

**Author's response to the Pipeline Operators Group
commentary on the paper "Gorillas in the Mist"**



**AUTHOR'S RESPONSE TO THE PIPELINE
OPERATORS GROUP COMMENTARY ON THE
PAPER**

"GORILLAS IN THE MIST"

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Author's response to the Pipeline Operators Group commentary on the paper "Gorillas in the Mist"



The author of "Gorillas in the Mist" takes this opportunity to thank the Pipeline Operator's Group (POG) for its response to the paper.

It is noted that the POG's response provides a very general critique together with an attempt at dismissal of the contents of the paper on several grounds including that it is "not reflective of industry operation and more reflective of an opinion of a person". Several of the POG's statements are not founded upon fact. Further, the POG response does not recognise that the author canvassed across the Industry for this paper and much of its content is a result of discussions across a broad cross-section of the Industry. Given such, the author felt a response was critical to the POG's, the APGA Board's and the APGA members' better understanding of the contents of and the intent behind the paper.

It is also worth stating at the outset, that the paper "Gorillas in the Mist" addresses several topics namely, the management and allocation of risk, procurement practices, People, Safety, Culture and the Community, Social License and the culture of internalisation and seeks to point out matters considered by the author to require attention by pipeline operators. It does not single out specific pipeline operators for distinct failings under any of the topics but, judging by the POG's response, as well as comments received directly by the author, several of the matters raised have obviously hit raw nerves. This is as it should be as pipeline operators are invited by the contents of the paper to recognise and to hopefully address those failings they might identify as applicable within their own organisations, if indeed they do apply. Should the behaviours cited not apply to their organisations, and perfection is viewed to persist, all is well, and all is good, and the contents of the paper can be completely ignored. But I would suggest that there remains virtue in the saying "don't shoot the messenger".

The author has responded to the various sections of the POG's response below.

POG collaboration and APGA long term role

The APGA members that are operators of high-pressure gas, oil, water and slurry pipelines throughout Australia, New Zealand and PNG have the opportunity to meet on a regular basis to support one another to enhance the safe and efficient operation of their pipelines and associated assets.

These meetings are well established and provide a **confidential forum** for sharing of technical and general operational experiences on a range of subjects.

The health of our collaboration is portrayed by the sharing of safety, operational issues that have been experienced by organizations, and their willingness to ensure that the community is safer based on raising these issues.

APGA continues to encourage these meetings, with the support of all Owner Groups, **as we focus on self management of issues**, whilst highlighting these across all industry owners.

1. Author's response:

The Pipeline Operator's Group (the POG) is composed of a number of representatives from the water/slurry pipeline sectors but is largely constituted by oil and gas transmission pipeline and distribution system

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operators (eg Jemena, APA) and oil and gas companies that produce oil, gas and coal seam methane (eg Origin, Santos) and which, as part of their production operations, operate pipelines. Whilst both may operate gas transmission pipelines in their own right, the distinction between the two groups is important for the purposes of this response and the author shall refer to the large pipeline operators as transmission pipeline operators and to those producing companies as production pipeline operators.

The POG has been in existence in one form or another for a long time and originated in the days of The Pipeline Authority (TPA) to share information on stress corrosion cracking (SCC) following the failure of the Moomba to Sydney Pipeline (MSP). The "Gorillas in the Mist" paper recognises the role played by the POG. The paper states:

What really backs up the industry's self-belief in the 'safe and reliable' pipeline industry? Is the Industry really good at what we do or have we just been mediocre with a big dose of luck? A widely held view, for which I find there is good evidence, is that pipeline operators are simply profit and growth driven. In addition, a lack of the necessary experience and a complacency about the maintenance of their pipeline assets is endemic.

The Industry has had some close calls. The Pipeline Operators Group (POG) does provide a forum where these can be shared but I recall a directive early on in my own career where discussion was gagged for commercially sensitive and reputational reasons.

The paper does not detract from the work that the POG does, it merely remarks, that in the author's own career, there has been experience of gagging discussion in such forums for commercial and/or reputational reasons. Indeed, the POG is a well-established group, but it is a "closed" assembly, notably dominated by the larger owners and operators of production and transmission pipeline assets in Australia, with regrettably no independent representation from consultants or other sectors of the Australian production and pipeline and gas industry. The fact that the learnings are "confidential" amongst owners of pipeline assets means that the broader industry cannot and does not learn from the sharing of incidents and near misses. This is not in the best interests of the safety and integrity of the production and transmission pipeline and gas industry.

The Gorillas in the Mist paper states:

The experts in the safety of complex engineered systems advise us that we need to share these stories in order to pass on the knowledge but, be they incidents or near misses, some in our Industry seemingly want to conceal these events to guard their reputations.

Whilst the POG proudly states in its mission statement that "commercial issues are left at the door so that POG members can share real-world experiences of government regulation, safety and environmental concerns, equipment performance, even people issues associated with working in remote locations", it is the author's view that the discussions are kept confidential purely for regulatory, commercial and reputational reasons.

The paper is also very supportive of the APGA but noted amongst other things that their mission in particular is, "to provide valued services, foster collaboration and to represent the collective interests of all Industry members". The paper states:

"To the general membership, the direction in which it [APGA] appears to be heading is one where the secretariat is seen as subservient to the wishes of the major pipeline operators despite a sincere and obvious credence expressed by the individuals of the secretariat in their mission. I wish to emphasise the

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fact that the Industry must respect the secretariat is required to represent the collective interests of all members and not just those of the powerful."

The author notes there have been incidents in some Australian industry associations where a large corporate member(s) has threatened to remove their support for the association if it did not adopt, lobby in favour of and/or promote the policies preferred by that company. In saying so, the author does not suggest this is the case with the APGA, far from it, and the "Gorillas in the Mist" paper merely reminds the full membership that the APGA secretariat is there to serve the interests of all its members and not just those of the powerful.

Independent Consultants

Operating pipeline companies use independent consultants regularly to provide specialised services. These include facilitating safety management studies, formal safety assessments, hazard and operability studies, layer of protection analysis studies, safety integrity level studies, performing design verification, undertaking specialist designs, undertaking environmental studies, performing independent audits and operational reviews.

Independent consultants also perform a pivotal role on standard committees including chairing responsibilities and are industry advisors on Future Fuels CRC research.

2. Author's response:

It is pleasing to hear that the POG does recognise the use by the Industry of independent consultants and notes it is specialised services that they provide. Some of these services are provided for a fee, an absolute necessity if consultants are to make a living in the Industry they serve. The author is very cognisant of this fact having operated on and off for the past three decades and continues to remain active as a consultant in the Industry providing a large number of the services mentioned by the POG.

The author is also aware of the extensive efforts independent consultants provide on ME 38, as industry advisors on the APGA Research and Standards Committee (RSC) and on both the Energy Pipelines and the Future Fuels CRC as well as serving on the many APGA committees. The author was a member of the RSC and paid the membership fees before resigning in 2020 and has contributed to other APGA committees over a lengthy period. It would be well for all the members of the POG and the management of the member companies represented to remember that these services are passionately provided by independent consultants on a voluntary basis (at a cost of "lost opportunity") and the consultants pay for their travel and accommodation costs which is another impost, unlike the representatives of member companies that serve on these committees whose costs are covered by their respective companies.

The "Gorillas in the Mist" paper delivers a very comprehensive resume of what consultants have and continue to contribute to the Industry since privatisation began in the late 80's, 90's and into the 2000's. What the paper notes is a distinct reduction in the number of consultants actively being engaged by the Industry for fee paying assignments together with the emerging fact that there is a distinct lack of new entrants coming into the pipeline consulting sector. This POG response does not acknowledge this fact.

The "Gorillas in the Mist" paper states:

"The level of engagement of independent consultants and consulting engineering houses by pipeline

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operators has dramatically reduced in recent times. Internalisation means that consultants cannot earn a living in the Industry and a number have resigned from both APGA and the RSC as a result. Consulting houses report they have less work in pipelines mainly as a consequence of the adversarial approach and risk allocation prevalent in tender documents combined with the fact that the lowest bid wins, there is little consideration for quality and/or reputation. Some suppliers, once mainstays of the Industry, view it as a minor component of their business now and only tender on the outside chance they might win, there is no longer an imperative to win, it's more of a hassle than it is worth.

When challenged on the matter of engaging independent consultants, pipeline operators' responses have ranged from too expensive, to personality issues, and to one of being potentially liable for aiding and abetting the 80/20 rule on annual remuneration from a single source or the long-term engagement of an independent contractor having to be considered as one of a full-time employee. When challenged on the matter of awarding to the lowest bidder every time, the response is, we like to share the work around. It would appear from the nature of these responses there is little desire to retain a competent cauldron of independent consultants or a pool of competent contractors, suppliers and service providers within the Industry.

The obvious long-term effects of internalisation include a reduction in the pool of expertise, a reduction in the experience level of that pool and the flexibility that such an experienced pool offers. Take a look, there are few if any new independent consultants hanging their shingles out for work these days. What is less obvious are the cultural effects internalisation can have within an organisation in the longer term.

On the matter of "too expensive" the author notes that most consultant's fees are generally in line with or less than the average pipeline operators' schedule of rates for positions of similar capability and experience. What is not generally accepted is the fact that consultants do not receive any fees for the voluntary work they do, nor for the travel and accommodation costs involved and the biggest benefactors of their contributions are the corporates in the pipeline and gas Industry.

Whilst the POG recognises that consultants do provide specialist services, it would be well for the POG to openly acknowledge the importance of such independent and unbiased consulting services and the value of retaining a cauldron of independent consultants which is critical to the integrity of the Industry going forward. This can only happen if the pipeline operators engage consultants more widely so they can earn a respectable living in the Industry, and it may be a good thing for the APGA to investigate some of the alleged impediments to their more widespread engagement.

Competencies

Some companies are undertaking both intern and graduate programs with permanent positions for graduate engineers being placed annually. Engineers gain experience on 6 monthly rotations for 2 years to gain a variety of experiences prior to working closely with senior engineers in a permanent position to gain knowledge with both buddying and mentoring support active. This occurs across a broad range of engineering disciplines.

3. Author's response:

These actions are only recent but are encouraging. For more comments on training refer to Author's responses #5 and #7.

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Some companies are developing engineering competency frameworks which use the APGA Pipeline Engineers Competency System where relevant or use this to set standards for the framework. This is used to develop engineers to ensure they are competent to carry out their current engineering duties and can develop skills for future roles as well.

4. Author's response:

The "Gorillas in the Mist" paper notes, in glowing terms, that the APGA had embarked on the preparation of the Pipeline Engineers Competency System (PECS). The paper states:

"APGA, with the full support of the Board representing owner members as well, embarked upon and funded the development of the Pipeline Engineers Competency System (PECS) which commenced in 2010 and was completed in 2016. Many experienced, independent consultants gave of their experience and time willingly, passionately and for free to develop the competency system including myself."

The paper went on to lament that the uptake of PECS was extraordinarily slow given the huge investment in consultant's voluntary time, costs with fees paid to the convenor and actual costs in time of the company representatives involved with the creation of PECS. The paper states:

"Since the commencement of action in 2010, it has taken over 7 years to build PECS, 7 long years and after all the effort, why has there been such a very slow uptake of the PECS by the Industry to date? Chris Harvey reported in his 2019 paper "APGA's Pipeline Engineer Ten Years On – Where to from Here?" that the uptake of PECS in the Industry was probably 25%. There is no evidence it has increased since. Perhaps there might be a surge in the uptake in order to avoid potential embarrassment following the agreement with the Canadians who have adopted and purchased a licence for the system?"

The author's opinion is that some in the Industry have not gone to the lengths of preparing competency matrices for their engineers including relevant training needs analyses, let alone embraced PECS simply because it is a cost impost.

Mentor and coaching programs are used extensively throughout the industry to develop engineers. Succession planning is undertaken in great detail to sure the required competency within the industry is maintained and improved. This also applies to managing retirements.

5. Author's response:

Whilst the "Gorillas in the Mist" paper does not refer to succession planning per se, it recognises that some members of the Industry have come to the realisation just lately, that they needed to contribute to the training of operators, technicians, and engineers. The author hammered this issue with members of the APIA Board as far back as 2008. It notes that some in the Industry have recently implemented training programs. However, this does not detract from the fact that for far too long a time, the transmission pipeline operators in particular, have relied on other sectors of the Industry to provide the pool of experienced and trained technicians and engineers. The paper states:

"There is a big difference between the person who has had 20 years of different annual experiences and the one who has had 20 years of the same annual experiences, the former available with movement across the Industry and the latter generally resulting from confinement to one organisation coupled with a reluctance

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to move people around the business. Less experience often results in costly outcomes because of poor risk awareness and a restricted sphere of knowledge. As the Industry ventures into more complex endeavours, such as gas production storage and processing and LNG and hydrogen, new and additional layers of competency are required.

A recent move by some in the Industry to implement apprenticeships and graduate traineeships is encouraging but in general, pipeline operators have not been socially responsible in providing the training and apprenticeships necessary to adequately sustain the skill requirements of our Industry, instead relying for many years upon other industries to supply the technicians and technical staff required. This has been true of engineers for a long time too but hopefully it might change with the adoption of the PECS.

The author recognises that some production pipeline operators have, for a long time, provided apprenticeships for operators, technicians, and training for engineers. The reference in the paper to pipeline operators not being socially responsible refers largely to the transmission pipeline operators whom, in the author's opinion, have not done their share of upskilling for the future of the Industry since privatisation of the pipelines began in the 80's, 90's and into the 2000's. This is in stark contrast to the training and apprenticeships provided in the days of The Pipeline Authority (TPA) which was a government owned corporation and operated the Moomba to Sydney gas pipeline or Associated Pipelines Ltd, a private company which operated the Roma to Brisbane pipeline for many years. This fact may say something about today's private companies and their allocation of budgets into future proofing the Industry versus short term profiteering.

The "Gorillas in the Mist" paper states:

"Chris Harvey went on to state the anecdotal evidence in the mid and late 2000s was that the awareness of and expertise in AS 2885 was far from good. Whilst this was not the only measure, it is an extremely important one for the Industry. This concern seemed, at the time, to relate to engineers, who were doing the pipeline engineering work.

It resulted in an increase in some pipeline operators seeking training in AS 2885 and related Australian standards. Under the influence of Brian O'Sullivan, PIPeD commenced providing pipeline engineer training in 2006 and Ian Haddow and I did a lot of bespoke training in pipeline operations and maintenance and in AS 2885 between 2008 and 2012. It is now 2021 and we are still debating the absence of competency despite Max Kimber first raising the concern publicly in 2003."

The issue with operator, technician and engineer training has always been that the consultant training service providers are never able to recoup the lost opportunity cost in the preparation of the training materials because the production and transmission pipeline operators do not engage their services enough to adequately recover the costs and provide them with an acceptable return and a living. The Haddow/Dykes bespoke training ceased in 2012 for this very reason and discussions with other consultants who have considered providing training services elicits exactly the same response.

Safety Records, site visits, Safety Mgt Studies

Safety Management of existing pipeline operations around the country is the responsibility of the operator. This responsibility must be documented focusing on safety management, facility design and construction and risk management studies to uphold the safe operation of individual assets. While each state has differing mechanisms of regulation each of the states have regulations that requires

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standards to be met. These standards are set by the industry in forums made up of individuals from the industry. Each of the state regulators have obligations to approve the safety management of each operating entity and to audit and check compliance to the safety management practices, which could be said to be best in world practices.

6. Author's response:

The author has extensive experience in the management of transmission pipelines and in oil and gas production including production pipeline operations. This experience embodies direct dealings in operations management positions over a 40 year career with the regulatory authorities in the States and Territories of Queensland, New South Wales, Victoria, Tasmania, Western Australia, and the Northern Territory and with the Federal regulator for offshore facilities now referred to as NOPSEMA.

Most Technical Regulators in Australian jurisdictions rely on an independent validator (which in most cases is an independent consultant) to recommend "acceptance" of the Safety Management Plans (Safety Case) for pipelines. Except for perhaps Victoria, in most jurisdictions it does not extend to "approval" as stated by the POG because the act of approval carries with it certain legal obligations.

Operators around the country have focused site visits and some have management KPI's to focus and support management site visits. These visits are about understanding the challenges site workers face in getting their work done. Only those in the businesses understand and appreciate the collective safety measures each business has. Safety is not a standalone object that works on its self it is a combination of many things that are not necessarily visible to onlookers who may only touch the perimeter of a business. The evolution of process safety across the industry brings a new dimension to the safety story and is more about the quality of work being performed by the technicians, the engineers, the management team all the way through to the employment process of people.

7. Author's response:

The introduction of management KPI's to focus and support management site visits is a very recent occurrence and it is not widely applied in the Industry as the POG suggests in this response. The mere fact that KPI's are required to encourage or indeed stipulate that engineers spend more time in the paddock is a telling statement in itself.

The POG is attempting to dismiss the matters concerning the level of technical and operational competence and the resultant level of engineered safety raised in the "Gorillas in the Mist" paper out of hand on the basis that "only those in the business understand and appreciate the collective safety measures each business has" and suggesting that the author, as an onlooker "may only touch the perimeter of a business".

It is a complete misnomer to suggest that the only people who can understand and appreciate the collective safety measures in a business must be internal to those businesses. Why would high-performance organisations engage independent auditors to provide an unbiased critique of a company's safety systems? And why would independent investigators be called in from outside companies to investigate safety incidents within the business if they cannot understand and appreciate the collective safety measures (and failures) in a business?

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There appears to be a reluctance in many modern corporates to move personnel around the business and indeed to manufacture the bridges to other, perhaps competing organisations to offer opportunities to broaden their experiences and make them more rounded and better, more proficient contributors. This is a trait emanating from the competitive forces prevalent in an oligopolistic environment in which holding on to resources is considered critical. This factor works to amplify the potential for mimetic and normative isomorphic behaviours in some organisations because there is no external experience gained in other corporate institutions from which to draw upon. Groupthink tends to thrive under these circumstances.

The author is of the view that the most valuable resources in a company as well as those excellent independent consultants have spent time learning and gaining experience across a multitude of disciplines and have been exposed to several corporate cultures in their careers. In the case of independent consultants, this is one of the important factors which gives them the ability to provide the specialist services that the POG recognises they provide.

The author's company operates a high-pressure gas pipeline, and to be able to do so, the company must demonstrate commensurate levels of competence to the Technical Regulator. This includes the preparation, validation by an external independent party and acceptance of a Safety Management System compliant with the Pipeline License and the relevant Acts, Regulations, and broad statutory requirements relevant to a pipeline operation.

The author's company's Integrated Management System incorporates a Safety Management System necessary to conduct well production, gas process plant and production pipeline operations. The author has conducted third party safety audits, quality audits, root cause analysis and regularly conducts routine audits of it's own business and is therefore very familiar and current with how safety is managed and promoted in a business, including the very important aspect of how the quality of materials and workmanship contribute to a safe environment.

Indeed, for the POG to suggest that the author might be termed just an "onlooker" who may only touch the perimeter of a business and as such would be blind to process safety and therefore to the dimension of the safety story is quite irrational given 40 years of experience in the oil and gas production and transmission pipeline industry both in large corporations and now in private practice as a consultant/contractor.

What the author states in the "Gorillas in the Mist" paper is as follows:

Whilst some companies have KPI's linked to site work, our engineers are not as site savvy as they should be, the majority of their time is spent in air-conditioned offices, and they lack the relationships with the technicians that bring the practical operational experiences and risk awareness necessary to cement their competency.

The level of engineered safety is dependent upon the extent of technical and operational competency in the organisation owning and operating the plant regardless of the fact that it is often supplied by an engineering house or a specialist contractor under a services contract. Many such service providers lack the operational competence that must be integral in the engineered safety of operating plant. This comes from years of working on site with the mix of skills and talents necessary at all levels to operate and maintain such assets.

The Haddow/Dykes bespoke training completed during the period 2008 – 2012 with some transmission and network pipeline operators included site visits as a prelude to the training sessions which incorporated lengthy discussions with the engineers and technicians in their working environments whilst they undertook their daily

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tasks. This is not just touching the perimeter of the business. This bespoke training was designed, given the experienced background of the trainers in oil and gas production and pipeline operations, to understand the nuances of those businesses from the engineer's, technician's, and operator's perspective in that business. In addition, both trainers have extensive pipeline operations management as well as large pipeline project delivery experience where quality is critical to project performance and were therefore able to deliver this training with a very good grasp of the threats and controls necessary to ensure high standards of safety across these businesses.

The author feels it is necessary to point out that he has also had extensive experience in the recruitment and management of personnel building the Duke Energy International pipeline operations team from 20 to over 100 in the space of 2 years between 1999 and 2002 and in the recruitment and management of personnel in multiple oil and gas, water, power station and pipeline projects across Asia and in Australia. This experience was used to add value to the bespoke training provided and to fully capture the cradle to grave nature of personnel selection, skills assessment, training needs analysis, the provision of skill development and training, mentoring, performance appraisal and remuneration.

Whilst at Duke Energy the author commenced both a graduate and an undergraduate training program and was in the process of beginning an arrangement to swap junior engineers with an engineering consulting house designed to give operating engineers experience in the design office and vice versa. The author's opinions as expressed in the "Gorillas In the Mist" paper are based on extensive knowledge of the subject and for the POG to even attempt to suggest that the author is not familiar with business processes as they apply to the "safety story" is simply inaccurate and is not based on any level of familiarity with the author's career and experience.

It cannot be over emphasized; engineered safety is dependent upon the extent of technical and operational competency in the organisation owning and operating the plant and this is down to its people and the level of site experience they obtain.

Some broad ranging commentary explained in this document is not reflective of industry operation and more reflective of an opinion of a person. The Transmission Pipeline Operations in Australia is a professional industry that works to very high standards regardless of ownership. Ownership of business has a commercial side but the operations side is shared across industry with a very powerful Pipeline Operators Group that share learnings, competencies and industry wide issues to assist operators in their business to improve each other.

8. Author's response:

When the "Gorillas in the Mist" paper was presented during the virtual conference in 2021, the opening lines stated:

I have canvassed across our Industry for this paper, and a short 25-minute presentation does not do it justice. I urge you to read the published version for more insight. To the many who contributed, thank you, I hope I present your feelings adequately.

Perhaps the POG have missed the very important point that much of the subject material discussed in the paper were matters both discussed with and brought to the attention of the author by industry members as pressing

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issues. It is however explicit, that an author of a paper is expressing his or her own opinion in a paper unless it is stated otherwise.

There should indeed be a view that some of the commentary in the "Gorillas in the Mist" paper is broad ranging and it was the intention of the author that it be so. To give details of the behaviour cited and to state publicly the specifics of the incidents and the names of the companies involved that would illustrate beyond doubt the author's presented "generalised" view would perhaps (almost certainly) invite legal action in the form of libel and/or defamation.

The author has also been accused of having a personal vendetta against corporates in the Industry. Nothing could be further from the truth. The intention of the paper was to engage the Industry in a conversation. It may be that this reaction was to certain statements made in the paper which were recognised as particular failings, by particular persons, in particular organisations. Nonetheless, if individual members of the POG and indeed any of the CEO's or Board members of the represented companies would like to discuss actual incidents within companies that would illustrate and support the author's broad ranging commentary, please feel free to have a confidential, no holds barred discussion.

Furthermore, the "Gorillas in the Mist" paper does not suggest that the pipeline industry is unprofessional. What the paper addresses is a range of subjects, the management and allocation of risk, procurement practices, competency, the behaviours of the administrators in people, safety and culture departments, a social license, and the philosophy of internalisation where-in the author finds (in auditing language) there is a real need for large amounts of improvement, and perhaps a status that might necessitate the issue of many non-conformance reports. Not all pipeline operators demonstrate failings in all the subject areas addressed, and some perhaps no failings at all. The author would suggest, on the basis that the POG did not comment on a number of these subject areas at all, there is a high chance there is a need for improvement. It is left to the reader to assess whether those failings or behaviours apply in the business that employs them.

The author has received a lot of feedback on the paper, understandably these have been both positive and negative. Amongst the negatives was "we employ consultants all the time, just not him", fair enough, it's a free World. Amongst the positives was one that came from a prominent member of APGA, and long-standing past APGA Board member who stated "Stephen, you said things that no-one else has had the guts to say". The paper has clearly resonated with many in the APGA membership, as was the author's intent.

Business operations is subject to many audit processes, and it is fundamental that **the directors of businesses through risk management committees and audit committees** take independent discoveries to prove the management policies and application of those policies. This draws in the independent views, assessment, and engineering practices of sound safety management.

9. Authors response:

The use of audit committees made up from members internal to the organisation can make "independent discoveries", but the process lacks "true" independence. Their views will be tainted with the corporate culture and philosophy and cannot be seen to be unbiased either by intention or through inherent behaviours of mimetics and/or normative isomorphism that such a process would entail. It is well understood in progressive management circles that routine internal audits become audits for the sake of audits and drive higher levels of

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complacency. The role of an experienced and independent external auditor is valuable because they usually bring with them observations to the business process from better, higher performing organisations or learnings from examples of their own real experiences and they are not gagged or held back by corporate policy, procedure and precedent. The "Gorillas in the Mist" paper states:

Mimetism is defined as the copying of the actions of business peers. Normative isomorphism refers to the fact that organizations are influenced by rules that introduce a prescriptive, evaluative, and obligatory dimension which extends beyond work into the social lives of the employees. These behaviours are symptomatic of Groupthink. Irvin Janis described Groupthink as a phenomenon that occurs when the desire for group consensus overrides people's common-sense desire to present alternatives, critique a position, or express an unpopular opinion. The desire for group cohesion effectively drives out good decision-making and problem solving.

In recent times I have observed these behaviours to be exhibited more and more in our Industry. It stems from a policy of exclusive recruitment accentuated with that of internalisation. Don't get me wrong, all organisations have a right to run a conformist recruitment policy, but a big danger is the propagation of an elitist culture, which is not good. When the recruitment policy is driven together with a "respect the boss" normative that produces an expectation that the respect required by the leaders within an organisation apply equally to Industry members outside the workings of that organisation, it is not good either. Senior members of the Industry have publicly articulated such policies in the recent past. Internalisation removes the independent and externally influenced checks and balances and the norm propagates.

It is the author's opinion that such internalised audit processes conducted by internal risk management and audit committees will only inform the Directors and management of those Companies, be they independent (Directors) or not, what the business wants them to hear, not what they need to hear.

The statement made by the POG is a poor attempt to dismiss the comments out of hand as "the opinion of a person".

Safety standards in our industry are leading, culture is developed from good sound workable rules and to each rule there must be consequence to ensure the understanding of importance. **There should be no excuses made for applying consequence to rule breakers in our industry. There should also be no excuse for moving with the times into the electronic world. The new generation is all about the electronic digitisation and as we see the next generation develop in our industry we also see the evolution of digitisation.** This brings new concepts that must be tried and tested and with that brings education to build competency of existing staff. The industry must embrace this new technology or it will be left behind, it is the operators responsibility to maintain consistent to industry movement on a cost verses efficiency basis.

10. Author's response:

Safety standards are a given and the consequences of a breach must be commensurate with the circumstances surrounding the breach. However, these standards are being driven by managers, people, safety and culture experts and engineers who do not have enough experience on the work front. Many of them are time consuming, paper wasting imposts driven by a culture that has this illusion of a "Risk Free" World and they seem

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to allow the addition of more and more impediments to the safe conduct of work with impunity. This industry lives with risk all day, every day, and the manipulation of "sound working rules" into ridiculous working requirements lacks logic because the risk assessments conducted by inexperienced managers, people, safety and culture practitioners and office engineers are lacking in practical reality. In addition, the office engineers are placed in charge of technicians, and they do not have the relevant field experience and are a hindrance to the efficient conduct of work at the coal face.

If you pay the right money, you get to employ the right people and they manage the safety at the work front using practical, workable procedures, JSEA's, SWMS, etc. If the corporate culture is right and they are treated with respect, then you get the quality outcomes of their work as a direct consequence. They are proud of their contribution.

If you employ the wrong people then you must "proceduralise" everything to keep them safe from themselves and because their input into how they should do the work is not valued, regardless of their level of competence, they are effectively lobotomised from the very act of thinking "safety". As a result, quality declines, the risk profile is raised and safety statistics rise. It reminds me, when the budget bottom line threatens the profit margin, the first thing to go is the biscuits in the coffee room, the second is the training budget and remember, the cream biscuits never come back!

The "Gorillas in the Mist" paper does not discuss the merits or otherwise of the transition to a digital World. Evolution of the work practices in any business necessitates the adoption of new technology. What the paper emphasizes is the effects of management restructure after restructure which usually follows the transition to a new CEO, relentless change for the sake of change and in particular the lack of foresight and inclusion of the needs of the workforce at the work front in the application of change to ensure it provides for more efficient and effective systems. It fails to do this effectively because senior management, those in the people, safety and culture and procurement departments and the engineers are much less familiar today with the practical issues faced at the work fronts they are supposed to manage. The paper states:

What our people, the pipeline technicians actually do in tending to pipelines daily has not changed a great deal over the near 40 years I have been associated with pipelines. They do lots of windscreen time, deal with high pressure gas in pipes, operate pigs and clean up the mess, calibrate instruments, inspect right of ways and deal with emergencies amongst other things. Yes, there has been technological change, instruments are more accurate, SCADA systems are more intrusive than they used to be in the days of the Leeds and Northrup 2068 systems and we now have computers.

Ask any technician what has changed and their answer is policy, procedure, layers of paperwork, management attitude, lack of management support, having to go through very inexperienced "office engineers" to complete their field work, difficulties with procurement, endless restructures that threaten their security, lack of consultation in the endless suite of change that is imposed on their lives, the list goes on. Visits on the ground from senior management and engineers are few and far between and if they do occur, it is within the time constraints ensuring a return to the city office by days end.

Work scheduling software like Maximo, whilst a good system, has dehumanised the workplace. The technician is communicated his weekly tasks through a printer. The durations allowed for the tasks don't even account for the travel time involved. There is clearly a need for training, communication, feedback and discussion to make it work effectively. Regardless, there is a loud and growing chorus in the engine room of

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our pipelines shouting that industry management does not know what it is doing. This is a direct symptom of least engagement with the coal face. Good management involves a great deal of walking around, not just talking about it and making decisions in select and closed management circles.

Max Kimber's 2003 paper reminds us that one of the contributing factors in the Longford disaster was the relocation of plant engineers to the Melbourne office which deprived plant operations personnel of engineering expertise and knowledge which previously they gained through interaction and involvement with engineers on site who also gain valuable operating experience. Our pipelines are potentially subject to the same fate.

Most Gas Pipeline operations around Australia are economically regulated assets and are therefore scrutinised heavily when it comes to the cost of operation and OPEX.

11. Author's response:

The "Gorillas in the Mist" paper does not suggest production and pipeline transmission operators are not scrutinised heavily. However, it needs to be stated loud and clear, that the level of scrutiny applied by either Economic or Technical Regulators should not be the determining factor driving the performance and behaviours of the pipeline operator as this POG response seems to suggest. Indeed, the integrity associated with such performance needs to be exemplary if the Industry wishes to retain even a modicum of self-regulation.

The POG statement that "Most Gas Pipeline operations around Australia are economically regulated assets and are therefore scrutinised heavily when it comes to the cost of operation and OPEX" is one and the same thing. OPEX is the cost of operation. What the "Gorillas in the Mist" paper states is, there is little incentive for pipeline operators to be efficient in terms of their capital and operating costs. The operating tariff derived through the rate of return instrument is calculated on the capital asset base. So inefficient management of capital projects (CAPEX) results in a larger capital base and the rate of return formula results in an increased tariff. The paper states:

Going back a decade or two, efficient delivery of projects meant meeting budget and time constraints. Despite the fact that the fundamental premise applied by the economic regulator in the derivation of the rate of return instrument that regulates pipeline tariffs to a fixed percentage is that the expenditure making up the capital base is necessary in delivering the transportation service used, there remains little incentive for pipeline operators to be efficient in terms of their capital and operating costs. The pipeline operator can adjust the regulated asset base at the next 5 year re-set for overspend. It is rare that an element of the asset base is rejected. Such a cost recovery mechanism is not available for pipeline contractors and equipment and service providers, they can only revert to the courts. Over the last decade, project performance would suggest that efficient cost imperatives are no longer important to pipeline operators. The net effect of their current approach to risk allocation is a key grievance amongst industry construction contractors, and equipment and service providers.

Regulators – improved relationships

While historically there has been a disconnect between technical and economic regulation in some jurisdictions, pipeline operators are now seeing closer collaboration between economic and

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technical regulators driving safety focussed outcomes.

Members of the Pipeline Operators Group believe that Technical Regulation of pipeline operations is robust, with Pipeline Regulators driving continuous improvement across the country. Pipeline Operators, through events such as the POG Seminar and APGA convention **openly discuss operational challenges**, enabling technical regulators to be informed of emerging issues outside of their jurisdiction. There is also collaboration between regulatory bodies to promote data sharing and improved technical regulation.

The collaborative approach to safety related matters is highlighted by Pipeline Operators effectively working with technical regulators in a number of jurisdictions to improve pipeline safety outcomes where land is developed in the vicinity of pipelines. Recent changes to South Australian Planning, Development and Infrastructure regulations have highlighted the effective safety outcomes being achieved through this collaboration.

Pipeline Operators have a progressive relationship with Technical Regulators on matters relating to pipeline safety. Technical regulators from five states are now participants in the Future Fuels CRC providing them with access to the latest pipeline related safety research. Technical regulators are also integral members of ME38 and our Australian Standard Sub-committees, enabling them to directly influence the standards called up by all State based legislation and ensure prompt uptake of research related to pipeline safety within standards.

12. Authors response:

The advent of Technical Regulators being permitted into APGA membership or indeed to be represented at APGA events is recent. The author has always promoted honest and open relationships with the Technical Regulators in every jurisdiction the author has operated in within Australia (and overseas) for many years and stands with a very high reputation for integrity amongst them. If members of the POG have any doubts over the author's standing with the Technical Regulators, please ask them.

The author was also responsible for a paper entitled "Notification Zones" presented to the APIA conference in 2002 in which the concept of notification zones around pipelines was discussed as a means to ensuring the safety of the public where development was planned adjacent to pipelines. This came out of the excellent working relationships established between the Duke Energy International project and pipeline operations teams and the Tasmanian Regulators during the planning, construction and operations of the Tasmania Gas Pipeline. Many of the concepts in that paper have proliferated into other Australian jurisdictions and it is good to see that they form the basis of the recent changes to South Australian Planning, Development, and Infrastructure regulations. The POG should recognise that such matters have been at the forefront of pipeline operations management through the excellent relationships held with Technical Regulators in jurisdictions other than just South Australia for many, many years.

Production and transmission pipeline operators have resisted the formal inclusion of Technical Regulators in APGA business for a long time and their inclusion today should remain restricted. This must be so, as such a structure forms a very important part of the principle of "the separation of powers". However, their contribution in the ongoing development of Australian Standards on ME 38 and through membership of the

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Future Fuels CRC is a good thing; after all they are responsible for holding the industry to account in such matters because the standard AS 2885 is Council of Australian Governments (COAG) endorsed as the National Standard and they need to be suitably informed.

The only collaboration between economic regulators and technical regulators that might need to occur to drive safety focussed outcomes should they be absent, is where the cost of operator and public safety becomes an issue in the aggregate cost base submitted by a pipeline operator for the 5-year tariff re-set. This would amount to the receipt of technical advice from the Technical Regulator.

Notwithstanding, the "Gorillas in the Mist" paper does not state anything about the state of the relationship of the Industry with the Technical Regulators, it merely notes if the Industry does not attend to the malpractice in some of its behaviours and a fatal incident does occur, besides the direct cause, these behaviours are likely to be found as contributing factors and the Industry will be subject to the strong arm of regulation along with its costly consequences. Several prominent industry members have presented papers over the years to the APGA conference and to seminars on this very issue. The "Gorillas in the Mist" paper simply carries yet another similar warning. The paper states:

Normalised behaviour can be good or bad. In the economic regulatory sphere, pipeline operators have been found wanting by the ACCC. This forced the hand of the economic regulator to act to ensure that the monopolistic powers that can persist in oligopolies are not exercised in the markets in which they operate.

As the Economic Regulator and the ACCC have found grounds against the Pipeline Operators, there is no doubt the Technical Regulators will too.

When root cause analysis into a future high consequence disaster is undertaken, as it will be, these bad behaviours are likely be found to have manifested into contributing factors, especially where normative isomorphism is prevalent and where monopoly power has perhaps been exercised within the Industry and perhaps with extension through the industry's representative body, the APGA.

Author's closing comments:

I am pleased that the POG has chosen to respond to the paper "Gorillas in the Mist". More than anything else, the author wanted the paper to elicit constructive dialogue in the Industry. Publishing such a "critique" in a paper addressed to the Industry comes with the risk of dismissal and alienation. Should one or both occur, so be it. The author has always prided himself on authenticity, "what you see is what you get" and this means owning one's successes as much as owning up to one's failures. I hope that the POG, together with the wider Industry, accedes to the authentic integrity of the paper and this response, and works to the betterment of the Industry by being prepared to listen through constructive dialogue and to continue with the process of continuous improvement.

It has been stated that perhaps the paper should have been presented in open session rather than in the more restricted virtual session that the advent of Covid caused because this would have engendered a lot more open dialogue. The author encourages the open dialogue to continue.

There are production and transmission pipeline operators in the Industry that meet exceptional standards in their business processes and strive to meet the statutory mandates of demonstrating continuous improvement

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which is a Pipeline License condition with which the Industry must comply. These are high performance organisations.

Then there the laggards who perhaps place profit before process or to put it bluntly, are simply unprofessional. Over the near 40 years the author has participated in the Industry, examples of both have been the subject of audit, legal process, and complaint in which the author has directly participated either as a manager, an expert witness or as an advisor. Some organisations never learn from their mistakes and lessons learnt processes are not an integral part of their business.

Despite the POG's assurances that pipeline operators have "great" relationships with the Australian regulators, it must be understood that the regulators will never and should never accept internal authorities as providers for the statutory "acceptance" of for example, License requirements, Fitness for Purpose reviews, and other safety related matters which are commonly managed by validation through independent and unbiased consultants.

The regulators rely on the independent validator's advice that they should "accept" such documentation, and in most State and Territory jurisdictions, with the possible exception of Victoria, they do not "approve". Whilst the pipeline operators may advocate for internal mechanisms for approval in the interests of promoting self-regulation, for the Technical Regulators to accept so, would mean the removal of the principle of the separation of powers. It is important that the production and transmission pipeline operators in the Industry, not only accept the application of this principle but having accepted it, acknowledge that it provides a path to much improved integrity, higher performance and an attitude engendering a more willing stance to listen to the messages they (seemingly) don't want to hear.

The independence of consultants and their integrity in providing professional and unbiased advice is critical, not only to the survival of a vibrant consulting sector, but it is also critical to the perception of the Technical Regulators (and others) as to the integrity of the Industry. The "Gorillas in the Mist" paper recognises that the Economic Regulators have questioned this integrity in the recent past and warns that a pipeline disaster will lead to these management behaviours likely being found to be contributing causes, following which the Technical Regulators will also question the level of technical integrity of the Industry. The POG should not need to be reminded of the causal assessment of tragedies such as Piper Alpha, Exxon Valdez, BP Texas City and Longford to mention a few and the array of management behavioural failures cited as contributing factors.

Technically our standing with the rest of the World, promoted largely by Independent consultants in the Research and Standards committee during the 1990's and 2000's is exemplary, as demonstrated by the tripartite agreement achieved with PRCI and EPRG and in our standard AS 2885, which carries great respect internationally. This respect is founded upon independent and unbiased professionalism.

History tells us that some practitioners, in the past as in the present, operating as consultants and production and transmission pipeline operators, have acted and perhaps continue to act in what might be regarded as less than a professional manner and the Regulators have reacted (quite rightly) to the detriment of the rest of the Industry who do the right thing. These actions are not in the interests of the Industry and such practitioners need to be brought to account to preserve the long-term integrity of the entire Industry. The consequences of a breach in professionalism must be commensurate with the circumstances surrounding the breach, much as the POG quite rightly cites as being a requirement to maintain safety standards.

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Moving forward, one of the outcomes of the "Gorillas in The Mist" paper has been the formation of the Consultant's Committee. The author is pleased that the APGA Board saw fit to approve its formation together with its Charter. This will provide a forum within which the interests of Independent Consultants and their passionate contributions can be harnessed for the betterment of the Pipeline and Gas Industry and its future.

It is also appropriate that many of the issues raised in the "Gorillas in the Mist" paper should be discussed openly in Industry seminars to be promoted by the APGA. The subjects of competency, the management and allocation of risk, procurement practices, social license, and corporate behaviour affect every single business in the Industry and continue to be burning concerns amongst many APGA members. This might prove to be a challenging proposition for some but baring one's soul leads to excellent learning outcomes for most. I would encourage Industry members and members of the POG to attend and contribute to such seminars as and when they become available.

Finally, should any member of the POG and APGA Board, be they individuals or management representatives of member companies, wish to discuss the contents of this response or indeed any matters raised in the paper "Gorillas in the Mist", please feel free to discuss the matter directly with the author, contact details below.

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