BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission"s Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms.	R.11-02-019 (Filed February 24, 2011)

COMMENTS OF THE CITY AND COUNTY OF SAN FRANCISCO ON THE INDEPENDENT PANEL REPORT ISSUED JUNE 8, 2011

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I. INTRODUCTION

Pursuant to the Scoping Memorandum and Assigned Commissioner"s Ruling dated June 16, 2011, the City and County of San Francisco ("CCSF") submits these comments on the Report of the Independent Review Panel San Bruno, issued on June 8, 2011.[1] Following the devastating incident in San Bruno, the California Public Utilities Commission ("Commission") created and appointed the Independent Review Panel (the "Panel"). The Panel was asked to gather information about the San Bruno explosion and "make recommendations to the CPUCfor the improvement of the safe management of PG&E"s natural gas transmission lines."[2]

The tragic incident in San Bruno and the various investigations subsequent have raised significant questions as to whether PG&E has been operating its pipelines in a safe manner. Similar questions are raised about whether regulators – the Commission and the Pipeline and Hazardous Materials Safety Administration ("PHMSA") have met their statutory obligations to regulate PG&E sufficiently to "provide adequate protection against risks to life and property," the stated purpose of the federal pipeline safety regulations adopted and enforced by the Commission and federal agencies.[3] Based on its own investigation, CCSF has become increasingly concerned about gas pipeline safety in the face of ample indications, many identified in the Report, that PG&E"s gas operations have not complied with the safety requirements of federal law, state law, or prudent industry practices and that regulators have not remedied PG&E"s failures. The Report makes many important findings and recommendations, the sum of which demonstrate that the work of making gas pipelines in California safe will be a long and difficult process.

Report of the Independent Review Panel

The Panel concluded "the explosion of the pipeline in San Bruno was a consequence of multiple weaknesses in PG&E"s management and oversight of the safety of its gas transmission

[1] CCSF recently learned that the Panel issued a revised report on June 24, 2011, but has not had the opportunity to review that document.

[2] *Report of the Independent Review Panel: San Bruno Explosion* (the "Report"), Prepared for the CPUC, June 8, 2011, at p. 2.

[3] 49 U.S.C. § 60102.

system." Further "the CPUC did not have the resources to monitor PG&E"s performance in pipeline integrity management adequately or the organizational focus would have elevated concerns about PG&E"s performance in a meaningful way."[4]

The findings in the Panel Report give cause for concern regarding the safety of gas pipeline systems in California. The Report highlighted the fact that (1) PG&E has the second highest amount of high pressure transmission pipelines located in High Consequence Areas compared to other pipeline companies in the U.S.[5] and (2) PG&E has a significantly higher proportion of pre-1960 transmission pipe than the national average.[6] Given these factors, it is crucial to provide robust regulatory oversight of PG&E"s gas operations.

One of the purposes of the Report, as identified by the Panel, was to explain pipeline integrity management and the regulatory oversight of integrity management programs.[7] The Panel Report describes the continuous review cycle utilized by pipeline operators to ensure integrity management.[8] The elements of the cycle are to (1) generate data and analysis, (2) identify segments and threats, (3) inspect and assess, and (4) mitigate and remediate.[9] The Panel Report identifies three central tenets to pipeline safety:

- If an activity is not documented, it was not done.
- A threat is assumed to exist until it can be demonstrated it does not exist.
- The re-inspection interval should be scheduled to ensure the integrity of the pipeline between inspections.[10]

These tenets demonstrate why PG&E"s pipeline safety practices are so troubling. PG&E has operated its gas transmission system without access to the basic documentation expected of a pipeline operator. Further, it has ignored or minimized threats without demonstrating they don"t exist. And its inspection practices have not complied with legal requirements and industry

[4] Report at p. 5.

[5] Report at p. 5.

[6] Report at p. 5.

[7] Report at p. 2.

[8] Report at p. 4.

[9] Report at p. 4.

[10] Report at p. 4.

practices designed to ensure pipeline integrity. Equally troubling, even though state and federal regulators at times recognized the failure of PG&E"s practices to comport with these tenets, they did not enforce PG&E"s compliance with them to ensure pipeline safety.

While CCSF supports the overall findings and tenor of the Report, it takes issue with the Report"s heavy reliance upon industry studies. Instead, the Panel and the Commission bear an obligation to seek out credible, independent research that is not unduly influenced by the interests of gas pipeline operators and their trade groups.

II. PG&E'S GAS PIPELINE OPERATIONS PLACE THE PUBLIC AT RISK.

A. The Panel Report and Other Evidence Demonstrate the Need for Close and Stringent Regulation of PG&E's Pipeline Safety Efforts.

Although measured in tone, the Report is a well-supported condemnation not just of PG&E"s pipeline safety practices, but of the corporate culture that allowed safety to be given insufficient priority. The Report documents numerous failures in PG&E"s Integrity Management Program, including poor data management,[11] ineffective threat identification procedures,[12] chaotic internal organization,[13] a lack of coherent resource planning,[14] a complete breakdown in quality assurance,[15] and no strategic plan to improve its safety assessment capabilities.[16] In addition, the Report demonstrates that PG&E"s corporate culture fostered such failures by, among other things, promoting the company"s image over substantive focus on safety matters,[17] and placing excessive emphasis on the company"s financial performance.[18] In CCSF"s long history of participation before the Commission, we do not recall a more sweeping and thorough description of how a large regulated utility has so fundamentally lost its way.

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[11] Report at pp. 7-8.

[12] Report at pp. 8-9.

[13] Report at pp. 9-10.

[14] Report at p. 10.

[15] Report at pp. 10-12.

[16] Report at pp. 12-13.

[17] Report at pp. 16-17.

[18] Report at p. 17.

As damning as the Report is, it could and should have been even stronger in calling out problems at PG&E. The Panel delicately questions whether PG&E has "embraced the spirit" of pipeline integrity regulations.[19] A better characterization of PG&E"s regulatory perspective may be "blatant disregard." As detailed later, PG&E has adopted baseless interpretations of relevant regulations in order to avoid triggering higher safety requirements. Worse, the fact that PG&E intentionally spiked the pressure on pipelines with potential manufacturing and construction defects indicates that PG&E does not understand the purpose of the regulatory requirements. Even in the current regulatory context, PG&E fails to consider the requirements of the federal regulations. As discussed in more detail below, instead of turning to the federal minimum safety standards to provide guidance on when to install remote controlled or automatic shutoff valves, PG&E"s recent proposal at a pipeline safety workshop does not incorporate the analysis proposed in the federal regulations.

PG&E has not just failed to embrace the spirit of pipeline safety regulations, it has shown utter disdain for the goals of such regulations, the requirements of state and federal law, and the safety of its customers. Given these facts, the Commission urgently needs to adopt a different regulatory approach toward PG&E. This should include strict oversight of its safety operations, thorough audits, and detailed and firm milestones and expectations for making the necessary improvements.

B. The Commission Should Make it Financially Costly for PG&E to Continue to Shirk Its Safety Responsibilities.

In light of PG&E"s demonstrated and detrimental "overemphasis on financial performance,"[20] it is clear that heightened regulation of PG&E"s safety efforts will have the best chance of success if it is made clear to PG&E that there will be a significant financial cost to the utility if it fails to meet the CPUC"s various interim milestones and requirements to restore the safety of PG&E"s system. In addition to invoking the penalties allowed under Public Utilities

[19] Report at p. 9.

[20] Report at p. 17.

Code Section 2107 for violations of CPUC orders, the Commission should put PG&E on notice that it will be subject to ratemaking penalties for failure to satisfy Commission requirements in a timely and complete fashion.

As recognized by the OIR, one form that ratemaking penalties could take are reductions in PG&E"s allowed rate of return ("ROR"). Given the findings of the Panel Report on PG&E"s misplaced priorities, the Commission should make clear in an order issued promptly that the Commission will not hesitate to avail itself of this option in order to ensure public safety. By issuing an order now that sternly warns the utility that its financial performance is at stake, the Commission will increase the likelihood that PG&E management will make compliance with CPUC safety requirements an appropriately high priority.

In addition, the Commission should revise its ratemaking policies to require PG&E to spend all funds approved in its rate cases for gas pipeline safety and maintenance items. The Commission should require detailed reports and sworn officer verifications, subject to audit, as proof that approved safety expenditures were actually spent for the authorized program. Failure to comply with such requirements, unless exceptions are granted, should result in stiff financial penalties.

C. Audits of PG&E's Safety-Related Systems and Functions Must Be Managed by the CPUC In Order to Ensure the Necessary Independence from PG&E.

The Report wisely recommends audits of two key points of failure at PG&E: (1) data and information management systems, and (2) the management of PG&E"s gas transmission and distribution functions. With respect to the former, the Report recommends "a comprehensive review of [PG&E"s] data and information management systems to validate the completeness, accuracy, availability, and accessibility to data and information" and a formal change process to correct deficiencies. With respect to the latter, the Report recommends "an independent operations and management audit of the gas transmission and gas distribution functions, including an organizational, staffing and skills assessment of the two distinct functions." The Report lists these audits under its recommendations for actions by PG&E.

CCSF concurs with the need for these audits, but believes that these important audits must be conducted by auditors who are truly independent of PG&E. For the data systems audit to have the most value, the auditors must be willing and able to be as candid as possible about the failures of the current system and not have to negotiate findings and conclusions with managers who may have a vested interest in defending the status quo. Similarly, the management audit will be highly sensitive in that it will assess the skills and deficiencies of PG&E"s current management and will be most useful if the auditors need not fear financial or other reprisals for stating candid conclusions.

To ensure the necessary independence, the auditors should not be retained by or directed by PG&E. Instead, the Commission staff should be responsible for choosing and supervising the auditors for both of these essential efforts. Consistent with current CPUC practice for many significant audits of utilities, PG&E should provide the funding for these audits.

CCSF recognizes that supervising additional audits of PG&E will add more obligations to the already heavily burdened Commission staff. However, as discussed elsewhere in these comments, if current CPUC resources are inadequate to ensure that the serious problems with PG&E"s safety program are being fixed, then it is the Commission"s responsibility to aggressively seek the funding from state and federal authorities that it needs to fulfill its statutory responsibilities or to reallocate resources it currently has in order to ensure safety is given the highest priority.

III. THE COMMISSION SHOULD REQUIRE FULL TRANSPARENCY REGARDING PIPELINE SAFETY

The Panel"s charter included addressing the public"s right to information related to gas pipelines.[21] Although the Panel Report does not contain a separate discussion of this issue, the Panel wisely recommends the posting of pipeline integrity audit findings and company responses

[21] One of the Commission"s questions for the Panel was: "What is the public"s right to information concerning the location of natural gas transmission and distribution facilities in populated areas?" Resolution L-403, Charter, p. 1.

on the CPUC"s website.[22] CCSF fully supports this recommendation, but believes the Commission should go further by ensuring, in a comprehensive manner, the transparency of the interactions between PG&E and its regulators.

Both PG&E and its regulators have lost the public trust. Bold measures that depart from the status quo are necessary for PG&E, the CPUC, and federal regulators to regain the public confidence. By adopting full transparency in the interactions between the utility and its regulators regarding the efforts to restore system safety, state, local and private watch dog agencies will be able to verify the Commission"s safety efforts. At a minimum, such transparency should include prompt website access to all documents exchanged between PG&E and the staffs of its state and federal regulators regarding pipeline safety matters, such as compliance submissions, IMP documentation, repair and inspection information, data/information requests and responses, and audit-related documents. In addition, the Commission should promptly post to its website all documents exchanged between its staff and the PHMSA staff regarding matters such as CPUC requests for certification, CPUC grant requests, PHMSA evaluations of the CPUC and related correspondence. The Commission has already stated that a key objective of this docket is to allow the public a means to express their views to the Commission.[23] Full transparency will allow the public to be better informed when they take advantage of this opportunity.

Moreover, the public has the right, under the public records policies of this state, e.g., the Constitution and Government Code Section 6250 *et seq*,[24] to such information. Allowing the public to monitor whether PG&E is operating as required by law and regulators are performing the necessary oversight will support the exercise of this right. In addition, this kind of transparency will provide an incentive to both PG&E and regulators to remain vigilant about gas

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[22] Report at p. 27.

[23] Order Instituting Rulemaking on the Commission"s Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms, R.11-02-019, p. 4.

[24] Cal. Constitution Art. I, § 3(b)(1)-(2); Government Code Section 6250 states the Legislature"s finding that "access to information concerning the conduct of the people"s business is a fundamental and necessary right of every person in this state."

transmission pipeline safety, since members of the public will be able to monitor PG&E"s safety practices by reviewing compliance documents, inspection and audit reports and other important information. The secrecy of these matters to date has only facilitated the current situation where safety has not been appropriately prioritized.

The Commission should require that the above-described documents be posted on a website accessible to all – hosted either by the Commission or PG&E – no later than one business day after the documents are originally transmitted. The only redactions that should be allowed are those that are strictly necessary to avoid compromising public security by divulging critical infrastructure information or confidential personnel information. Such redactions should be limited and should not be the basis for withholding entire documents.

Under current law, the CPUC can immediately begin web-posting of any documents originated by the CPUC or PHMSA staff, without any further action by the Commission. With respect to documents that originate from PG&E, Public Utilities Code Section 583 and General Order 66-C require that the Assigned Commissioner or Commission issue an order requiring that such documents be made available for public inspection.[25] CCSF urges the Assigned Commissioner and Commission to issue the appropriate orders without delay as one important step toward gaining the public trust.

Although Section 583 need not serve as an impediment to the necessary transparency, the subject matter of this proceeding highlights the need for amendments to this statute. As currently phrased, Section 583 runs directly counter to the public records policies of this state, which establish a presumption that records in the possession of public agencies should be available for public inspection. Section 583 reverses this presumption by making confidentiality of utility-submitted information the default, unless the Commission (or an assigned Commissioner) takes

[25] Section 583 states in relevant part: "No information furnished to the commission by a public utility . . . shall be open to public inspection or made public except on order of the commission, or by the commission or a commissioner in the course of a hearing or proceeding." Although Section 583 clearly authorizes an assigned commissioner in a proceeding such as this to order the disclosure of utility provided information, the Commission may wish to avoid any questions as to authority by issuing a full Commission decision that confirms any assigned commissioner ruling ordering disclosure.

affirmative action permitting disclosure. CCSF urges the Commission to propose and support before the Legislature amendments to Section 583 that would conform this provision to otherwise applicable state policy.[26]

IV. THE COMMISSION MUST ENFORCE THE MINIMUM SAFETY STANDARDS OF THE PIPELINE SAFETY ACT BY REQUIRING PG&E TO COMPLY WITH THE FEDERAL INTEGRITY MANAGEMENT PROGRAM.

The Panel found that PG&E"s Integrity Management Program suffered from numerous shortcomings. Essentially from top to bottom, PG&E"s efforts to maintain and operate a safe gas transmission system have been deficient. The Panel also found, however, that the CPUC has played a role in allowing PG&E"s operations to fall below the minimum expectations of safety. Specifically, the Panel stated "the very issues that surface regarding the quality of PG&E"s pipeline integrity management are mirrored in the requirements for effective CPUC oversight."

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[26] CCSF would urge amendments to Section 583 along the lines of the following:

(a)~~No~~ *All* information furnished to the commission by a public utility, or any business which is a subsidiary or affiliate of a public utility, or a corporation which holds a controlling interest in a public utility, ~~except those matters specifically required to be open to public inspection by this part,~~ *is a public record as defined in Gov. Code section 6252(e) and* shall be open to public inspection or made public except *as provided in the Public Records Act*. ~~on order of the commission, or by the commission or a commissioner in the course of a hearing or proceeding. Any present or former officer or employee of the commission who divulges any such information is guilty of a misdemeanor.~~

(b) The commission, or a commissioner in the course of a hearing or proceeding, may upon written motion from a public utility determine that any information disclosed to the commission by a public utility is exempt from disclosure if such exemption is permitted under the Public Records Act. If the commission or commissioner finds that any information should be exempt from disclosure, the exempted information shall be redacted narrowly to ensure the broadest possible disclosure to the public. Any present or former officer or employee of the commission who divulges any information that has been exempted from disclosure is guilty of a misdemeanor.

(c) The following information may not be exempted from public disclosure:

(1) Utility management compensation, including salaries, bonuses, and stock options.

(2) Utility safety records, except that these may be redacted to protect critical infrastructure information as the commission deems necessary, if consistent with the Public Records Act.

Thus, both PG&E and the CPUC have placed the public at risk of harm by not effectively implementing safety standards..

The Panel recommends that the Commission create integrity management specialists, provide staff with additional integrity management training, and retain experts and consultants to assist and audit CPSD staff. Without significant change, the Panel believes that there is "little evidence the focus on pipeline Integrity Management audits will increase and improve."

A. The Pipeline Safety Act

Under the framework of the Act, the CPUC, as the state certified agency, bears the obligation to enforce safety standards and practices for intrastate pipelines facilities and intrastate pipeline transportation.[27] By submitting this annual certification, the CPUC represents to PHMSA that it has jurisdiction over the standards and practices to which the certification applies; has adopted each standard prescribed by the Act; is enforcing each standard of the Act; is working to prevent damage from construction; and has the authority to require record maintenance, reporting and inspections; to require plans for inspection to be filed for approval; and can enforce the minimum safety requirements through civil penalties and injunctive relief.[28] In exchange, PHMSA delegates to the CPUC the authority to enforce safety requirements to the operation of intrastate natural gas pipelines, and provides partial funding for that work.[29]

In addition to the specific requirements of the certification, the U.S. Department of Transportation has promulgated federal regulations that create minimum safety standards, with which pipeline operators must comply and regulators enforce. Although the regulations primarily apply to gas operators, it is the obligation of the regulators to enforce the requirements of the Act to satisfy its stated purpose: "to provide adequate protection against risks to life and

[27] 49 U.S.C. 60105(a).

[28] 49 U.S.C. 60105(b).

[29] 49 U.S.C. 60105(a).

property posed by pipeline transportation and pipeline facilities by improving the regulatory and enforcement authority of the Secretary of Transportation."[30]

1. The Integrity Management Program: 49 C.F.R. Part 192, Subpart O.

As the Panel noted, adhering to the tenets of Integrity Management can substantially reduce the probability of pipeline failure.[31] The foundation of natural gas transmission pipeline safety is the identification of risk of pipeline failure, and the prioritization of testing and remediation of threats to pipeline integrity on the basis of the expected impact of a pipeline failure on human life and property. In 2004, the regulatory approach to pipeline safety was amended to introduce the Integrity Management Program ("IMP").[32] Under the IMP, operators must continuously identify threats, select appropriate methods to assess those threats, properly test for those threats, remedy any problems or anomalies, and document the entire process.[33] Under the integrity management rules, "operators must analyze risks for each pipeline segment that could affect high consequence areas in order to identify actions needed to enhance public safety."[34]

B. The CPUC Has Failed to Enforce Federal Regulations That Require PG&E to Properly Implement Core Integrity Management Practices Intended to Protect the Public.

The Panel recognized that the Integrity Management is process oriented and man-power intensive. Specifically, the Panel found that in order to enforce the basic requirements of the federal IMP effectively, a regulator must understand the utility"s system, and question its threat

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[30] 49 U.S.C. 60102(a)(1).

[31] Report at p. 5.

[32] 49 C.F.R. § 192.901 et seq.

[33] 49 C.F.R. § 192.937.

[34] United State General Accounting Office, *Pipeline Safety and Security: Improved Workforce Planning and Communication Needed*, p. 13.

identification and risk management decisions.[35] The Panel also found that "[a] CPUC auditor must have substantial expertise to understand and critically evaluate all the elements of the integrity and management processes in order to fulfill his role as a regulator."[36] These types of audits require "significant effort, and added a need for new skills and training."[37]

The Report correctly notes that PG&E"s Integrity Management Program fails to comply with federal standards. This is demonstrated by the following specific examples:

1. PG&E's Purposeful Under-Calculation of the Potential Impact Radius to Identify High Consequence Areas Continues to Place the Public at Risk.

Federal regulations require gas pipeline operators to identify pipelines running through high consequence areas ("HCAs"), or areas that are densely populated or where substantial numbers of people are likely to be present (such as a hospital or recreational area).[38] Pipelines in HCAs must be included in an operator"s IMP and are subject to more rigorous requirements regarding identification of threats to pipeline safety, prioritization of assessment, and remediation of those threats.

An operator may choose between two methods to calculate HCAs.[39] PG&E purports to use "method 2," which is a calculation based on the number of buildings present within areas known as the Potential Impact Radius ("PIR"). Pipelines where the PIR contains 20 or more buildings intended for human occupancy are considered to be in HCAs.[40] The federal regulations define PIR is as "the radius of a circle within which the potential failure of a pipeline could have significant impact on people or property."[41] The formula for determining the PIR is a

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[35] Report at p. 19 ("Auditing of pipeline integrity management requires an understanding of the utility"s system, the utility"s threat identification process, and its risk management and decision processes.").

[36] Report at pgs. 19, 66-75.

[37] Report at p. 91.

[38] 49 C.F.R. § 192.903.

[39] 49 C.F.R. § 192.905(a).

[40] 49 C.F.R. § 192.903.

[41] 49 C.F.R. § 192.903.

calculation based in part on the diameter of the pipeline and the maximum allowable operating pressure ("MAOP").[42] MAOP is a term of art defined by federal regulation as "the maximum pressure at which a pipeline or segment of a pipeline may be operated."[43] Maximum Operating Pressure ("MOP") is sometimes referred to as normal operating pressure or "maximum actual operating pressure," which is defined by federal regulation as "the maximum pressure that occurs during normal operations over a period of 1 year."[44] The MOP should always be lower than the MAOP.

In its Risk Management Procedure 08 ("RMP-08"), PG&E uses MOP instead of MAOP to calculate the presence of HCAs.[45] By using MOP, the lower number, instead of MAOP, the higher number, to calculate the PIR, RMP-08 directs PG&E employees to under-state the size of the PIR. Because the MOP-based PIR is smaller than a PIR based on MAOP, the MOP-based PIR may not contain 20 or more buildings and therefore not be identified as HCAs. Thus, PG&E has intentionally under-identified the number of HCAs in its service territory, and is not applying the appropriate level of threat identification, assessment, and remediation to those unidentified HCA pipeline segments.

This MOP-based definition of PIR in PG&E"s RMP-08 violates federal law. As stated above, section 192.903 explicitly directs operators to use MAOP to calculate the PIR when identifying HCAs. RMP-08 also flies in the face of PHMSA guidance on this precise question:

> **PHMSA FAQ-119: Use of Normal Operating Pressure in Potential Impact Circle Calculations**
>
> **Question**: Can I use normal operating pressure in my potential impact circle calculations if that pressure is significantly below MAOP?
>
> **Answer**: No. The rule requires that MAOP be used in calculating potential impact circles (PIC) to identify HCAs. Pipelines can operate up to their MAOP, and *integrity must be assured for such operation*. Operators whose MAOP is significantly higher than their operating pressure could choose to derate their pipeline to reduce the calculated size of PICs. In such a case, subsequent increases in MAOP would be subject to the

[42] 49 C.F.R. § 192.903.

[43] 49 C.F.R. § 192.3.

[44] 49 C.F.R. § 192.3.

[45] Exh. No. 2-AV, NTSB Docket No. SA-534: PG&E"s RMP-08, at pp. 50-53.

> requirements of Subpart K for uprating and would require that PICs be re-calculated. [46] (emphasis added)

Put simply, there is no excuse for PG&E to use MOP instead of MAOP to calculate PIR. In addition to violating federal law, PG&E"s RMP-08 places the public at risk. PG&E"s RMP-08 fails to assure the integrity of PG&E"s pipelines by intentionally turning a blind eye to additional pipelines that should be subject to the additional safety rigors of the Integrity Management Program. Further, by using MOP instead of MAOP, PG&E may raise the operating pressure at-will without satisfying the requirement for uprating a pipeline. In other words, if PG&E desires to use the smaller PIR based on MOP, then it should derate its pipelines to the lower MOP. Otherwise, PG&E must use the MAOP to calculate the PIR and identify HCAs.

Finally, the Panel questions whether PG&E had properly assessed at least 50% of the most risky segments of transmission lines in HCAs.[47] This is an important question, but RMP-08 also begs the question as to whether PG&E has properly assessed "*at least 50% of the covered segments* beginning with the highest risk segments by December 17, 2007."[48]

2. The CPUC and PHMSA Have Failed to Take Any Corrective Action Against PG&E for Under-Identifying HCAs.

Both the CPUC and PHMSA have been aware of issues regarding PG&E"s identification of HCAs since 2005. However, no corrective action has been taken to date. In 2005, PHMSA and the CPUC conducted an audit of PG&E"s Integrity Management Program.[49] This was a training exercise where PHMSA acted as the lead on that audit.[50] The 2005 audit observed that PG&E"s Integrity Management Program was not sufficiently detailed regarding the process by which PG&E implemented HCA identification,[51] and noted that certain pipeline facilities known

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[46] http://primis.phmsa.dot.gov/gasimp/FaqHome.gim?s=E19D1C07EC5B41BF85E089FA43F37631&c=1

[47] Report at p. 67, fn 54.

[48] 49 C.F.R. § 192.921(d) (emphasis added).

[49] Exh. 2-CC, NTSB Docket No SA-534: Interview of Sunil Shori, 14:16-15:5.

[50] *Id.*

[51] Exh. 2-AY, NTSB Docket No SA-534: CPUC 2005 and 2010 IMI Audit Items, p. 1.

to be within HCAs had not been identified as HCA affecting segments almost one year from the effective date of the rule requiring HCA identification.[52]

In 2010, the CPUC performed a second audit of PG&E"s Integrity Management Program. The CPSD found that there was a potential issue in how PG&E was identifying HCAs based on PHMSA Gas Integrity Management Protocol A.05.a, which states that "Calculation [of the "potential impact radius"] must use MAOP (not actual or historical operating pressure)."[53] CPSD noted that "PG&E is using MOP instead of MAOP to determine where HCA segments exist on its system which is an issue."[54] PG&E responded to the audit finding in December 2010, conceding that PG&E indeed does use MOP to determine the "potential risk radius" and identify HCAs, but asserted that "PG&E"s use of MOP correctly meets PHMSA"s requirement to use the pressure of the limiting component to determine PIR."[55] PG&E also asserted that as of April 2010, it was undertaking a system wide study "to ensure proper utilization of MOP to calculate HCAs" and that the study was expected to be provided to the CPUC by March 31, 2011.

As demonstrated, this assertion violates the federal regulations and contravenes PHMSA guidance on this issue. Further, there has been no indication that the study has been completed or submitted to the CPUC, and CCSF questions the utility of a study ensuring the proper utilization of MOP to calculate HCAs when that study is based on an unlawful understanding of the federal regulations, contravenes PHMSA guidance, and fails to satisfy PG&E"s obligations under the Integrity Management Program.

Despite these clear directives, and despite their knowledge that PG&E has failed to include all High Consequence Areas within its Integrity Management Plan since 2005, neither

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[52] Exh. 2-AY, NTSB Docket No SA-534: CPUC 2005 and 2010 IMI Audit Items, p. 2.

[53] PHMSA Gas Integrity Management Inspection Manual, Inspection Protocols with Supplemental Guidance (rev. Jan 1, 2008), at p. 6, Supplemental Guidance A.02.a

[54] Exh. 2-AY, NTSB Docket No SA-534: CPUC 2005 and 2010 IMI Audit Items, p. 14.

[55] Exh. 2-DH, NTSB Docket No SA-534: PG&E Response To California Public Utilities Commission 2010 Integrity Management Inspection, pp. 1-25, 3.

CPUC nor PHMSA[56] have taken any action to require PG&E to change its Integrity Management Program to use MAOP instead of MOP to calculate the "potential impact radius" to ensure that all High Consequence Areas are identified within its Integrity Management Plan. As a result, the very foundation of PG&E"s Integrity Management Program – the identification of areas in which a potential pipeline failure would significantly impact people or property – is inaccurate and incomplete, and continues to render PG&E"s Integrity Management Program inadequate to ensure the integrity and safe operation of its pipelines. CPUC and PHMSA have never enforced PG&E"s full compliance with these regulations, and instead have tolerated PG&E"s use of a methodology that understates the extent of HCAs along its transmission pipelines.

On June 30, 2011, PG&E filed a Class Location Study Report responding to Commission Resolution L-403, which directed PG&E to "review the class location for its pipelines to determine if the class locations had changed since the initial designation." The report does not, however, address whether PG&E has corrected its methodology.[57] The CPUC should require PG&E to properly calculate each PIR based on the MAOP of each pipeline segment or treat those pipeline segments using the smaller PIR based on MOP as being de-rated. If PG&E seeks to raise the MAOP in the future, such requests should be subject to the requirements of Subpart K for up-rating.

3. PG&E's Integrity Management Program Avoids Adequately Addressing and Prioritizing Threats of Manufacturing and Construction Defects and Exacerbates Existing Defects.

Once an operator identifies the HCAs in its service territory, its next obligation is to develop its baseline assessment plan ("BAP"). The BAP must include an identification of the potential threats to covered pipeline segments; the methods selected to assess the integrity of the

[56] PHMSA should be aware of the CPUC"s specific findings resulting from its 2005 and 2010 audits, as CPUC is required to enter its audit results into the federal database. PHMSA Guidelines For States Participating In The Pipeline Safety Program (revised December 2010), at p. 24, Section 5.1.3.d

[57] If PG&E continues to use MOP instead of MAOP to calculate PIR, then it should be required to perform the study again using the proper methodology this time

line pipe, including an explanation of why the assessment method was selected; a schedule for completing the assessments; and a procedure to minimize environmental and safety risks.[58]

Threat identification is important because it defines what types of assessment technology is used and whether a threat needs to be remediated.[59] The Panel found many problems with obligations associated with PG&E"s baseline assessment plan. Specifically, the Panel found that "PG&E was not identifying all threats, as required by regulation; is not identifying segments of highest risk and remediating significant anomalies; and hence is not taking programmatic actions to prevent or mitigate threats."[60]

Based on its practice of pressure spiking, PG&E should have prioritized the assessment of manufacturing and construction defects. The federal regulations state that an operator may consider a manufacturing and construction defect to be stable, and not warrant further assessment, only "if the operating pressure on the covered segment has not increased over the maximum operating pressure experienced during the five years preceding identification of the [HCA]." If the pressure exceeds the five year MOP, then the operator must consider that segment to be a high risk segment for the baseline assessment or subsequent assessment.[61]

In addition, the federal regulations recognize that certain pre-1970"s manufacturing or construction methods such as low frequency electric resistance welds ("ERWs") may be particularly susceptible to failure and therefore pose potential threats to pipeline integrity. These include ERW pipe, steel pipeline more than 50 years old, mechanically coupled pipelines, and pipelines joined by acetylene girth welds in areas where the pipeline is exposed to land movement.[62] Because these pre-1970 fabrication techniques are more susceptible to failure, the

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[58] 49 C.F.R. § 192.919.

[59] 49 C.F.R. § 192.917.

[60] Report at p. 8.

[61] 49 C.F.R. § 192.917(e)(3)(i).

[62] 49 C.F.R. §§ 192.917(e)(3)(i) and (4) (incorporating by reference ASME Appendix 4.3. ASME Appendices incorporated by reference are binding requirements on pipeline operators. *See* PHMSA FAQ # 155. "Where sections of consensus standards are incorporated by reference into a rule, those sections become binding requirements the same as if the language were repeated in the rule. Operators must follow the requirements in the Appendices of ASME/ANSI B31.8S when those Appendices, or sections thereof, are referenced in the rule, even though the standard indicates that the appendices are non-mandatory").

federal regulations state that if a pipeline segment is made with these construction techniques and the operating pressure exceeds the five year MOP, in addition to considering the segment as a high risk for the baseline assessment or subsequent assessment, the operator "must select an assessment technology or technologies with a proven application capable of assessing seam integrity and seam corrosion anomalies."[63]

Instead of properly prioritizing the assessment and identification of the potential risks presented by these types of manufacturing and construction threats, PG&E ignored the federal regulations and has risked destabilizing the pre-1970 fabrication defects by intentionally performing pressure spikes. PG&E representatives testified during the recent March 2011 NTSB hearings that until recently it was PG&E"s routine practice to do planned pressure spikes every five years on pipelines with these identified threats if the maximum pressure reached during normal operation of those pipelines did not reach the MOP experienced during the prior five year period.[64] PG&E representatives explained, these planned pressure increases were done to avoid reduction of the MOP which, if exceeded, would trigger the requirement to undertake more rigorous assessment of pipeline integrity.[65] During those same NTSB hearings, CPUC and PHMSA representatives testified that they understood that PG&E performed these planned pressure spikes every five years to avoid having to perform burdensome assessment of the integrity of such pipelines.[66] However, neither CPUC nor PHMSA has taken any action regarding PG&E"s pressure spiking practice or its failure to assess manufacturing or construction defects or prioritize seam and corrosion threats on pipeline segments with the specific threats identified in section 192.917(e)(4) or ASME Appendix 4.3.

All three of the transmission lines that run through San Francisco have been identified as having manufacturing or construction defects, or other conditions that would require PG&E under sections 192.917(e)(3)(i) and (4) to prioritize and perform rigorous assessment of pipeline

[63] 49 C.F.R. § 192.917(e)(4).

[64] NTSB Docket No. SA-534, Transcript of March 1, 2011 Hearing, at 80:15–81:11, 83:8-18.

[65] *Id.* at 83:8-18.

[66] *Id.*, Transcript of March 2, 2011 Hearing, at 347:16–351:2.

integrity if the line pressure exceeds the five year historical maximum operating pressure. In addition, seismic movement in San Francisco is well-documented.[67]

Nonetheless, PG&E has performed planned pressure spikes on all three lines. On December 11, 2003, two days before the requirements of the Integrity Management Program became effective, PG&E spiked the pressure on Line 101, Line 109 and Line 132. In November 2008 and again in April 2010, PG&E spiked the pressure on Line 109. And in December 2008 PG&E spiked the pressure on Line 132 a second time.[68] The practice of spiking pressure to avoid the obligation to assess manufacturing and construction defects not only places a low priority on public safety, it also increases the risk to the public by exacerbating the potential threat that PG&E hopes to avoid assessing in the first place.

4. CPUC And PHMSA Have Failed To Enforce Federal Regulations Prohibiting PG&E's Practice Of Planned Pressure Spikes Above The Five-Year Historic Maximum Operating Pressure On Pipelines With Identified Manufacturing And Construction Threats.

In violation of section 192.917(e)(4), PG&E"s Integrity Management Program expressly instructs that the five-year historical MOP may be exceeded on pipe segments containing ERWs *without* triggering the obligation to prioritize and assess the seam integrity and corrosion of that segment. PG&E"s Risk Management Instruction 06 ("RMI-06"), states "PG&E has made a decision to only reprioritize those pipeline segments that exceed the historic 5 year MOP plus 10% of the historic 5 year MOP."[69] PG&E"s instruction contravenes PHMSA guidance:

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[67] San Francisco experienced large and destructive earthquakes in 1838, 1868, 1906, and 1989, and the United States Geological Survey ("USGS") has described "future large earthquakes" in San Francisco as "a certainty." (See earthquake.usgs.gov/regional/nca/wg02/index. php.) As for massive (as opposed to merely "large") earthquakes, a USGS forecast issued in April 2008 estimate that over the next thirty years the San Francisco Bay Area has a 63 percent chance of experiencing an earthquake measuring 6.7 or greater.

[68] NTSB Docket No. SA-534, Exh. No. 2-AI: All Lines That PG&E Overpressures In Order To Maintain MAOP, at pp. 2-3. San Francisco is not the only territory where PG&E has performed pressure spikes. NTSB Docket No. SA-534, Exh. No. 2-AH: All PG&E Over Pressures Of Any Lines And Documentationshows eight additional transmission lines where PG&E allowed the pressure on transmission lines to exceed MAOP.

[69] RMI-06, NTSB Docket No. SA-534, Exh. 2-AG, at p. 2.

PHMSA FAQ-221: Amount of pressure increase to trigger assessment of M&C defects

Question: Relative to the requirement in 192.917(e)(3)(i), how much pressure increase (above the maximum experienced in the preceding five years of operation) will trigger the requirement to treat the segment as high risk for purposes of integrity assessments?

Answer: The rule specifies that any pressure increase, regardless of amount, will require that the segment be prioritized as high risk for integrity assessment.[70]

Through inspections, audits, and review of PG&E"s Integrity Management Program documents, CPUC and PHMSA should have known about PG&E"s unlawful instruction not to assess seam integrity of pipe segments with these manufacturing and construction threats unless operating pressure exceeds the five-year maximum by 10%. Although CPUC faulted PG&E for not prioritizing ERW pipe non-covered segments as high risk in the 2010 IMP Audit, it did not identify PG&E"s unlawful policy embodied in RMI-06.[71] Neither agency has taken any action to require PG&E to revise its Integrity Management Program to comply with federal regulations by requiring PG&E to treat as "high risk," and subject to prioritized assessment of seam integrity, any ERW pipeline or pipe with manufacturing or construction defects on which operating pressure exceeds the five-year historical maximum operating pressure by any amount.

5. PG&E's Integrity Management Program Systematically Avoids Assessment of Threats to Seam Integrity.

In addition, PG&E"s Risk Management Procedure 06 ("RMP-06"), which is PG&E"s Gas Transmission Integrity Management Program, contains many statements showing a clear bias against using pressure tests to assess seam integrity, instead favoring the use of External Corrosion Direct Assessment – an assessment technology limited to testing certain forms of external corrosion of a pipeline.[72] Although RMP-06 regurgitates the federal regulations, in

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[70] http://primis.phmsa.dot.gov/gasimp/FaqList.gim

[71] 2010 IMP Audit Finding B.02.c "„PG&E RMP-06, section 4.3 does not include the requirement to prioritize LFERW as high risk for any covered or non-covered segment where in the pipeline system ... has experienced pipeline failure." (i.e., it speaks to covered, but not to non-covered segments."

[72] Exh. No. 2-AU, NTSB Docket No. SA-534: Excerpts From The PG&E Integrity Mgmt Plan RMP-06, RMP- 10, RMP- 11 and RMP- 13. RMP-06.

practice, it does not give pressure testing or In-line Inspection serious consideration. In section 4.5, PG&E"s "Tool Selection Process" flow chart for "Selecting the best assessment method(s)," pressure testing is noticeably absent from the list of potential outcomes listed in the flow chart.[73] In addition, in section 5.5, PG&E"s discussion on the use of pressure tests states "the Company does not plan to use pressure testing to assess the integrity of its pipelines, unless it is a post installation test or up-rate test for a new HCA"[74] or if pressure tests are the only feasible option.

Similarly, RMP-06 states that it is the Company"s desire to use in-line inspection whenever physically and economically feasible. A close examination of the factors proposed to analyze when in-line inspection is feasible render in-line inspection a non-option for most HCA pipelines. RMP-06 proposes the following relevant factors to determine feasibility:

- Minimum length of at least 10 miles, that is predominantly located in HCAs
- Less than 0.5 miles of replacement required to make the pipeline piggable
- Flow rates that enable a successful ILI
- Pipeline operation over 30% SMYS[75]

In sum, these factors place restrictions that effectively preclude in-line inspection from being used in HCAs. In combination with the lack of consideration of pressure testing, PG&E"s RMP-06 places the public at risk by prejudicing its integrity management principles away from assessment technologies capable of identifying manufacturing and construction defects, and towards assessment technologies that are only capable of assessing certain forms of external corrosion.

V. THE CPUC AND PHMSA SHOULD HAVE IDENTIFIED AND CORRECTED PG&E'S FAILURE TO OBSERVE MINIMUM RECORD-KEEPING STANDARDS.

The Panel finds that PG&E"s Integrity Management process is flawed because it lacks sufficient data to support its decision making.[76] And even though some engineers knew that the

[73] *Id.* RMP-06 pp. 36-40.

[74] *Id.*

[75] *Id.* p. 39.

segment of Line 132 in San Bruno was seam welded rather than seamless, "the process by which data were collected and examined for threat identification and the risk ranking of piping segments, which could include examination of construction and operating records by those experienced piping engineers, failed to correct the error."[77] Without adequate records, it is impossible for an operator to satisfy the requirements of the IMP or even the basic tenets of prudent operations. The fact that PG&E"s record-keeping and data integration was so deficient precludes PG&E from operating its transmission lines safely. Despite repeated audits, the CPUC did not discover PG&E"s failing.

The Act requires pipeline operators to create and maintain records adequate to demonstrate compliance with safety standards. State law and prudent industry practice also demand this. Further, the Act requires the Secretary to prescribe minimum standards for the information that must be maintained by operators and provided to the Secretary and state authorities.[78] Record-keeping requirements are pervasive in the federal regulations, making it plain that the obligation to keep records is fundamental to the Act"s purpose of protecting people and property from the risks posed by operation of gas pipelines.[79] The regulations require operators to prepare and regularly update for each pipeline a manual to govern normal and emergency conditions, specifically including construction and operating history.[80] In addition, the regulations require operators "to make and retain for the useful life of the pipeline" records of required strength tests and leak tests.[81]

The regulations also require a comprehensive review of records for certain pipeline segments proposed for service after March 1971 or modified after November 1970 prior to use of the pipeline segment.[82] The regulations implementing a gas integrity management program

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[76] Report at p. 62.

[77] Report at p. 63.

[78] 49 U.S.C. §§ 60102(d), 60117(b).

[79] See, e.g., 49 C.F.R. §§ 192.14(a)(1), 192.14(b), 192.517, 192.603(b), 192.605(a), 192.605(b)(3), 192.917(b) and 192.947.

[80] 49 C.F.R. §§ 192.603(b), 192.605(a) and 192.605(b)(3).

[81] 49 C.F.R. § 192.517.

[82] 49 C.F.R. § 192.14(a)(1) and 192.14(b).

require a comprehensive review of data and information "that could be relevant" in order to identify and assess the potential threats to a pipeline segment.[83] The regulations further specify a minimum list of the records that must be maintained for the life of a pipeline.[84]

PG&E"s inability to produce adequate and accurate records has been publicly documented and is the subject of an ongoing investigation by the CPUC. One example is PG&E"s initial identification of Line 132 in San Bruno to the NTSB as seamless when it is in fact a seam welded pipe.[85] This failure is further evidenced by the company"s inability to produce complete and accurate records, as ordered by the NTSB in January 2011. This inadequacy is not recent or isolated, as is demonstrated by internal memoranda from 1992 and 1993 provided to the CPUC by Representative Jackie Speier.[86] Yet, despite this long period of inadequacy, neither the CPUC nor PHMSA took any action to ensure that PG&E"s record keeping met the requirements of federal law. The CPUC and PHMSA, in performing their obligations to enforce the safety standards of federal law should have identified and addressed PG&E"s failure to keep adequate records. Given the pervasive and serious record-keeping failures that are now public knowledge, anomalies in PG&E"s records should have been apparent to the CPUC and PHMSA.

In addition to maintaining complete records, pipeline operators must refer to and use the records as part of the process of ensuring pipeline integrity. PHMSA Audit protocol C.02 requires the auditor to verify that the operator is gathering and integrating existing data and information on the entire pipeline that could be relevant to covered segments, and verify that the necessary pipeline data have been assembled and integrated. Protocol C.02.c directs CPSD to verify that a pipeline operator is using proper data to implement the IMP. ASME B21.8S-2004, Table 2 lists the relevant documents that should be considered. These documents include: process and instrumentation drawings (P&ID), pipeline alignment drawings, original

[83] 49 C.F.R. §192.917(b).

[84] 49 C.F.R. § 192.947.

[85] Report at p. 74.

[86] Ruling of Administrative Law Judge Entering Documents into Record, Investigation 11-02-016. Internal memoranda available: http://docs.cpuc.ca.gov/efile/RULINGS/137470.pdf

construction inspector notes/records, pipeline aerial photography, facility drawings/maps, as-built drawings, material certifications, survey reports/drawings, safety related condition reports, operator standards/specifications, industry standards/specifications, O&M procedures, emergency response plans, inspection records, test reports/records, incident reports, compliance records, design/engineering reports, technical evaluations, and manufacturer equipment data.

The CPUC"s audit did not identify any issues with how PG&E was using these sources of documents. Many of these documents are the type that PG&E has not been able to produce for the CPUC since San Bruno rupture occurred. Given PG&E"s well documented difficulty in producing pressure test records or documentation to validate the MAOP per the NTSB recommendations, it appears that potential issues were not properly identified in this audit.

VI. THE COMMISSION MUST PRIORITIZE GAS TRANSMISSION SAFETY TO PROVIDE EFFECTIVE OVERSIGHT.

The Report is less critical of the Commission than it should be for the Commission"s failure to effectively regulate PG&E"s gas transmission safety compliance. The Report notes that while Commission staff are "dedicated and knowledgeable,"[87] they lack the resources, training, and "organizational focus"[88] to perform effectively. The Report further states that "employees generally believe the safety branch does not customarily perform the type of high-profile work that is recognized and rewarded in the CPUC organization."[89] The Report also found that in order to ensure sufficient oversight of PG&E"s IMP, in particular, "the CPUC"s role in the auditing of Integrity Management must shift culturally to a destination beyond compliance. It must summon up the courage and resources to monitor the prudence of the operator"s program, its effectiveness and analysis of the program results to manage the system risks."[90]

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[87] Report at p. 91.

[88] Report at p. 5.

[89] Report at p. 100.

[90] Report at p. 101.

Implementing this recommendation requires more than just hiring additional inspectors and training them adequately; it requires a cultural change at the Commission. It is the Commission"s obligation to demonstrate the requisite leadership to achieve this level of change. In addition to adequate staffing, funding, and training, the Commission – through its Commissioners and the highest levels of management – must demonstrate to its staff that it expects and will support vigorous enforcement of safety regulations, and that it will reward such efforts.

The Commission is required by state and federal laws to enforce pipeline safety requirements.[91] The Commission"s internal priorities, reflected in its staffing and budgeting decisions, should reflect these obligations. The Commission is required to allocate its resources so that required pipeline safety functions can be effectively performed. The obligation to ensure safe operation of utility facilities must be ranked at the very top of the Commission"s priorities and should take precedence over non-safety policy work to the extent necessary due to limited funds. The Commission"s budgeting process is not transparent, so the public does not know whether the lack of sufficient funding for pipeline safety work is a result of the CPSD failing to request adequate resources, or the Commission failing to put those resources in its proposed budget, or the Governor"s administration failing to approve such resources.

A. The Commission and PHSMA Have Failed to Ensure That Integrity Management Inspections of Transmission Pipelines in California are Performed with Sufficient Frequency and Thoroughness to Ensure Pipeline Safety.

Under the Act, a state agency must certify that it is enforcing federal pipeline safety standards to intrastate pipelines "through ways that include inspections conducted by State employees meeting the qualifications the Secretary prescribes."[92] The Secretary of Transportation has issued guidelines specifying the necessary staffing levels, qualifications and

[91] 49 U.S.C. § 60105. Cal. Pub. Util. Code §§ 451, 761.

[92] 49 U.S.C. § 60105(b)(3).

training, which are used as scoring criterion for the federal government"s grant program.[93] Indeed, the Commission"s recent announcement that it intends to double the number of its inspection staff by September 2011 is a testiment to the gross understaffing of safety inspectors at the Commission.

PHMSA has neither taken enforcement action to require more frequent and thorough on-site audits by the Commission, nor provided additional financial or logistical support to enable the Commission to perform more audits. The combined failure of the Commission to perform meaningful audits and of PHMSA to require thorough audits, has left PG&E"s integrity management practices effectively unregulated.

B. CPSD Staffing Levels Have Hampered Its Ability to Inspect and Audit Pipeline Operations and Receive Maximum Federal Funding For Pipeline Safety Efforts.

The Report characterizes the Commission"s regulation of gas operators as "a struggle for resources" and notes that the safety division is understaffed. Understaffing is not a new problem, however, as this issue has persisted for over a decade. As early as 1998, the Department of Transportation noted that staffing "continues to be a problem."[94] The letter pointed out that NAPSR standards indicated that the Commission needed to devote 28 person-years to inspections and that the Commission only devoted 13.25 Person Years in 1997, and with upcoming staff departures, the Commission was projected to devote only 9.84 Person Years in 1998. The letter warned that if immediate action were not taken to increase staffing levels to meet the NAPSR standard, the Commission could possibly lose funding.

Despite this warning, the Commission did not increase its staffing. The following year, the Department of Transportation pointed out that Commission inspection staffing in 1998 had

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[93] *See* April 26, 2004 letter from Zee Wong, Safety and Reliability Branch, Consumer Protection Division, CPUC to Stacey Gerard, Associate Administrator, OPS, U.S. D.O.T.

[94] September 28, 1998 letter from Edward Ondak, Director of Western Region Pipeline Safety, DOT to Richard Bilas, CPUC President.

fallen to 7.54 Person Years.[95] In virtually every year since, PHMSA evaluations of the Commission have found that it has met neither the staffing levels nor the training requirements prescribed by the Secretary with respect to safety inspectors. In 2006, PHMSA"s noted that the "low number of on-site inspection days not only reduces public safety, but lowers the amount of federal funds allocated to your pipeline safety program."[96] In comparison to other states, the number of days spent in the field by California"s inspectors have been woefully inadequate. For example, in New York, 20 inspectors worked 4,300 field days/year.[97] In contrast, California"s 9 inspectors worked only 787 field days/year.[98]

The U.S. Department of Transportation defines a "person day" as "[a]ll or part of a day spent by Agency staff – Supervisor(s) and/or Inspector(s)/Investigator(s) (including travel) in on-site evaluation of an operator"s system to determine compliance with Federal or State pipeline safety regulations."[99] Thus, even if an inspector spends only one hour inspecting an operator"s system, that hour is counted as a full day of work for the purposes of the federal certifications. In light of this definition, it is especially glaring that the Commission has continually failed to meet the person years requirement for inspections.

1. PHMSA Has Contributed to the Difficulty of Training CPSD Inspectors.

PHMSA itself has hampered the Commission"s ability to perform adequate audits by offering mandatory training courses in such limited fashion that CPSD inspectors have often been denied access to courses due to over-subscription.[100] When the CPSD asserted that its

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[95] October 22, 1999 letter from Zach Barrett, State Liaison, Western Region Pipeline Safety, DOT to Mahendra Jahla, Chief, USRB, CPSD.

[96] January 12, 2006 letter from Chris Hoidal, Director, Western Region, Office of Pipeline Safety to Michael R. Peevey, President CPUC.

[97] newspaper? Mercury news?

[98] Need year cite; and comparison of transmission lines.

[99] State Guidelines, Glossary "Inspection Person-day."

[100] February 24, 2006 letter from Raffy Stepanian, Interim Program Manager, Utilities Safety and Reliability Branch, Consumer Protection and Safety Division, CPUC to Thomas Finch, State Liaison, Western Region, PHMSA.

inspectors were having difficulty in signing up for training at the U.S. Department of Transportation"s Transportation Safety Institute, PHMSA responded "we understand that newer inspectors are frequently „wait listed." I encourage that you maintain all pertinent documentation of your enrollment efforts with [Transportation Safety Institute]."[101] In January 2007, PHMSA again acknowledged the difficulty in getting inspectors enrolled at the Transportation Safety Institute, and urged the CPSD to maintain all pertinent documentation. PHMSA"s suggestion that the CPSD simply "maintain a paper trail" to justify the lack of training of inspectors is symptomatic of the "check the boxes" approach to safety identified by the Panel.[102]

C. The Depth and Quality of the Commission's and PHMSA's Audits of PG&E's IMP Show a Lack of Oversight and Understanding of PG&E's Aging Transmission System.

As a result of the Commission"s insufficient staffing and inability to obtain the proper training, the quality and depth of the IMP audits have suffered. The Panel found that the CPSD"s "current integrity management audits consist of predominantly tabletop exercises to assure compliance against a PHMSA checklist with little, if any, field related auditing."[103] The Panel also noted that the "table top" audits require "an in-depth analysis on the part of the auditor of the approach operators take to know, evaluate, and assess the risks in their pipelines and take appropriate mitigation measures."[104] Even though field audits were rarely included, the "table-top" audits have lacked thoroughness, as Commission auditors in 2010 did not note the statements in PG&E"s Integrity Management Program documents of policies and practices expressly prohibited by federal regulation as discussed above. A table-top audit should have revealed that in addition to implementing policies that turned a blind eye to manufacturing and construction defects, PG&E"s Integrity Management Program does not give serious

[101] January 12, 2006 letter from Thomas Finch, State Liaison, Western Region, PHMSA to Raffy Stepanian, Interim Program Manager, Utilities Safety and Reliability Branch, Consumer Protection and Safety Division, CPUC.

[102] Report at p. 25.

[103] Report at p. 96.

[104] Report at p. 91.

consideration to pressure testing or in-line inspection as methods for assessing manufacturing and construction threats. This heavy bias towards External Corrosion Direct Assessment should have raised alarm bells for the state and federal auditors.

As noted during the NTSB hearing in March 2011, Commission auditors failed in both 2005 and 2010 to note the absence of information in PG&E"s summary sheets for PG&E"s IMP.[105] And both the 2005 and 2010 audits failed to discover the huge gaps in basic pipeline information that is crucial to determining the existence and nature of threats to pipeline integrity.[106] The gaping holes in PG&E"s recordkeeping came to light only as a result of the NTSB investigation following the San Bruno pipeline rupture.

Further, in CPSD"s 2009 Operation, Maintenance and Emergency Plan audit of PG&E, CPSD noted that PG&E was relying upon historical MAOP.[107] If CPSD knew that PG&E was using historic MAOP, then staff had an increased obligation in its IMP audit to spot check PG&E"s records to ensure that PG&E had sufficient documentation to justify that the historic operating pressure and ensure that PG&E was properly considering potential manufacturing and construction defects. The use of historic MAOP necessarily means that the pipe segments in question were constructed before 1970s – the era of fabrication defects section 192.917(e)(4) and AMSE Appendix 4.3 are intended to address.

Even where the CPSD audits have found deficiencies in PG&E"s Integrity Management Program, CPSD has been unable to follow up sufficiently to ensure that PG&E has corrected the deficiencies within a reasonable time period commensurate with the seriousness of the deficiency. A punchlist prepared for March 2011 NTSB hearing regarding PG&E"s response to the 2005 audit indicates that PG&E only corrected some of the 2005 deficiencies in 2009 and 2010. Similarly, CPSD has failed to follow up on and ensure correction of several findings in its

[105] NTSB Docket No. SA-534, Transcript of March 1, 2011 Hearing, at 134:6-33; Exh. 2-AY, NTSB Docket No SA-534: CPUC 2005 and 2010 IMI Audit Items, p. 1.

[106] Exh. 2-AY, NTSB Docket No SA-534: CPUC 2005 and 2010 IMI Audit Items, p. 1.

[107] 2009 OM&E Audit , Standard Inspection Form p. 7.

May 2010 audit of serious violations by PG&E of federal safety regulations. Some of these violations go to the very core of PG&E"s integrity management practices.

VII. PG&E'S PLANNED INSTALLATION OF REMOTE CONTROL VALVES AND AUTOMATIC SHUT-OFF VALVES IN HCAS REQUIRES A MORE CAREFUL ANALYSIS THAN HAS BEEN PROPOSED.

As part of PG&E"s Pipeline 2020 program, PG&E intends to install remote control valves ("RCV") and automatic shutoff valves ("ASV"). In general, the Panel found the proposal to be "reactive," and not "well reasoned or based on a thoughtful examination of alternatives."[108] The Report also found that "PG&E has not developed the analytical support for investments in either pipe or valves."[109] RCVs and ASVs may be appropriate in certain circumstances and the Commission should approve expenditures where careful risk assessment warrants the use of RCVs and ASVs.

Under the federal Integrity Management Program, operators are required to use risk analysis to determine whether ASVs, or RCVs would be an efficient means of adding protection to a high consequence area in the event of a gas release. Operators must consider:

- Swiftness of leak detection and pipe shut-down capabilities
- The type of gas being transported
- Operating pressure
- The rate of potential release
- Pipeline profile
- The potential for ignition
- And location of nearest response personnel.

If the risk analysis proves that ASV or RCV would be an efficient means of adding protection, then the operator must install ASVs or RCVs.

Notably, PG&E"s IMP does not adhere to these federal requirements. Instead of providing a framework for addressing the factors listed in the federal regulations for a specific HCA, PG&E"s RMP-06 provides a categorical determination that "the company has concluded (based on referenced documents) that, in most cases, the uses of ASV"s or RCV"s as a Preventative and Mitigative measure in a HCA has little or no effect on increasing human safety

[108] Report at p. 13.

[109] *Id.*

or protecting pipelines."[110] The PG&E"s Integrity Management Program should have referred to another RMP, which would have provided instruction on how to perform the analysis required by section 192.935. The CPUC"s 2010 IMP Audit noted this violation.[111]

Even in the current environment where its practices are closely scrutinized, PG&E does not look to the minimum safety standards for guidance. Rather than utilize the risk assessment considerations in section 192.935, PG&E continues to develop its own guidelines for pipeline safety. At a recent Workshop to Provide Input on Development of Utility Implementation Plans, PG&E proposed to install RCVs and ASV using a decision tree that does not refer to, or incorporate any of the requirements of section 192.935.[112] PG&E"s implementation of RCVs and ASVs should follow the risk management considerations as required by the federal regulations.

[110] Exh. No. 2-AU , NTSB Docket No. SA-534, RMP-06, p. 59,; Exh. No. 2-Q, NTSB Docket No. SA-534, Senior Consulting Engineer Memorandum to File, p. 1.

[111] 2010 CPUC IMP Audit "PG&E had not developed specific guidelines (especially none which consider items listed under H.07.a) for utilizing in-line valves."

[112] See attached flowchart.

VIII. CONCLUSION

For the reasons stated herein, the Commission should implement CCSF"s recommendations.

July 15, 2011

Respectfully submitted,

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