create a "<del>method of</del> procedures"<sup>2</sup> covering the <del>transfer</del> <del>and</del> <del>loads</del> <del>equipment</del> from one Uninterruptable Power Supply to another. <del>This plan</del> <u>Each project Clearance should <del>cover</del> include</u> possible scenarios and contingency plans to mitigate any abnormal operating conditions that may arise.</p>	<p>PG&amp;E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&amp;E-1a, at 13A-6; San Bruno OII Ex. PG&amp;E-1, Chapters 8.F.1 &amp; 8.F.3.</p>	<p>PG&amp;E should review its work clearance process to ensure that abnormal operating conditions that may arise during the course of work are anticipated and responses to those conditions are detailed. Additionally, PG&amp;E should create a <b>procedure</b> "<del>method of procedures</del>" covering the <del>transfer and</del> commission of electrical <b>equipment loads</b> from one Uninterruptable Power Supply to another. <del>This plan</del> <b>Each project should <u>require</u> cover</b> possible scenarios and contingency plans to mitigate any abnormal operating conditions that may arise.</p>	<p>CPSD accepts PG&amp;E's edits with a minor revision in the last sentence to clarify that each project <u>Clearance should include</u>, not just require, possible scenarios and contingency plans . . .</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.22	<p>PG&amp;E should revisit its Work Clearance procedures and training to ensure that future work will not be authorized unless: all forms and fields therein are comprehensively and accurately populated, <u>and reviewed by a designated clearance supervisor.</u> <del>and, the gas technician has prepared the work clearance him/herself or has intimate knowledge of the work clearance.</del> Additionally, work should not commence until such time as the operator and technician have reviewed the work clearance and have confirmed that <u>understand the actions to take in the event an abnormal condition is encountered</u> <del>have intimate knowledge of the items detailed in the work clearance form.</del> <u>both have intimate knowledge of the items detailed in the work clearance form.</u> <del>both have intimate knowledge of the items detailed in the work clearance form.</del> Lastly, PG&amp;E must ensure that proper records showing the specific steps taken, when taken, are <u>maintained pursuant to its Record Retention Schedule</u> <del>retained.</del></p>	<p>PG&amp;E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&amp;E-1a, at 13A-6; San Bruno OII Ex. PG&amp;E-1, Chapters 8.F.1 &amp; 8.F.3.</p>	<p>PG&amp;E should revisit its Work Clearance procedures and training to ensure that future work will not be authorized unless: all <u>necessary</u> forms and fields therein are comprehensively and accurately populated, <u>and reviewed by a designated clearance supervisor.</u> <del>and, the gas technician has prepared the work clearance him/herself or has intimate knowledge of the work clearance.</del> Additionally, work should not commence until such time as the operator and technician have reviewed the work clearance and have confirmed that both <u>understand the actions to take in the event an abnormal condition is encountered</u> <del>have intimate knowledge of the items detailed in the work clearance form.</del> Lastly, PG&amp;E must ensure that proper records showing the specific steps taken, when taken, and by whom, are <u>maintained pursuant to its Record Retention Schedule</u> <del>retained.</del></p>	<p>CPSD accepts PG&amp;E's proposed edits with one exception. The insertion of the word "necessary" leaves room for subjective determination of what is and is not to be filled out, leading to incomplete forms, which is a problem that arose when the Milpitas work Clearance was filled out.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.23	<p>Training – PG&amp;E should provide training to Gas Service</p> <p>Representatives to recognize the differences between fires of low-pressure natural gas, high-pressure natural gas, gasoline fuel, or jet fuel.</p>	<p>PG&amp;E agrees that Gas Service Representatives should be provided training to identify hazards associated with natural gas infrastructure, and to make the system safe for the public and other employees. <i>See</i> San Bruno OII Ex. PG&amp;E-1a at 13A-7.</p>	<p>Training – PG&amp;E should provide Representatives to identify <u>hazards associated with PG&amp;E natural gas infrastructure and take action to make the condition safe for the public and employees. If assistance is needed and the situation is an imminent hazard, the GSR will remain on site until appropriate resources take control.</u> <del>to recognize the differences between fires of low-pressure natural gas; high-pressure natural gas; gasoline fuel, or jet fuel.</del></p>	<p>CPSD opposes PG&amp;E’s edits as they completely alter the purpose of the proposed remedy. PG&amp;E’s proposed language is already included in its emergency response training. When the San Bruno fire occurred, PG&amp;E employees could not agree on the source of the fire and some key employees were not able to distinguish between possible sources, including natural gas, gasoline or jet fuel. The confusion seemed to affect the quality and timing of PG&amp;E’s response. CPSD’s proposed training could easily be incorporated into PG&amp;E’s current emergency response training program.</p>
4.B.24	<p>Internal coordination – PG&amp;E should revise its procedures to outline each individual Dispatch and Control Room employee’s roles, responsibility, and lines of communication required to be made in the event of an emergency either during or outside normal working hours. This should include assigning specific geographical monitoring responsibilities for Control Room employees.</p>	<p>PG&amp;E agrees with and is implementing this recommendation. <i>See</i> San Bruno OII Ex. PG&amp;E-1a at 13A-7.</p>	<p>None.</p>	<p>None.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.25	<p>External coordination – CPSD agrees with NTSB recommendation P-11-2, which requests that PHMSA issue guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of control room operators immediately and directly notifying the 911 emergency call center(s) for the communities and jurisdiction in which those pipelines are located when a possible rupture of any pipeline is indicated. CPSD further recommends that prior to such PHMSA guidance PG&amp;E should revise their own procedures to allow for the immediate and direct notification of 911 emergency call centers when a possible pipeline rupture is indicated.</p>	<p>PG&amp;E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&amp;E-1a at 13A-7 and 13B (PG&amp;E's May 23, 2012 letter to the NTSB); San Bruno OII Ex. 1, Chapter 10.B.</p>	None.	None.

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.26	Decision making authority – PG&E should revise its emergency procedures to clarify emergency response responsibilities, especially in regards to authorizing valve shut offs. PG&E policies should not just delegate authority to act but also detail obligations to act.	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a at 13A-7 to 13A-8; San Bruno OII Ex. PG&E-1, Chapter 10.B.	None.	None.
4.B.27	RCV/ASV – PG&E should perform a study to provide Gas Control with a means of determining and isolating the location of a rupture remotely by installing RCVs, ASVs, and appropriately spaced pressure and flow transmitters on critical transmission line infrastructure and implement the results.	PG&E agrees with this recommendation and is currently implementing this through its Valve Automation program in PSEP and its Leak and Line Break Detection Pilot Program, described in CPSD 4.B.18. See San Bruno Ex. PG&E-1a at 13A-8; San Bruno Ex. PG&E-1, Chapter 8.F.2.	None.	None.

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.28	<p>Response time – PG&amp;E should review required response times in other utility service territories nationwide and devise appropriate response time requirements to ensure that its Emergency Plan results in a “prompt and effective” response to emergencies. PG&amp;E <del>shall</del> <u>will provide report</u> its analysis and conclusions to <del>the</del> <u>Commission for review</u> <u>CPSD</u>.</p>	<p>PG&amp;E agrees that it should benchmark its required response times against those of other utilities nationwide and devise appropriate response time requirements to ensure that its Emergency Plan results in a prompt and effective response. PG&amp;E is implementing this recommendation. <i>See</i> San Bruno OII Ex. PG&amp;E-1a at 13A-8; San Bruno OII Ex. PG&amp;E-1, Chapter 10.B.</p> <p>PG&amp;E requests additional information regarding the parameters of the reporting obligation recommended by CPSD.</p>	<p>Response time – PG&amp;E should review required response times in other utility service territories nationwide and devise appropriate response time requirements to ensure that its Emergency Plan results in a “prompt and effective” response to emergencies. PG&amp;E <del>shall</del> <u>will provide report</u> its analysis and conclusions to <u>CPSD</u>. <del>the Commission for review</del>.</p>	<p>CPSD accepts PG&amp;E’s proposed edits.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.29	<p>Emergency Plan Revision – Currently a maintenance supervisor annually reviews SCADA alarm responses and makes revisions as necessary. This process needs to be formalized to ensure a robust feedback loop such that new information is fully analyzed and necessary changes to PG&amp;E’s Emergency Plan and/or other procedures are implemented with a subsequent review of made changes to ensure they are adequate.</p>	<p>PG&amp;E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&amp;E-1a at 13A-8; San Bruno OII Ex. PG&amp;E-1, Chapter 10.B.</p>	None.	None.



Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.30	<p>Public Awareness – CPSD agrees with NTSB recommendation P-11-1, which requests PHMSA issue guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of sharing system-specific information, including pipe diameter, operating pressure, product transported, and potential impact radius, about their pipeline systems with the emergency response agencies of the communities and jurisdiction in which those pipelines are located. CPSD further recommends that prior to such PHMSA action PG&amp;E undertake a review of <a href="#">its gas transmission</a> public awareness and outreach programs to ensure that system-specific information is appropriately disseminated.</p>	<p>PG&amp;E agrees with this recommendation as it relates to its gas transmission public awareness and outreach programs, and is implementing this recommendation accordingly. See San Bruno OII Ex. PG&amp;E-1a at 13A-8 to 13A-9; San Bruno OII Ex. PG&amp;E-1, Chapter 10.B.</p>	<p>Public Awareness – CPSD agrees with NTSB recommendation P-11-1, which requests PHMSA issue guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of sharing system-specific information, including pipe diameter, operating pressure, product transported, and potential impact radius, about their pipeline systems with the emergency response agencies of the communities and jurisdiction in which those pipelines are located. CPSD further recommends that prior to such PHMSA action PG&amp;E undertake a review of <a href="#">its gas transmission</a> public awareness and outreach programs to ensure that system-specific information is appropriately disseminated.</p>	<p>CPSD accepts PG&amp;E's edit.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.31	<p>PG&amp;E’s <del>“Transformation”</del> <del>strategy and subsequent</del> <u>business strategies</u> and associated programs should expressly ensure that safety is a higher priority than shareholder returns and be designed to implement that priority, which may include reinvesting operational savings into infrastructure improvements.</p>	<p>This recommendation is moot with respect to Business Transformation, which has not been an active program since 2007. This recommendation is also moot with respect to similar programs in the future because PG&amp;E has already committed substantial shareholder investments to gas transmission improvements. There is no need to adopt an express requirement that any savings from operational efficiencies be reinvested into infrastructure improvements. See San Bruno OII Ex. PG&amp;E-1a at 13A-11.</p>	<p>Oppose.</p>	<p>CPSD considers this proposed remedy critical to ensuring that PG&amp;E prioritizes and finances safety in the best interest of its employees, customers and the public. Regardless of the title of the program or strategy, PG&amp;E should have a program to expressly ensure that safety is a higher priority than shareholder returns and it should be designed to implement that priority, which may include reinvestment of operational savings into infrastructure improvements. CPSD proposes an edit to its original remedy language to recognize the expired condition of PG&amp;E’s Business Transformation program.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.32	<p>PG&amp;E should target retained earnings towards safety improvements before providing dividends, especially if the ROE exceeds the level set in a GRC decision.</p>	<p>PG&amp;E disagrees with this recommendation. There is no basis for adopting a restriction on dividends based on prior earnings history, given that PG&amp;E earned less than the authorized rate of return in more than half of the years under consideration by Overland. Moreover, through the end of 2012, PG&amp;E's shareholders already spent more than \$900 million on gas transmission work without any rate recovery. PG&amp;E forecasts that it will spend an additional \$1.3 billion in shareholder-funded improvements to gas transmission safety over the next several years. See San Bruno OII Ex. PG&amp;E-1a at 13A-11 to 13A-12. Adopting a vaguely worded condition such as this would likely have an adverse effect on PG&amp;E's ability to access debt and equity markets on as favorable terms as other California utilities, potentially increasing its cost of capital.</p>	<p>Oppose.</p>	<p>CPSD considers this remedy essential to correcting PG&amp;E's past practices that led to a gas transmission system that contained numerous known and unknown safety threats. By opposing this proposed remedy, PG&amp;E is essentially saying that it will prioritize dividends over safety improvements. This approach leaves its employees, customers and the public at risk.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.33	<p>PG&amp;E's incentive plan, <del>and other employee awards programs</del>, should include <u>safety, selection criteria for improved safety performance and training and/or experience in the reliability and</u> <u>PG&amp;E should revise its STIP program to make safety performance 40% of the score used to determine the total award.</u> <u>PG&amp;E should require upper management to participate in annual training activities that enhance and expand their knowledge of safety, including exercises in which gas officers will have an opportunity to enhance their knowledge of incident command and will participate in an annual safety leadership workshop.</u> <del>safety aspects of gas transmission and distribution. PG&amp;E should ensure that all gas leaders upper management attend gas safety training.</del></p>	<p>PG&amp;E agrees with this recommendation. PG&amp;E has revised its STIP program to make safety performance 40% of the score used to determine the total award. We endorse the recommendations that our upper management participate in activities that enhance and expand their knowledge of safety. We are continuing to enhance our gas emergency response training as discussed in Chapter 10, section B of PG&amp;E's June 26, 2012 San Bruno OII testimony. All officers have an opportunity to participate in an annual drill, but we are now expanding the number and types of exercises that we will conduct throughout the year. We will be including exercises in which gas officers will have an opportunity to enhance their knowledge of incident command. All of our officers participate in an annual safety leadership workshop. Our officers also actively participate in industry organizations such as the American Gas Association, the Interstate Natural Gas Association of America, the Edison Electric Institute, the Nuclear Energy Institute, and the Institute of Nuclear Power Operations, where they learn about best industry practices to enhance safety. Several of our officers have</p>	<p><del>A component of a PG&amp;E gas employee PG&amp;E's incentive plan; and other employee awards programs; should include selection criteria for improved safety performance and training and/or experience in the reliability and safety aspects of gas transmission and distribution. PG&amp;E's annual training plan should <u>require</u> <del>ensure</del> that <u>all gas leaders upper management</u> attends gas safety training.</del></p>	<p>CPSD recommends incorporating PG&amp;E's proposed plans into this proposed remedy.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.34	PG&E should not hold joint Company and Corporation Board of Director meetings as the two entities should have different priorities.	PG&E disagrees with this recommendation because the interests of the Company and the Utility are aligned. The utility represents about 98% of PG&E Corporation's assets, making the interest of the two entities coextensive. See San Bruno OII Ex. PG&E-1a at 13A-13.	Oppose.	CPSD believes this remedy is essential to create a meeting environment that allows the Utility to appropriately address safety issues.
4.B.35	<u>PG&amp;E should focus on enhancing public safety and operational excellence as a core mission, and PG&amp;E should</u> examine whether the time and money it spends on public relations and political campaigns distracts it from <del>its</del> <u>this</u> core mission. <del>of providing safe and reliable gas service.</del>	This recommendation is unnecessary. PG&E is focusing on enhancing public safety and operational excellence. See Ex. PG&E-1a at 13A-13.	Oppose.	CPSD rephrased its proposed remedy to incorporate PG&E's statement.
4.B.36	PG&E should revisit its Pipeline 2020 program, and subsequent variations thereof, to ensure that its implementation is fully flushed out with specific goals, performance criteria, and identified funding sources.	This recommendation is unnecessary. The Pipeline 2020 program is no longer an active program, and has been superseded by our PSEP. The CPUC has reviewed the detailed information submitted about PSEP during its OIR proceeding. See San Bruno OII Ex. PG&E-1a at 13A-13.	Oppose.	CPSD agrees with deleting this remedy.

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.37	<p>PG&amp;E should examine internal communication processes to ensure that all employees <b>are knowledgeable on what is expected of them and their teams</b> understand their job responsibilities and priorities. <u>Goals of PG&amp;E gas employees should describe what is expected of them and their teams.</u></p>	<p>PG&amp;E agrees with this recommendation, and is implementing the recommendation through a thorough re-examination of a number of issues, including job responsibilities. The gas business, in particular, has clarified job responsibilities and priorities. <i>See</i> San Bruno OII Ex. PG&amp;E-1a at 13A-13.</p>	<p><b>Goals of PG&amp;E gas employees</b> should <b>describe</b> <del>examine internal communication processes to ensure that all employees are knowledgeable on</del> what is expected of them and their teams.</p>	<p>CPSD accepts PG&amp;E's additional language and incorporates part of PG&amp;E's response for a clearer remedy.</p>
4.B.38	<p>CPSD agrees with the following NTSB recommendations to PG&amp;E (CPSD-9, pages 130-131)</p>	<p>PG&amp;E agrees with and is implementing this recommendation to follow the NTSB recommendations. <i>See</i> San Bruno OII Ex. PG&amp;E-1a at 13A-13 to 13A-16; Exhibit 11 of PG&amp;E's March 25, 2013 Records OII Request for Official Notice (reflecting the latest status of these items with the NTSB).</p>	<p>None.</p>	<p>None.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.38.a	Revise your work clearance procedures to include requirements for identifying the likelihood and consequence of failure associated with the planned work and for developing contingency plans. (P-11-24)	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a at 13A-14 & Ch. 13B (PG&E's May 23, 2012 response to NTSB Recommendation P-11-24 (marked closed by NTSB on 3/14/13)); San Bruno OII Ex. PG&E-1, Chapters 8.F.1 and 8.F.3.	None.	None.
4.B.38.b.1	Establish a comprehensive emergency response procedure for responding to large-scale emergencies on transmission lines; the procedure should (1) identify a single person to assume command and designate specific duties for supervisory NTSB Pipeline Accident Report 131 control and data acquisition staff and all other potentially involved company employees	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a at 13A-14 & Ch. 13B (PG&E's May 23, 2012 response to NTSB Recommendation P-11-25 (marked closed by NTSB on 8/29/12)); San Bruno OII Ex. PG&E-1, Chapter 10.B.	None.	None.
4.B.38.b.2	Establish a comprehensive emergency response procedure for responding to large-scale emergencies on transmission lines; the procedure should include the development and use of trouble-shooting protocols and checklists	PG&E agrees with and is implementing this recommendation. The NTSB stated that this recommendation was closed on 8/29/12.	None.	None.

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.38.b.3	Establish a comprehensive emergency response procedure for responding to large-scale emergencies on transmission lines; the procedure should include a requirement for periodic tests and/or drills to demonstrate the procedure can be effectively implemented. (P-11-25)	PG&E agrees with and is implementing this recommendation. The NTSB stated that this recommendation was closed on 8/29/12.	None.	None.
4.B.38.c	Equip your supervisory control and data acquisition system with tools to assist in recognizing and pinpointing the location of leaks, including line breaks; such tools could include a real-time leak detection system and appropriately spaced flow and pressure transmitters along covered transmission lines. (P-11-26)	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a at 13A-14 & 13B (PG&E's May 23, 2012 response to NTSB Recommendation P-11-26); San Bruno OII Ex. PG&E-1, Chapter 8.F. We are expecting closure in 2014.	None.	None.
4.B.38.d	Expedite the installation of automatic shutoff valves and remote control valves on transmission lines in high consequence areas and in class 3 and 4 locations, and space them at intervals that consider the factors listed in Title 49 Code of Federal Regulations Part 192.935(c). (P-11-27)	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a at 13A-14 to 13-15 & 13B (PG&E's May 23, 2012 response to NTSB Recommendation P-11-27); San Bruno OII Ex. PG&E-1, Chapter 8.F.2. We are expecting closure in 2014.	None.	None.



Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.38.e	Revise your post-accident toxicological testing program to ensure that testing is timely and complete. (P-11-28)	PG&E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&E-1a at 13A-15 & 13B (PG&E's May 23, 2012 response to NTSB Recommendation P-11-28); San Bruno OII Ex. PG&E-1, Chapter 8.F.4. This recommendation was closed by the NTSB on 8/29/2012.	None.	None.

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.38.f	<p>Assess every aspect of your integrity management program, paying particular attention to the areas identified in this investigation, and implement a revised program that includes, at a minimum, (1) a revised risk model to reflect the PG&amp;E Company's actual recent experience data on leaks, failures, and incidents; (2) consideration of all defect and leak data for the life of each pipeline, including its construction, in risk analysis for similar or related segments to ensure that all applicable threats are adequately addressed; (3) a revised risk analysis methodology to ensure that assessment methods are selected for each pipeline segment that address all applicable integrity threats, with particular emphasis on design/material and construction threats; and (4) an improved self-assessment that adequately measures whether the program is effectively assessing and evaluating the integrity of each covered pipeline segment. (P-11-29)</p>	<p>PG&amp;E agrees with and is implementing this recommendation. PG&amp;E has embarked on a complete assessment of every aspect of our transmission integrity management program. We have hired a number of consultants recognized and respected in the industry as experts in integrity management to assist in an exhaustive review of our program's policies, procedures, and tools. This review will assure that our integrity management program meets all regulatory requirements, including improving its practices in areas highlighted in the NTSB report and CPSD/PHMSA 2011 Risk Assessment Audit. We expect closure by 2013. See San Bruno OII Ex. PG&amp;E-1c at 4.E; San Bruno OII Ex. PG&amp;E-1a at 13A-15 &amp; 13B (PG&amp;E's May 23, 2012 response to NTSB Recommendation P-11-29).</p>	None.	None.

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.B.38.g	<p>Conduct threat assessments using the revised risk analysis methodology incorporated in your integrity management program, as recommended in Safety Recommendation P-11-29, and report the results of those assessments to the Commission and the Pipeline and Hazardous Materials Safety Administration. (P-11-30)</p>	<p>PG&amp;E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&amp;E-1c Chapter 4.E; San Bruno OII Ex. PG&amp;E-1a at 13A-16 &amp; 13B (PG&amp;E's May 23, 2012 response to NTSB Recommendations P-11-29 and P-11-30). We expect closure in 2013.</p>	None.	None.
4.B.38.h	<p>Develop, and incorporate into your public awareness program, written performance measurements and guidelines for evaluating the plan and for continuous program improvement. (P-11-31)</p>	<p>PG&amp;E agrees with and is implementing this recommendation. See San Bruno OII Ex. PG&amp;E-1 Chapter 10.B; San Bruno OII Ex. PG&amp;E-1a at 13A-16 &amp; 13B (PG&amp;E's May 23, 2012 response to NTSB Recommendation P-11-31 (marked closed by NTSB 3/14/13)).</p>	None.	None.
4.C.1	<p>PG&amp;E's <u>gas transmission organization</u>- should be required to achieve at least a Level 3 information maturity score under the Generally Accepted Records Keeping Principles <u>within 3 years</u>. (CPSD Exhibit 6, Appendix 4)</p>	<p>PG&amp;E will undertake to achieve a Level 3 score for its gas transmission records management practices using the GARP principles as a benchmark. This is a significant undertaking that is likely to take upwards of three years to complete.</p>	<p>PG&amp;E's <u>gas transmission organization</u> should be required to achieve <del>at least</del> a Level 3 information maturity score under the Generally Accepted Records Keeping Principles <u>within 3 years</u>. (CPSD Exhibit 6, Appendix 4);</p>	CPSD agrees with PG&E's edits.

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.2	<p>PG&amp;E should be required to achieve International Organization Standard (ISO) certification against ISO 30300 for its Management System for Records (MSR) within five years of the ISO 30300 audit standard being finalized and published</p>	<p>PG&amp;E disagrees with this recommendation. ISO 30300, which will be a newly revised update to ISO 15489, is primarily used for organizations that have international demands on information governance, including EU directives and other cross-country requirements. Meeting ISO 30300 would be unnecessary and inappropriate for an organization that although large is located in one state of the United States.</p>	<p>Oppose.</p>	<p>CPSD rejects PG&amp;E's opposition to this proposal</p> <p>The International Standards Organization (ISO) has developed a new family of standards the ISO 30300 series, called "Management System for Records" -. The series is <b>not</b> a revision of ISO15489 -2001 known as "The Records Management Standard" which is still current. <del>At</del> <u>ISO 30300</u> was <i>not</i> developed only for companies that have international demands on information.</p> <p><del>ISO 30300</del> is applicable to all organizations, regardless of size, type or location allowing you to benefit immediately by saving time and costs by applying a best practice approach.</p> <p><u>ISO 30301:2011</u> can be implemented with other Management System Standards (MSS) and is especially useful in demonstrating compliance with the documentation and records requirements of other MSS.</p> <p><u>ISO 30301:2011</u> specifies requirements to be met by a management system for records</p>
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Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.3.a., b, and c.	<p>PG&amp;E should <del>develop a program to draft, review, approve and issue</del> a corporate policies and <del>policy guidance</del> standard that will:</p> <p>a. <del>establish guidance for all departments and divisions to assist them with drafting standard practices to implement the corporate policies;</del></p> <p>(a) Communicate recordkeeping expectations <u>that underlie its post-2010 Corporate Records and Information Management Policy and Standard</u> for all departments and divisions across PG&amp;E. These expectations should be <u>incorporated into procedures specific to</u></p>	<p>(a) PG&amp;E’s Information Management and Compliance Department has issued a <b>corporate records and information management policy and standard</b> that communicates recordkeeping expectations for all departments and divisions across PG&amp;E. This will be incorporated into procedures specific to meet the needs of every Line of Business, including gas transmission. It is impractical to draft standard practices that</p>	<p><del>PG&amp;E should develop a program to draft, review, approve and issue</del> a corporate policies and <del>policy guidance</del> <u>standard</u> that will:</p> <p><del>establish guidance for all departments and divisions to assist them with drafting standard practices to implement the corporate policies;</del> <b>(a) communicate recordkeeping expectations for all departments and divisions across PG&amp;E. This should be incorporated into procedures specific to meet the needs of every Line of Business. (b) The IM Compliance Department should design a governance controls catalog for recordkeeping practices to assess compliance</b></p>	<p>(MSR) in order to support an organization in the achievement of its mandate, mission, strategy and goals. It addresses the development and implementation of a records policy and objectives and provides the necessary information on measuring and monitoring your organizations performance.”<sup>2</sup></p> <p>CPSD accepts PG&amp;E’s proposed language with minor edits.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
	<p><u>every Line of Business.</u></p> <p>(b) <u>The IM Compliance Department should design a governance controls catalog for recordkeeping practices to assess compliance with the corporate policy and standard, consistency of behavior with official records being stored in approved systems of record, and timeliness of addressing records during their lifecycle.</u></p> <p>(c) <u>The retention schedule will support the policy by providing retention length for all identified official records to meet legal and regulatory mandates.</u></p> <p><del>establish guidance for all departments and divisions to assist them with drafting standard practices to implement the corporate policies;</del></p> <p><del>a. will incorporate an internal audit function to review standard practices for compliance, consistency and accuracy, and</del></p> <p><del>b. will incorporate a retention policy with a schedule that identifies all</del></p>	<p>would fit business processes as diverse as Gas Operations, Human Resources and Regulatory Affairs, for example.</p> <p>(b) The IM Compliance Department will be designing a governance controls catalog for recordkeeping practices to assess compliance with the corporate policy and standard, consistency of behavior with official records being stored in approved systems of record, and timeliness of addressing records during their lifecycle.</p> <p>(c) The retention schedule will support providing retention length for all identified official records to meet legal and regulatory mandates.</p>	<p><u>with the corporate policy and standard, consistency of behavior with official records being stored in approved systems of record, and timeliness of addressing records during their lifecycle. (c) the retention schedule will support the policy by providing retention length for all identified official records to meet legal and regulatory mandates.</u></p>	

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.4	<p><del>records within the business for which there is a retention period mandated by federal state laws; general orders and regulations including CPUC section 451 and its successors.</del></p> <p>PG&amp;E should develop and implement an education and training program <u>for the gas transmission organization in Records and Information Governance; records management principles and practices within an information governance framework; and information security.</u></p>	<p>4.C.9. Public Utilities Code section 451 is not a recordkeeping provision and contains no retention requirements. Therefore, PG&amp;E retention schedules will not list section 451 as a mandate for retention.</p> <p>PG&amp;E agrees that it should develop and implement Records and Information Management (RIM)<sup>3</sup> training for its gas transmission organization.</p>	<p>PG&amp;E should develop and implement an education and training program <b>for the gas transmission organization in Records and Information Governance; records Management (RIM) principles and practices; and information security.</b></p>	<p>CPSD accepts PG&amp;E's edits, but adds back the phrase "within an information governance framework, which is the basis of Generally Accepted Record Keeping Principles (GARP). (Refer to Remedy 4.C.1)</p>

<sup>3</sup> Records and Information Management (RIM) is the field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use, and disposition of records.

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.5	<p>PG&amp;E should develop and deploy the systems necessary to manage, maintain, access and preserve both records and documents (physical and electronic, in all formats and media types); their related data, metadata, and geographic location and geospatial content in accordance with legal and business mandated rules, utilizing technology that includes appropriate aids to help improve data and metadata quality, including but not limited to validation, verification and referential integrity.</p>	<p>PG&amp;E agrees with this recommendation, and is implementing this recommendation in its gas transmission business.</p>	<p>PG&amp;E should develop and deploy the <u>gas transmission</u> systems necessary to manage, maintain, access and preserve <del>both</del> records and <del>documents</del> (physical and electronic, in all formats and media types); their related data, metadata, and geographic location and geospatial content <u>to the extent appropriate</u> in accordance with <u>PG&amp;E's records retention schedule</u> <del>and business mandated rules</del>, utilizing technology that includes appropriate aids to help improve data and metadata quality, <del>including but not limited to validation, verification and referential integrity.</del></p>	<p>CPSD opposes PG&amp;E's addition of "gas transmission" as unnecessarily limiting. "Systems" is not limited to gas transmission in this case. Systems could also mean records/document / content management systems; Quality management systems at any level in the Corporation. CPSD opposes PG&amp;E's addition of "PG&amp;E's records retention schedule" as unnecessarily vague. Without seeing PG&amp;E's record retention schedule, CPSD is not convinced that it incorporates all of the requirements stated in the CPSD remedy.</p>



Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.6	<p>PG&amp;E should establish <del>a method of accountability for senior manager who are responsible for developing development and implementing implementation of a PG&amp;E governance strategy across gas transmission that should rest with PG&amp;E Senior Management and a method of accountability should be developed and implemented. information governance strategies across engineering processes and standard practices and should document the results at least annually.</del></p>	<p>PG&amp;E agrees with this recommendation and is implementing this recommendation in its gas transmission business.</p>	<p>PG&amp;E should establish a method of accountability for <b>developing and implementing senior manager who are responsible for developing and implementing</b> information governance strategies across <b>gas transmission engineering processes and standard practices</b> and should document the results at least <b>annually</b>.</p>	<p>CPSD agrees that this remedy should be rewritten for clarity and so proposes edits, which incorporate PG&amp;E's proposed language, to achieve that goal.</p>
4.C.7	<p>PG&amp;E should identify and document <del>annually</del> the employees responsible for <del>implementing the Records and Information Management program for gas transmission. of standard practices developed for records and engineering documents control. implementation of standard practices developed for records and engineering documents control.</del></p>	<p>PG&amp;E agrees with this recommendation and is implementing this recommendation in its gas transmission business.</p>	<p>PG&amp;E should identify and document <del>annually</del> the employees responsible for <b>implementing the Records and Information Management program for gas transmission of standard practices developed for records and engineering documents control.</b></p>	<p>CPSD agrees with PG&amp;E proposed edits.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.8	<p>PG&amp;E should develop consistent standard practices that include <u>gas transmission records management</u> <del>engineering document control</del> linked to corporate polices on information governance, <del>and engineering processes</del>.</p>	<p>PG&amp;E agrees with this recommendation and is implementing this recommendation in its gas transmission business.</p>	<p>PG&amp;E should develop consistent standard practices that include <u>gas transmission records management</u> <del>engineering document control</del> linked to corporate polices on information governance <del>and engineering processes</del>.</p>	<p>CPSD accepts PG&amp;E proposed edits.</p>
4.C.9	<p>PG&amp;E should implement mandated retention periods for all <del>relevant</del> records <u>relevant to gas transmission</u>.</p>	<p>PG&amp;E agrees with this recommendation and is implementing this recommendation in its gas transmission business.</p>	<p>PG&amp;E should implement mandated retention periods for all relevant records <u>in gas transmission</u>.</p>	<p>CPSD accepts PG&amp;E's edit with one minor modification.</p>
4.C.10	<p>PG&amp;E should ensure that each <u>gas transmission engineering process and corresponding standard conforms with Records and Information Management (RIM) policies for gas transmission</u>, <u>practice explains how the data, information, documents and records are handled, when and by whom, which laws, regulations and standards govern the records and where the records reside and are maintained, retained and disposed of</u>.</p>	<p>PG&amp;E agrees with this recommendation and is implementing this recommendation in its gas transmission business.</p>	<p>PG&amp;E should ensure that each <u>gas transmission engineering process and corresponding standard conforms with Records and Information Management (RIM) policies for gas transmission</u>, <u>practice explains how the data, information, documents and records are handled, when and by whom, which laws, regulations and standards govern the records and where the records reside and are maintained, retained and disposed of</u>.</p>	<p>CPSD accepts PG&amp;E proposed edits.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.11	<p>PG&amp;E should <u>include the treatment of active and inactive records in its Records and Information Management (RIM) Policy for gas transmission, develop a policy that describes how records (paper and electronic) that are inactive and accessed on an irregular basis for long periods of time will be stored and protected.</u></p>	<p>PG&amp;E agrees with this recommendation and is implementing this recommendation in its gas transmission business.</p>	<p>PG&amp;E should <u>include the treatment of active and inactive records in its Records and Information Management (RIM) Policy for gas transmission</u> develop a policy that describes how records (paper and electronic) that are inactive and accessed on an irregular basis for long periods of time will be stored and protected.</p>	<p>CPSD accepts PG&amp;E's edits.</p>
4.C.12	<p>PG&amp;E's records management processes should be <del>able to</del> managed and maintained <u>in accordance with the traceable, highly verifiable and accuracy complete standard, including retention</u> of physical and digital pipeline records for the 'life of the asset.'</p>	<p>PG&amp;E agrees with this recommendation and is implementing this recommendation in its gas transmission business.</p>	<p>PG&amp;E's <u>as-built records for gas transmission pipelines</u> management processes should be able to managed and maintained <u>in accordance with the traceable, highly verifiable and accuracy complete standard and aligned with PG&amp;E's record retention schedule</u> of physical and digital pipeline records for the 'life of the asset.'</p>	<p>CPSD accepts some of PG&amp;E's edits. It is important to retain the phrase "for the life of the asset" in this remedy, as that is the primary concern as this remedy relates to physical assets. CPSD does not want to limit the records to just "as-built" records because in the course of these investigations it has been difficult to discern exactly what records PG&amp;E includes in that classification.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.13	<p>The accuracy and completeness of data within gas transmission records should be traceable, verifiable and complete and when errors are discovered, the record should be corrected as soon as correct information is available and the reason(s) for each change should be documented and kept with the record. For example, <u>when discrepancies are discovered in GIS 3.0, GIS 3.0 should be updated as soon as the new information is available and reflected in the audit change log.</u></p>	<p>PG&amp;E agrees with this recommendation and is implementing this recommendation in its gas transmission business.</p>	<p>The accuracy and completeness of <del>data within</del> gas transmission <u>pipeline</u> records should be traceable, verifiable and complete and when <del>errors</del> <b>discrepancies</b> are discovered <u>in GIS 3.0</u>, <del>the</del> <del>record</del> <u>GIS 3.0</u> should be <del>corrected</del> <b>updated</b> as soon as <del>correct</del> <u>the new</u> information is available and <b>reflected in the audit change log</b> <del>the reason(s) for each change should be documented and kept with the record.</del></p>	<p>CPSD opposes PG&amp;E's edits on the basis that they limit PG&amp;E to addressing discrepancies within its GIS 3.0 system only. <u>However, CPSD agrees that the traceable, verifiable and complete principal should apply to PG&amp;E's GIS 3.0 system and the audit change log in addition to other PG&amp;E records.</u></p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.14	<p>PG&amp;E should create a standard format for the organization of a job file so that PG&amp;E personnel will know exactly where to look in a file folder, or set of file folders, to find each type of document associated with a job file. At a minimum, a job file will contain traceable, verifiable and complete records to support the MAOP of the pipeline segment installed; design documentation; purchase documentation showing the sources and specifications of equipment purchased; permits; environmental documents; field notes; design, construction and as-built drawings; x-ray reports and weld maps; pressure test records; correspondence with the CPUC; and inspection reports and correspondence.</p>	<p>PG&amp;E agrees with this recommendation, and is implementing this recommendation by creating an electronic format for job file organization.</p>	<p>PG&amp;E should create a standard <u>electronic</u> format for the organization of a job file so that PG&amp;E personnel will know exactly where to look <u>electronically</u> in a file folder, or set of file folders, to find each type of <del>document</del> <u>record</u> associated with a job file. <del>At a minimum, a</del> <u>An electronic</u> job file will contain traceable, verifiable and complete records to support the MAOP of the pipeline <u>features that were reviewed as part of the MAOP Validation project including where available; segment installed;</u> design documentation; purchase documentation showing the sources and specifications of equipment purchased; <del>permits; environmental documents; field notes; design, construction and as-built drawings; and x-ray reports and weld maps; pressure test records; correspondence with the CPUC; and inspection reports and</del> <u>correspondence.</u></p>	<p>CPSD opposes PG&amp;E's proposed edits as it ignores the presence of, and problems associated with Job Files that this proposed remedy addresses.</p> <p>PG&amp;E's Job file contents should not be limited to the features or job files that were reviewed as part of the MAOP Validation project, but should include all of the records listed that document the history of the pipeline, including any past, present or future records that support the MAOP of the pipeline or pipeline segment installed. This list of document types included in this remedy was developed from lists of job file contents provided by PG&amp;E.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.15	<p>Job file data, including drawings, for all parts of the active PG&amp;E gas transmission system should be immediately accessible from multiple locations. The development of a complete and accurate catalog of job files that can be searched immediately should be included within this objective.</p>	<p>PG&amp;E agrees with this recommendation, and is implementing this recommendation through Project Mariner.</p>	<p>Job file <del>data</del><u>records</u>, including drawings, for all parts of the active PG&amp;E gas transmission <u>pipelines</u> system should be <del>immediately</del> accessible from multiple locations. <del>The development of a complete and accurate catalog of "job files that can be searched immediately should be included within this objective.</del></p>	<p>CPSD opposes PG&amp;E's proposed edits as they ignore the issues that this remedy addresses and the timeliness element of it.</p> <p>By including a requirement for a catalog of job files, CPSD's intent is for PG&amp;E's staff to have immediate access to relevant information and not have to wait days or months for the information to be located.</p> <p>PG&amp;E also attempts to limit the scope of this exercise to gas transmission pipelines, rather than the full extent of the gas transmission system itself (e.g. terminals etc).</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.16.a, b., and c	<p>The information that was contained in PG&amp;E’s historic records and documents, and that has been identified as ‘missing or disposed of,’ and is necessary to be retained for the safe operation of the pipelines, pursuant to laws, regulations and standards and the PG&amp;E retention schedule, should be recovered. This recovery should include but not be limited to:</p> <ol style="list-style-type: none"> <li>a. updating and verification of data in engineering databases, such as the leak database, GIS and the integrity management model,</li> <li>b. updating plat sheets and other engineering drawings, and</li> <li>c. updating and organizing job files.</li> </ol>	<p>PG&amp;E agrees with this recommendation, and is implementing this recommendation through the MAOP validation effort. See PG&amp;E’s response to CPSD Recommendation 4.B.4.</p>	<p><u>In the course of the MAOP Validation Project, when PG&amp;E cannot locate records, PG&amp;E should apply conservative assumptions in its development of its Pipeline Features Lists for gas transmission pipelines.</u></p>	<p>CPSD opposes PG&amp;E’s proposed edits.</p> <p>Despite PG&amp;E claim that it agrees with CPSD’s proposal, PG&amp;E’s proposed edits completely ignore the inferred ‘duty of care’ element to recover such information via a range of options, rather than simply insert a conservative value. And, by PG&amp;E’s own admission, it is still searching for records and expects to find them. When PG&amp;E finds the missing records, the information contained therein should be appropriately integrated into the records system and in each instance PG&amp;E meets its expectation to find its missing records, should allow replacement of assumed conservative values with actual values.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.17	<p>PG&amp;E should document adoption of, and changes and amendments to policies and standard practices and the reasons for their adoption, amendment or cancellation. An audit trail of changes should be maintained, retained and preserved permanently, taking heed of potential changes in technology that may render documents unreadable in the future.</p>	<p>PG&amp;E agrees that it should document changes to gas transmission policies and standard practices. An explanation of changes should be maintained so long as the standard practice is in effect, or for a reasonable, defined period of time. Permanent retention of all documents is not practicable.</p>	<p>PG&amp;E should <u>maintain documentation of adoption of, and changes to gas transmission standards and procedures and amendments to policies and standard practices and the reasons for their adoption, amendment or cancellation. An audit trail of changes should be maintained, retain according to PG&amp;E's Records and Information Management (RIM) policies, standards and procedures and preserved permanently, taking heed of potential changes in technology that may render documents unreadable in the future.</u></p>	<p>CPSD opposes PG&amp;E's proposed edits as they specifically exclude the permanent preservation requirement defined in CPSD's proposed remedy.</p>



Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.18	<p>PG&amp;E will identify each section of pipe that has been salvaged and reused within the PG&amp;E gas transmission system. For each section of pipe identified, PG&amp;E will change the installed date in its GIS and its IM model to the date the pipe was originally installed in the PG&amp;E pipeline system.</p>	<p>PG&amp;E agrees with this recommendation, and will identify sections of pipe that have been salvaged and reused in other gas transmission pipelines through its MAOP Validation Effort.</p>	<p><u>Using the information collected in the MAOP Validation Effort</u>, PG&amp;E will <u>identify track</u> each section of pipe that has been salvaged and reused <u>on</u> the PG&amp;E gas transmission <u>pipelines</u> system. For each <u>those</u> sections of pipe identified, PG&amp;E will <u>change reflect both the current</u> installed date <u>and the original date of manufacture and installation, if available</u>, in its GIS and its IM model <u>to the date the pipe was originally installed in</u> <u>for</u> the PG&amp;E pipeline system.</p>	<p>CPSD opposes PG&amp;E's proposed edits. Although PG&amp;E claims to agree with CPSD's recommendation, the remedy should not be unnecessarily and arbitrarily limited to PG&amp;E's MAOP validation effort as the source of identifying documents.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.19	<p>PG&amp;E will create a system to track reused pipe installed within its operating gas transmission pipeline system and <u>identify pipeline characteristics along with where the pipe segments originated from, medium transported previously, and justification of the usage of it in its system.</u></p> <p><u>PG&amp;E</u> <del>and</del> will maintain these records so long as there are sections of reused pipe in the PG&amp;E operating gas transmission pipeline system.</p>	<p>PG&amp;E addresses this recommendation in response to CPSD Recommendation 4.C.18.</p>	<p>Oppose as duplicative of CPSD 4.C.18.</p>	<p>CPSD opposes PG&amp;E’s opposition to this proposal as it is not duplicative of proposal 4.C.18.</p> <p>Proposal 4.C.18 requires PG&amp;E to identify each section of salvaged and reused pipe in its system and to correct its GIS records.</p> <p>This proposal (4.C.19) requires PG&amp;E to create and maintain a system that tracks all reused pipe in PG&amp;E’s operating gas system and tasks PG&amp;E with the specific mandate to maintain all records relating to the reused pipe for as long as reused pipe remains in place.</p>
4.C.20	<p>PG&amp;E should implement the recommendations included in the final Pricewaterhouse Coopers (PwC) audit report. (TURN Exhibit 16, Appendix B)</p>	<p>PG&amp;E’s assessment of each of the 59 recommendations is located in Records OII Ex. PG&amp;E-61, Chapter 1D, Attachment 1D.</p>	<p>Oppose as addressed in Ex. PG&amp;E-61, Chapter 1D, Attachment 1D.</p>	<p>The CPSD recommended remedy should stand as proposed <u>because Ex PG&amp;E61, Chapter 1D, Attachment 1D does not commit that PG&amp;E will implement all of PwC recommendations. In fact, PG&amp;E that Exhibit merely states that many PwC recommendations are under review or under consideration.</u></p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.21	<p>Using independent auditors, CPSD will undertake audits of PG&amp;E’s recordkeeping practices within the Gas Transmission Division on an annual basis for a minimum of ten years after the final decision is issued in I.11-02-016.</p>	<p>PG&amp;E agrees that CPSD should audit PG&amp;E’s recordkeeping practices, and supports the use of independent auditors retained by CPSD. However, auditing PG&amp;E’s practices annually is not practical or useful. The steps necessary for audits to be successful (define audit criteria, conduct an audit, discuss findings with PG&amp;E, issue report, PG&amp;E to implement corrective actions in response to findings, allow time for implementation) will take longer than one year.</p> <p>Also, the Government Auditing Standards issued by the U.S. Government Accountability Office contain appropriate protocols for conducting recordkeeping audits of the kind contemplated by CPSD’s proposal. PG&amp;E expects CPSD to define the scope and criteria for its audits at the outset, and to follow the standards to ensure high quality audits.</p>	<p>Using independent auditors, <u>and applying the Government Auditing Standards issued by the U.S. Government Accountability Office</u>, CPSD will undertake audits of PG&amp;E’s recordkeeping practices within the Gas Transmission Division <del>on an annual basis</del> for a minimum of ten years after the final decision is issued in I.11-02-016.</p>	<p>Oppose. Although PG&amp;E claims it agrees with CPSD’s proposal, CPSD never proposed GAO standards. Moreover, CPSD rejects PG&amp;E’s proposed changes on the grounds that:</p> <p>d) There is no reason to include an auditing standard <u>proposed by PG&amp;E</u> in a remedy that is designed to determine whether PG&amp;E has complied with the Commission’s required remedies.</p> <p>e) Auditing is part of the Commission’s legal jurisdiction. As such, CPSD will use its own auditing standard(s) designed for the purpose of recordkeeping and safety audits.</p> <p>f) CPSD will not limit the pool of available auditors by restricting itself to the criteria set out in the Government Auditing Standard.</p> <p>CPSD reserves the right to appoint auditors and subject matter experts at its sole discretion, to undertake the proposed safety and recordkeeping audits.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.C.22	<p>PG&amp;E will correct deficiencies in recordkeeping discovered as a result of each CPSD audit and will report to CPSD when such deficiencies have been corrected.</p>	<p>The Government Auditing Standards provide an opportunity to discuss the draft findings with PG&amp;E prior to issuance of its report, to ensure a common understanding of the alleged deficiency, and develop an agreed-upon corrective action plan. To ensure consistency with these government-sanctioned standards, PG&amp;E expects CPSD to provide an opportunity to discuss the draft findings with PG&amp;E prior to issuance of its report, to ensure a common understanding of the alleged deficiency, and needed corrections.</p>	<p>PG&amp;E will correct deficiencies in recordkeeping discovered as a result of each CPSD audit and will report to CPSD when such deficiencies have been corrected.</p> <p><b><u>Consistent with the Government Auditing Standards issued by the U.S. Government Accountability Office, CPSD will review the draft findings and proposed corrective action plans with PG&amp;E prior to issuance of its audit report.</u></b></p>	<p>Oppose. Although PG&amp;E claims it agrees with CPSD’s proposal, CPSD never proposed GAO standards. Moreover, CPSD rejects PG&amp;E’s proposed changes on the grounds that:</p> <p>g) There is no reason to include an auditing standard <i>proposed by PG&amp;E</i> in a remedy that is designed to determine whether PG&amp;E has complied with the Commission’s required remedies.</p> <p>h) Auditing is part of the Commission’s legal jurisdiction. As such, CPSD will use its own auditing standard(s) designed for the purpose of recordkeeping and safety audits.</p> <p>i) CPSD will not limit pool of available auditors by restricting itself to the criteria set out in the Government Auditing Standard.</p> <p>CPSD reserves the right to appoint auditors and subject matter experts at its sole discretion, to undertake the proposed safety and recordkeeping audits.</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.D.1	<p>Systems: Utilize industry-<u>standard</u> <del>approved and accepted</del> software for electronic storage of class location information.</p> <p>o Devise a <del>system</del> <u>process</u> to capture <del>and document</del> new PG&amp;E service hook-ups especially in proximity to transmission lines and incorporate into the <u>class location analysis</u>.</p>	<p>PG&amp;E agrees with this recommendation to utilize industry-standard software for electronic storage of class location information. PG&amp;E will implement this recommendation via an integrated GIS and gas transmission asset management system that will enable the use of software to perform class location calculations. See Class OII Ex. PG&amp;E-1 at A-1 and Chapter 1, Section B.2.</p> <p>PG&amp;E agrees with the recommendation to devise a new system to document new service hookups in proximity to transmission lines. We are studying how to best accomplish this goal. We have created a pilot project to identify new gas and electric meters, new building permits, new assessor parcel numbers, and increased county tax assessments (indicating a recent improvement on the property) for parcels located within 1,000 feet of our pipelines and thereby identify potential class location changes. See Class OII Exhibit PG&amp;E-1, Chapter 1, Section 2.</p>	<p>Systems: Utilize industry-<del>approved and accepted</del> <u>standard</u> software for electronic storage of class location information.</p> <p>o Devise a <del>system</del> <u>process</u> to capture <del>and document</del> new PG&amp;E service hook-ups especially in proximity to transmission lines and incorporate into the <u>class location analysis</u>.</p>	CPSD accepts PG&E's edits.

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.D.2	<p>Procedures: Update procedures, <u>patrolling process instructions</u>, and related OQ training. <del>TD-4412-07-6-2(4)</del> to require written confirmation to <u>Patrol Supervisors</u> <del>patrollers</del> that follow up has been performed on all new construction that the patroller has previously observed and documented. <del>The same change should be made to Attachment 7 Item 5 of TD-4412-07, Aerial Patrolling Process Instructions. This requirement should also be included in the OQ training for the task.</del></p>	<p>PG&amp;E agrees with the essence of CPSD’s recommendation. We are in the process of revising our patrol standard to require that field employees and their supervisors investigate all conditions identified on aerial patrol reports to ensure all patrol observations are properly addressed. See Class OII Ex. PG&amp;E-1 at 1-9 n.24. In addition, we plan to use the Company’s SAP software to schedule all pipeline patrols and necessary corrective actions. This will enable the Pipeline Patrol Process Owner to monitor the completion of scheduled patrols and any necessary follow up actions.</p>	<p>Procedures: Update procedures <del>TD-4412-07-6-2(4)</del> to require written confirmation to <b>Patrol Supervisors</b> <del>patrollers</del> that follow up has been performed on all new construction that the patroller has previously observed and documented. <del>The same change should be made to Attachment 7 Item 5 of TD-4412-07, Aerial Patrolling Process Instructions. This requirement should also be included in the OQ training for the task.</del></p>	<p>CPSD agrees with some of PG&amp;E’s edits and rejects others. The remedy is revised for clarity.</p>
4.D.3	<p>Procedure 6.3 (3) should be rewritten as “List all new observations regardless if it is believed that the ground crew has already investigated the observation.”</p>	<p>PG&amp;E agrees with and is implementing this recommendation. See Class OII Ex. PG&amp;E-1 at 1-8, A-2.</p>	<p>None.</p>	<p>None.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.D.4	TD-4412-07 section 6.1 (2) should include specific language for the pilot to recommend increased patrolling to the Aerial Patrol Program Manager.	PG&E agrees with this recommendation, and is implementing this recommendation by revising our patrol procedure to encourage aerial patrol pilots to recommend increased patrolling of specific segments based on observed ground activity. The Patrol Process Owner will review, validate, and incorporate the pilots' recommendations into future patrols as appropriate. <i>See</i> Class OII Ex. PG&E-1, at 1-9 to 1-12. We will also use information from our Public Awareness and Damage Prevention Programs to increase patrol frequencies as appropriate.	None.	None.

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.D.5	Ensure that the Report of New Construction forms are completed.	PG&E agrees with and is implementing this recommendation and has trained field supervisors on the updated class location and patrol procedures, including the supervisors' responsibility to complete the "Report of New Construction Along Pipeline" Form. Additionally, the Maintenance & Construction organization's Manager of Gas Compliance will be responsible for performing regular compliance documentation reviews of class location analysis and patrolling, including reviewing "Report of New Construction Along Pipeline" forms to ensure they are properly completed. <i>See</i> Class OII Ex. PG&E-1 Chapter 1.D-1.E.	None.	None.
4.D.6	Increase the duties of the Aerial Patrol Program Manager (APPM) to include oversight and review of the quality and accuracy of patrol reports.	PG&E agrees with and is implementing this recommendation. <i>See</i> Class OII Ex. PG&E-1 at A-3.	None.	None.
4.D.7	Create a detailed procedures manual containing the APPM's duties to ensure quality control of aerial patrol responsibilities.	PG&E agrees with and is implementing this recommendation. <i>See</i> Class OII Ex. PG&E-1 at A-3.	None.	None.



Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.D.8	Training: Utilize varied <del>multiple</del> <b>Generate</b> training exams for patrolling.	PG&E agrees with this recommendation, and is implementing this recommendation by evaluating a specialized training program and testing regiment utilizing varied training exams for patrolling personnel. See Class OII Ex. PG&E-1 at 1-12, A-3.	Training: Utilize varied <del>multiple</del> <b>Generate</b> training exams for patrolling.	CPSD agrees with PG&E's proposed edits.

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.D.9	<p>The new training exams for patrolling should include questions with greater detail and complexity than the current exam and shall use aerial photos as <u>exam exhibits where pilots indicate which structures are approximately 660 feet from the right of way and would require reporting.</u></p> <p><u>Training materials and associated tests should be reviewed and updated to enhance employee competency, utilize aerial photos and other aids, and reflect field conditions to approximate buildings' key distances from lines.</u></p> <p><del>Patrolling exams submitted to CPUC staff contained fairly simple questions which require only a rudimentary understanding of class locations.</del></p>	<p>PG&amp;E agrees with this recommendation, and is implementing this recommendation by evaluating a specialized training program and testing regiment utilizing enhanced training exams for patrolling personnel. See Class OII Ex. PG&amp;E-1 at 1-12, A-3.</p>	<p><del>The new training exams for patrolling should include questions with greater detail and complexity than the current exam.</del></p> <p><u>Training materials and associated tests will be reviewed and updated to enhance employee competency, utilize aerial photos and other aids, and reflect field conditions to approximate buildings' key distances from lines.</u></p>	<p>CPSD accepts PG&amp;E's additional language but rejects the proposed deletion, which is the substance of the entire proposed remedy.</p> <p>Patrolling exams submitted to CPUC staff contained fairly simple questions which require only a rudimentary understanding of class locations. The exams should be improved with greater detail and complexity for productive training.</p> <p>Because PG&amp;E agrees with this recommendation and believes San Bruno's proposed remedy V.D.2.g is duplicative, CPSD adds specific language from V.D.2.g to the proposed remedy. The phrase added is:</p> <p>"and shall use aerial photos as exam exhibits where pilots indicate which structures are approximately 660 feet from the right of way and would require reporting"</p>

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.D.10	<p>Improve Aerial Patrol Pilot training.</p> <p>PG&amp;E should consider pilot training using aerial photographs taken at an altitude of 750 feet, which replicates what the pilots see on patrol, and include a number of structures both within and outside of the 660 foot standard. Use the photos as exam exhibits where the pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training should also include a <del>WDA</del> <u>Well-Defined Area (WDA)</u> in the exhibit as well. <del>PG&amp;E should also consider using in its training photographs, video or other aids to reflect expected views to be seen from typical patrol altitudes.</del></p>	<p>PG&amp;E agrees with and is implementing this recommendation by evaluating a specialized training program and testing regiment utilizing enhanced training exams for patrolling personnel. See Class OII Ex. PG&amp;E-1 at 1-12, A-3. This training may test a patroller's estimate of distances between structures and a pipeline. <i>Id.</i> at 1-12.</p>	<p>Improve Aerial Patrol Pilot training;</p> <p>PG&amp;E should consider pilot training using <del>aerial</del> photographs, <b>video or other aids to reflect expected views to be seen from typical patrol altitudes. Include structure examples taken at an altitude of 750 feet, which replicates what the pilots see on patrol, and include a number of structures both within and outside of the 660 foot standard.</b> Use the photos as exam exhibits where the pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training should also include a <b>Well-Defined Area (WDA)</b> in the exhibit.</p>	<p>CPSD accepts PG&amp;E's proposed additions, but rejects the deletion of taking aerial photographs at 750 feet. The remedy recommends that PG&amp;E consider this alternative aerial photograph, which replicates what the pilots see on patrol. PG&amp;E employees may gain a better understanding of the structures and PG&amp;E's system by using this additional source of information.</p>
4.D.11	<p><del>Audits</del> <del>for</del> <u>the</u> patrolling process should include a comparison of new construction observations with new gas/electrical hook ups near the line to ensure that new construction has not been missed.</p>	<p>PG&amp;E agrees with and is implementing this recommendation through a pilot program to evaluate the comparison of new construction indications with patrol observations. See Class OII Ex. PG&amp;E-1 at 1-6.</p>	<p>Audits: Audits for <u>the</u> patrolling process should include a comparison of new construction observations with new gas/electrical hook ups near the line to ensure that new construction has not been missed.</p>	<p>CPSD agrees with PG&amp;E's proposed edits.</p>

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
4.D.12	A new item "All Sections of Document Completed" should be added to the audit checklist when reviewing Reports of New Construction.	PG&E agrees with and is implementing this recommendation. The Manager of Gas Compliance will be responsible for performing regular compliance reviews of class location analysis and patrolling records, including new construction forms. See Class OII Ex. PG&E-1 at A-4.	None.	None.
4.D.13	Audits should make sure that copies of completed Reports of New Construction are being provided to local supervisors as required by standard procedure TD-4127P-01 section 3.8 (5).	PG&E agrees with and is implementing this recommendation. See Class OII Ex. PG&E-1 at A-4.	None.	None.

Brief Reference	Revised Party Proposal	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
<b>TURN's Proposals</b>				
1	<p>PG&amp;E should be required to track in a centralized database where it has placed reused or otherwise reconditioned pipe in its system. For each such segment, the database should show the date of manufacture of the segment, if known. If this date is unknown, the database should so indicate, to ensure that the segment is given appropriate attention in integrity management. The database should include a link to reliable and readily accessible documentation showing, for each re-used or otherwise reconditioned pipe segment, that all steps necessary to prepare the segment for installation were performed and inspected. If such documentation is unavailable, the centralized documentation should so indicate so that the segment will be given appropriate attention in integrity management.</p>	<p>See PG&amp;E's response to CPSD Recommendations 4.C.18 and 4.C.19.</p>	<p>Oppose as duplicative of CPSD 4.C.18 and 4.C.19.</p>	

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
2A	<p>As required by Ordering Paragraph 1 of D.11-06-017, PG&amp;E shall fully document any engineering-based assumptions it makes for data that is missing, incomplete or unreliable. Such assumptions must be clearly identified and justified and, where ambiguities arise, the assumption allowing the greatest safety margin must be adopted.</p>	<p>Object. See PG&amp;E's response to CPSD Recommendation 4.B.4.</p>	<p>Oppose as duplicative of CPSD 4.B.4.</p>	
2B	<p>PG&amp;E shall pay for the costs of a qualified independent auditor, retained by the Commission, to:</p> <p>(a) audit PG&amp;E's MAOP Validation results for accuracy, reliability, and compliance with the requirements of D.11-06-017, and (b) to prepare a full report to the Commission and available to interested parties of its conclusions and recommendations for remediation of any observed deficiencies.</p>	<p>See PG&amp;E's response to San Bruno Recommendation V.C.</p>	<p>Oppose as duplicative of San Bruno V.C.</p>	

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
3	PG&E shall pay for the costs of a qualified independent auditor, retained by the Commission, to (a) examine the new systems developed in Project Mariner, including observations of the systems in operation, to ensure that they result in accurate, reliable, and accessible pipeline data that meets all safety operational needs, and (b) to prepare a report to the Commission and available to interested parties of its conclusions and recommendations for remediation of any observed deficiencies.	Object. See PG&E's response to San Bruno Recommendation V.C.	Oppose as duplicative of San Bruno V.C.	
<i>San Bruno's Proposals</i>				
V.B.	San Bruno Requests that Commission Establish the California Pipeline Safety Trust	Object for the reasons discussed in Section V.B.2 of PG&E's brief.	Oppose.	

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
V.C.	Appoint an Independent Monitor to Oversee PG&E Compliance with the PSEP and Remedies Imposed in the Proceeding.	PG&E disagrees with this recommendation. PG&E agrees that CPSD’s resources are limited and that adding substantial management and oversight obligations to its existing duties could outstrip available resources. To address that concern, PG&E agrees with CPSD’s suggestion that the Commission order a portion of any penalty imposed against PG&E be used to retain consultants to assist CPSD in managing and overseeing PG&E’s implementation of its operational commitments and continuing PSEP activities. Such consultants could be identified, hired and directed by CPSD, but funded by PG&E.	Oppose.	
V. D.1	Establishment of the Peninsula Emergency Response Fund	Object for the reasons discussed in Section V.B.2 of PG&E’s brief.	Oppose.	
V. D.2.a	Provide training to Gas Service Representatives to recognize the differences between fires of low-pressure natural gas, high-pressure natural gas, gasoline fire, or jet fuel.	See PG&E’s response to CPSD recommendation 4.B.23.	Oppose as duplicative of CPSD 4.B.23.	



Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
V. D.2.b	<p>Provide training to its Gas Service Representatives (GSRs) and Gas Control Operators to ensure that they coordinate effectively with emergency responders, follow PG&amp;E’s own internal procedures when responding to emergencies, and each GSR Gas Control Operators shall be trained and able to manually shut off valves. PG&amp;E shall also audit its GSRs and Gas Control Operators annually to ensure that they are properly trained.</p>	<p>PG&amp;E agrees with the recommendation that its Gas Service Representatives and Gas Control Operators should be trained to coordinate with emergency responders and follow internal emergency plans. PG&amp;E further agrees that gas service representatives should, at the direction of gas control operators, be trained and able to manually shut off emergency shutdown zone valves. PG&amp;E agrees that its GSRs and Gas Control Operators should be audited to ensure that they are properly trained. However, annual auditing of every employee is impractical and unnecessary.</p>	<p>Provide training to its Gas Service Representatives (GSRs) and Gas Control Operators to ensure that they coordinate effectively with emergency responders, follow PG&amp;E’s own internal procedures when responding to emergencies, and each GSR <u>under Gas Control Operators’ <b>direction should</b></u> <del>shall</del> be trained and able to manually shut off <u>emergency shutdown zone valves</u>. PG&amp;E <u>should</u> <del>shall</del> also audit its GSRs and Gas Control Operators <del>annually</del> to ensure <del>that</del> they are properly trained.</p>	
V. D.2.c	<p>Develop and deliver, to all staff, records management education and training sessions to provide records management skills and give staff and understanding of the responsibilities and tasks that relate to managing records. These sessions shall be updated and repeated at regular intervals at least twice annually to include amendments to the records management program and for the benefit of new staff.</p>	<p>See PG&amp;E’s response to CPSD Recommendation 4.C.4.</p>	<p>Oppose as duplicative of CPSD 4.C.4.</p>	

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
V. D.2.d	Develop specific and additional training for those staff involved directly in the management of retention and disposition of records.	See PG&E's response to CPSD Recommendation 4.C.4.	Oppose as duplicative of CPSD 4.C.4.	
V. D.2.e	Develop specific and additional training focusing on all of the widely used recordkeeping systems such as SAP, GEMS, SharePoint, IGIS, ECTS. Employees and PG&E contractors who have duties using these programs shall be required to attend these training sessions.	See PG&E's response to San Bruno Recommendation V.D.2.c and CPSD Recommendation 4.C.4.	Oppose as duplicative of San Bruno V.D.2.c and CPSD 4.C.4..	
V. D.2.f	Improved Aerial Patrol Pilot training by using aerial photographs taken at an altitude of 750 feet, which replicates what the pilots see on patrol, and include a number of structures both within and outside of the 660 foot standard. Training shall also include a Well-Defined Area ("WDA") in the exhibit as well.	See PG&E's Response to CPSD Recommendation 4.D.10.	Oppose as duplicative of CPSD 4.D.10.	

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
V. D.2.g	Generate multiple training exams for patrolling to ensure that the trainee does not see the same exam upon subsequent requalification. New training exams shall include questions with greater detail and complexity than the current exam and shall use aerial photos as exam exhibits where pilots indicate which structures are approximately 660 feet from the right of way and would require reporting.	See PG&E's response to CPSD Recommendations 4.D.8 and 4.D.9.	Oppose as duplicative of CPSD 4.D.8 and 4.D.9.	
V.D.3	Require PG&E to Formalize its Emergency Response and Disclosure Obligations with Every City, County, and Fire District in its Service Territory.	Object for the reasons discussed in Section V.B.3 of PG&E's brief.	Oppose.	
V.E	Direct PG&E to Undertake an Automated Safety Valve ("ASV") Pilot Program Throughout its Service Territory	PG&E objects to this recommendation, as automated safety valve implementation is addressed in the Pipeline Safety Enhancement Plan in R.11-02-019.	Oppose as addressed in R.11-02-019.	

Brief Reference	<i>Revised Party Proposal</i>	PG&E Response and Reasoning	PG&E Proposed Edits	CPSD Comments re PG&E Response and Edits
V.F	Modification of PG&E Long-Term and Short-Term Incentive Program Calculations to incorporate proper priorities	<p>This recommendation is duplicative of CPSD Recommendation 4.B.33. As stated in response to CPSD Recommendation 4.B.33, PG&amp;E has revised its STIP program to make safety performance 40% of the score used to determine the total award. It is not appropriate to modify LTIP in the manner San Bruno recommends because LTIP is a different kind of compensation program, designed specifically to focus on comparative long-term market performance. PG&amp;E's shareholders pay for LTIP in its entirety.</p>	Oppose as duplicative of CPSD 4.B.33.	

**CERTIFICATE OF SERVICE**

I hereby certify that I have on this date served a copy of **REPLY BRIEF OF THE CONSUMER PROTECTION AND SAFETY DIVISION ON FINES AND REMEDIES** to all known parties by either United States mail or electronic mail, to each party named on the official service list in **I.12-01-007, I.11-02-016 and I.11-11-009.**

I also hand-delivered a hard copy to the assigned Administrative Law Judge's mail slot.

Executed on **June 5, 2013** at San Francisco, California.

/s/ MARGARITA LEZCANO

\_\_\_\_\_  
Margarita Lezcano



**CALIFORNIA PUBLIC UTILITIES COMMISSION**  
**Service Lists**

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**PROCEEDING: I1201007 - CPUC - PG&E - OII IN**  
**FILER: CPUC**  
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## **APPENDIX B**

**APPENDIX B**  
**CPSD's Final Recommended Remedies**

- 4.A.1 PG&E should pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD, for the cost of verification audits and inspections to ensure compliance with the other remedies. PG&E should also pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD in the near term to provide needed technical expertise as PG&E proceeds with its hydrostatic testing program, in order to provide a high level of technical oversight and to assure the opportunity for legacy piping characterization though sampling is not lost in the rush to execute the program.
- 4.A.2 PG&E should reimburse CPUC/CPSD for the cost of conducting all three of the present investigations.
- 4.A.3 RE: Penalty - Refer to CPSD Response Brief
- 4.B.1 PG&E's pipeline construction standards should meet or exceed all legal requirements and industry standards for identifying and correcting pipe deficiencies and strength testing.
- 4.B.2 PG&E should revise its GTRIMPRMP to robustly meet the data gathering requirements of 49 CFR Part 192.917(b) and ASME-B31.8S, and to do so without limiting its data-gathering to only that data which is "readily available, verifiable, or easily obtained" by PG&E.
- 4.B.3 PG&E should perform a complete company-wide record search to populate its GIS database with all identified gas transmission pipeline leak history, including closed leak, information not already transferred to the GIS.
- 4.B.4 PG&E should revise its Integrity Management training to ensure that missing data is represented by conservative assumptions, and that those assumptions are supportable, per the requirements of ASME B31.8S. As required by Ordering Paragraph 1 of D.11-06-017, PG&E should be required to fully document any engineering-based assumption it makes for data that is missing, incomplete or unreliable. Such

assumptions must be clearly identified and justified and, where ambiguities arise, the assumption allowing the greatest safety margin must be adopted.

- 4.B.5 PG&E should revise its GTRIMPRMP and related training, to ensure robust data verification processes are enacted and implemented.
- 4.B.6 PG&E should revise its threat identification and assessment procedures and training, including its Baseline Assessment Plans, to fully incorporate all relevant data for both covered and non-covered segments, including but not limited to potential manufacturing and construction threats, and leak data.
- 4.B.7 PG&E should re-label its system MAOP nomenclature in accordance with 49 CFR Part 192.
- 4.B.8 PG&E should permanently cease the self-suspended practice of regularly increasing pipeline pressure up to a “system MAOP” to eliminate the need to consider manufacturing and construction threats. In addition, PG&E should analyze all segments that were subjected to the planned pressure increases to determine the risk of failure from manufacturing threats under 49 C.F.R. Part 192.917(e)(3), and perform further integrity assessments as warranted. Each assessment should be documented and retained for the life of the facility.
- 4.B.9 PG&E should revise its threat identification and assessment procedures and training to ensure that HCA pipeline segments that have had their MAOP increased are prioritized for a suitable assessment method (e.g., hydro-testing), per the requirements of 49 CFR Part 192.917(e)(3)-(4).
- 4.B.10 PG&E should revise its threat identification and assessment procedures and training to ensure that cyclic fatigue and other loading conditions are incorporated into their segment specific threat assessments and risk ranking algorithm, and that threats that can be exacerbated by cyclic fatigue are assumed to exist per the requirements of 49 CFR Part 192.917(b).
- 4.B.11 PG&E should revise its risk ranking algorithm to ensure that PG&E’s weighting factors in its risk ranking algorithm more accurately reflect PG&E’s actual operating experience along with generally reflected industry experience.

- 4.B.12 PG&E should revise its threat identification and assessment procedures and training to ensure that PG&E's weighing of factors in its risk ranking algorithm and the input of data into that algorithm corrects the various systemic issues identified in the NTSB report and the CPSD/PHMSA 2011 Risk Assessment Audit.
- 4.B.13 PG&E should revise its threat identification and assessment procedures and training to ensure that the proper assessment method is being used to address a pipeline's actual and potential threats.
- 4.B.14 PG&E should make revisions to its equipment retention policy to ensure that integrity of equipment, wiring and documentation and identification of electrical components does not deteriorate to unsafe conditions such as occurred at the Milpitas Terminal, described herein. If PG&E does not have an applicable equipment retention policy then it should formulate one.
- 4.B.15 PG&E should revise its SCADA system to reduce the occurrence of "glitches" and anomalies in the control system that desensitizes operators to the presence of alarms and other inconsistent information.
- 4.B.16 PG&E should reevaluate SCADA alarm criteria with the goal of reducing unnecessary alarm messages.
- 4.B.17 PG&E should revise its control systems, including SCADA, to ensure that all relevant information, including redundant pressure sensors, is considered.
- 4.B.18 PG&E should install more pressure sensors and have them closely spaced and use the additional information to incorporate leak or rupture recognition algorithms in its SCADA system.
- 4.B.19 PG&E should program its PLCs to recognize that negative pressure values are erroneous and require intervention to prevent valves from fully opening.
- 4.B.20 PG&E should replace the three pressure controllers which malfunctioned on September 9, 2010.
- 4.B.21 PG&E should review its work clearance process to ensure that abnormal operating conditions that may arise during the course of work are anticipated and responses to those conditions are detailed. Additionally, PG&E should create a procedure covering

the commission of electrical equipment from one Uninterruptable Power Supply to another. Each project Clearance should include possible scenarios and contingency plans to mitigate any abnormal operating conditions that may arise.

- 4.B.22 PG&E should revisit its Work Clearance procedures and training to ensure that future work will not be authorized unless: all forms and fields therein are comprehensively and accurately populated, and reviewed by a designated clearance supervisor. Additionally, work should not commence until such time as the operator and technician have reviewed the work clearance and have confirmed that understand the actions to take in the event an abnormal condition is encountered. Lastly, PG&E must ensure that proper records showing the specific steps taken, when taken, and by whom, are maintained pursuant to its Record Retention Schedule
- 4.B.23 Training – PG&E should provide training to Gas Service Representatives to recognize the differences between fires of low-pressure natural gas, high-pressure natural gas, gasoline fuel, or jet fuel.
- 4.B.24 Internal coordination – PG&E should revise its procedures to outline each individual Dispatch and Control Room employee’s roles, responsibility, and lines of communication required to be made in the event of an emergency either during or outside normal working hours. This should include assigning specific geographical monitoring responsibilities for Control Room employees.
- 4.B.25 External coordination – CPSD agrees with NTSB recommendation P-11-2, which requests that PHMSA issue guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of control room operators immediately and directly notifying the 911 emergency call center(s) for the communities and jurisdiction in which those pipelines are located when a possible rupture of any pipeline is indicated. CPSD further recommends that prior to such PHMSA guidance PG&E should revise their own procedures to allow for the immediate and direct notification of 911 emergency call centers when a possible pipeline rupture is indicated.
- 4.B.26 Decision making authority – PG&E should revise its emergency procedures to clarify emergency response responsibilities, especially in regards to authorizing valve shut

offs. PG&E policies should not just delegate authority to act but also detail obligations to act.

- 4.B.27 RCV/ASV – PG&E should perform a study to provide Gas Control with a means of determining and isolating the location of a rupture remotely by installing RCVs, ASVs, and appropriately spaced pressure and flow transmitters on critical transmission line infrastructure and implement the results.
- 4.B.28 Response time – PG&E should review required response times in other utility service territories nationwide and devise appropriate response time requirements to ensure that its Emergency Plan results in a “prompt and effective” response to emergencies. PG&E will provide its analysis and conclusions to CPSD.
- 4.B.29 Emergency Plan Revision – Currently a maintenance supervisor annually reviews SCADA alarm responses and makes revisions as necessary. This process needs to be formalized to ensure a robust feedback loop such that new information is fully analyzed and necessary changes to PG&E’s Emergency Plan and/or other procedures are implemented with a subsequent review of made changes to ensure they are adequate.
- 4.B.30 Public Awareness – CPSD agrees with NTSB recommendation P-11-1, which requests PHMSA issue guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of sharing system-specific information, including pipe diameter, operating pressure, product transported, and potential impact radius, about their pipeline systems with the emergency response agencies of the communities and jurisdiction in which those pipelines are located. CPSD further recommends that prior to such PHMSA action PG&E undertake a review of **its gas transmission** public awareness and outreach programs to ensure that system-specific information is appropriately disseminated.
- 4.B.31 PG&E’s business strategies and associated programs should expressly ensure that safety is a higher priority than shareholder returns and be designed to implement that priority, which may include reinvesting operational savings into infrastructure improvements.

- 4.B.32 PG&E should target retained earnings towards safety improvements before providing dividends, especially if the ROE exceeds the level set in a GRC decision.
- 4.B.33 PG&E's incentive plan, should include safety. PG&E should revise its STIP program to make safety performance 40% of the score used to determine the total award. PG&E should require upper management to participate in annual training activities that enhance and expand their knowledge of safety, including exercises in which gas officers will have an opportunity to enhance their knowledge of incident command and will participate in an annual safety leadership workshop.
- 4.B.34 PG&E should not hold joint Company and Corporation Board of Director meetings as the two entities should have different priorities.
- 4.B.35 PG&E should focus on enhancing public safety and operational excellence as a core mission, and should examine whether the time and money it spends on public relations and political campaigns distracts it from this core mission.
- 4.B.36 PG&E should revisit its Pipeline 2020 program, and subsequent variations thereof, to ensure that its implementation is fully flushed out with specific goals, performance criteria, and identified funding sources.
- 4.B.37 PG&E should examine internal communication processes to ensure that all employees understand their job responsibilities and priorities. Goals of PG&E gas employees should describe what is expected of them and their teams.
- 4.B.38 CPSD agrees with the following NTSB recommendations to PG&E (CPSD-9, pages 130-131)
- 4.B.38.a Revise your work clearance procedures to include requirements for identifying the likelihood and consequence of failure associated with the planned work and for developing contingency plans. (P-11-24)
- 4.B.38.b.1 Establish a comprehensive emergency response procedure for responding to large-scale emergencies on transmission lines; the procedure should (1) identify a single person to assume command and designate specific duties for supervisory NTSB Pipeline Accident Report 131 control and data acquisition staff and all other potentially involved company employees.



- 4.B.38.b.2 Establish a comprehensive emergency response procedure for responding to large-scale emergencies on transmission lines; the procedure should include the development and use of trouble-shooting protocols and checklists.
- 4.B.38.b.3 Establish a comprehensive emergency response procedure for responding to large-scale emergencies on transmission lines; the procedure should include a requirement for periodic tests and/or drills to demonstrate the procedure can be effectively implemented. (P-11-25).
- 4.B.38.c Equip your supervisory control and data acquisition system with tools to assist in recognizing and pinpointing the location of leaks, including line breaks; such tools could include a real-time leak detection system and appropriately spaced flow and pressure transmitters along covered transmission lines. (P-11-26).
- 4.B.38.d Expedite the installation of automatic shutoff valves and remote control valves on transmission lines in high consequence areas and in class 3 and 4 locations, and space them at intervals that consider the factors listed in Title 49 Code of Federal Regulations Part 192.935(c). (P-11-27).
- 4.B.38.e Revise your post-accident toxicological testing program to ensure that testing is timely and complete. (P-11-28).
- 4.B.38.f Assess every aspect of your integrity management program, paying particular attention to the areas identified in this investigation, and implement a revised program that includes, at a minimum, (1) a revised risk model to reflect the PG&E Company's actual recent experience data on leaks, failures, and incidents; (2) consideration of all defect and leak data for the life of each pipeline, including its construction, in risk analysis for similar or related segments to ensure that all applicable threats are adequately addressed; (3) a revised risk analysis methodology to ensure that assessment methods are selected for each pipeline segment that address all applicable integrity threats, with particular emphasis on design/material and construction threats; and (4) an improved self-assessment that adequately measures whether the program is effectively assessing and evaluating the integrity of each covered pipeline segment. (P-11-29).

- 4.B.38.g Conduct threat assessments using the revised risk analysis methodology incorporated in your integrity management program, as recommended in Safety Recommendation P-11-29, and report the results of those assessments to the Commission and the Pipeline and Hazardous Materials Safety Administration. (P-11-30).
- 4.B.38.h Develop, and incorporate into your public awareness program, written performance measurements and guidelines for evaluating the plan and for continuous program improvement. (P-11-31).
- 4.C.1 PG&E's gas transmission organization should be required to achieve at least a Level 3 information maturity score under the Generally Accepted Records Keeping Principles within 3 years. (CPSD Exhibit 6, Appendix 4).
- 4.C.2 PG&E should be required to achieve International Organization Standard (ISO) certification against ISO 30300 for its Management System for Records (MSR) within five years of the ISO 30300 audit standard being finalized and published.
- 4.C.3.a., b, and c. PG&E should issue a corporate policy and standard that will:
- (a) Communicate recordkeeping expectations that underlie its post-2010 Corporate Records and Information Management Policy and Standard for all departments and divisions across PG&E. These expectations should be incorporated into procedures specific to meet the needs of every Line of Business.
  - (b) The IM Compliance Department should design a governance controls catalog for recordkeeping practices to assess compliance with the corporate policy and standard, consistency of behavior with official records being stored in approved systems of record, and timeliness of addressing records during their lifecycle.
  - (c) The retention schedule will support the policy by providing retention length for all identified official records to meet legal and regulatory mandates.
- 4.C.4 PG&E should develop and implement an education and training program for the gas transmission organization in Records and Information Management principles and practices within an information governance framework
- 4.C.5 PG&E should develop and deploy the systems necessary to manage, maintain, access and preserve both records and documents (physical and electronic, in all formats and

- media types); their related data, metadata, and geographic location and geospatial content in accordance with legal and business mandated rules, utilizing technology that includes appropriate aids to help improve data and metadata quality, including but not limited to validation, verification and referential integrity.
- 4.C.6 PG&E should establish accountability for development and implementation of a PG&E governance strategy across gas transmission that should rest with PG&E Senior Management and a method of accountability should be developed and implemented.
- 4.C.7 PG&E should identify and document the employees responsible for implementing the Records and Information Management program for gas transmission.
- 4.C.8 PG&E should develop consistent standard practices that include gas transmission records management linked to corporate policies on information governance.
- 4.C.9 PG&E should implement mandated retention periods for all records relevant to gas transmission.
- 4.C.10 PG&E should ensure that each gas transmission standard conforms with Records and Information Management (RIM) policies for gas transmission.
- 4.C.11 PG&E should include the treatment of active and inactive records in its Records and Information Management (RIM) Policy for gas transmission.
- 4.C.12 PG&E's records management processes should be managed and maintained in accordance with the traceable,-verifiable and complete standard, including retention of physical and digital pipeline records for the 'life of the asset.'
- 4.C.13 The accuracy and completeness of data within gas transmission records should be traceable, verifiable and complete and when errors are discovered, the record should be corrected as soon as correct information is available and the reason(s) for each change should be documented and kept with the record. For example, when discrepancies are discovered in GIS 3.0, GIS 3.0 should be updated as soon as the new information is available and reflected in the audit change log.
- 4.C.14 PG&E should create a standard format for the organization of a job file so that PG&E personnel will know exactly where to look in a file folder, or set of file folders, to

- find each type of document associated with a job file. At a minimum, a job file will contain traceable, verifiable and complete records to support the MAOP of the pipeline segment installed; design documentation; purchase documentation showing the sources and specifications of equipment purchased; permits; environmental documents; field notes; design, construction and as-built drawings; x-ray reports and weld maps; pressure test records; correspondence with the CPUC; and inspection reports and correspondence.
- 4.C.15 Job file data, including drawings, for all parts of the active PG&E gas transmission system should be immediately accessible from multiple locations. The development of a complete and accurate catalog of job files that can be searched immediately should be included within this objective.
- 4.C.16.a, b., and c The information that was contained in PG&E’s historic records and documents, and that has been identified as ‘missing or disposed of,’ and is necessary to be retained for the safe operation of the pipelines, pursuant to laws, regulations and standards and the PG&E retention schedule, should be recovered. This recovery should include but not be limited to:
- a. updating and verification of data in engineering databases, such as the leak database, GIS and the integrity management model,
  - b. updating plat sheets and other engineering drawings, and
  - c. updating and organizing job files.
- 4.C.17 PG&E should document adoption of, and changes and amendments to policies and standard practices and the reasons for their adoption, amendment or cancellation. An audit trail of changes should be maintained, retained and preserved permanently, taking heed of potential changes in technology that may render documents unreadable in the future.
- 4.C.18 PG&E will identify each section of pipe that has been salvaged and reused within the PG&E gas transmission system. For each section of pipe identified, PG&E will change the installed date in its GIS and its IM model to the date the pipe was originally installed in the PG&E pipeline system.

- 4.C.19 PG&E will create a system to track reused pipe installed within its operating gas transmission pipeline system and will maintain these records so long as there are sections of reused pipe in the PG&E operating gas transmission pipeline system and identify pipeline characteristics along with where the pipe segments originated from, medium transported previously, and justification of the usage of it in its system.
- PG&E will maintain these records so long as there are sections of reused pipe in the PG&E operating gas transmission pipeline system.
- 4.C.20 PG&E should implement the recommendations included in the final Pricewaterhouse Coopers (PwC) audit report. (TURN Exhibit 16, Appendix B)
- 4.C.21 Using independent auditors, CPSD will undertake audits of PG&E’s recordkeeping practices within the Gas Transmission Division on an annual basis for a minimum of ten years after the final decision is issued in I.11-02-016.
- 4.C.22 PG&E will correct deficiencies in recordkeeping discovered as a result of each CPSD audit and will report to CPSD when such deficiencies have been corrected.
- 4.D.1 Systems: Utilize industry-standard software for electronic storage of class location information. Devise a process to capture new PG&E service hook-ups especially in proximity to transmission lines and incorporate into the class location analysis.
- 4.D.2 Procedures: Update procedures, patrolling process instructions, and related OQ training to require written confirmation to Patrol Supervisors that follow up has been performed on all new construction that the patroller has previously observed and documented.
- 4.D.3 Procedure 6.3 (3) should be rewritten as “List all new observations regardless if it is believed that the ground crew has already investigated the observation.”
- 4.D.4 TD-4412-07 section 6.1 (2) should include specific language for the pilot to recommended increased patrolling to the Aerial Patrol Program Manager.
- 4.D.5 Ensure that the Report of New Construction forms are completed.
- 4.D.6 Increase the duties of the Aerial Patrol Program Manager (APPM) to include oversight and review of the quality and accuracy of patrol reports.

- 4.D.7 Create a detailed procedures manual containing the APPM's duties to ensure quality control of aerial patrol responsibilities.
- 4.D.8 Training: Utilize varied training exams for patrolling.
- 4.D.9 The new training exams for patrolling should include questions with greater detail and complexity than the current exam and shall use aerial photos as exam exhibits where pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training materials and associated tests should be reviewed and updated to enhance employee competency, utilize aerial photos and other aids, and reflect field conditions to approximate buildings' key distances from lines.
- 4.D.10 Improve Aerial Patrol Pilot training. PG&E should consider pilot training using aerial photographs taken at an altitude of 750 feet, which replicates what the pilots see on patrol, and include a number of structures both within and outside of the 660 foot standard. Use the photos as exam exhibits where the pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training should also include a Well-Defined Area (WDA) in the exhibit as well. PG&E should also consider using in its training photographs, video or other aids to reflect expected views to be seen from typical patrol altitudes.
- 4.D.11 Audits the patrolling process should include a comparison of new construction observations with new gas/electrical hook ups near the line to ensure that new construction has not been missed.
- 4.D.12 A new item "All Sections of Document Completed" should be added to the audit checklist when reviewing Reports of New Construction.
- 4.D.13 Audits should make sure that copies of completed Reports of New Construction are being provided to local supervisors as required by standard procedure TD-4127P-01 section 3.8 (5).