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August 14, 2008

VIA OVERNIGHT DELIVERY AND EMAIL

Thomas L. Morrison
Deputy Executive Director
California Building Standards Commission
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833

Re: *PEX Potable Water Pipe*; July 10, 2008 Notice of Post-Hearing Modifications to Text of Proposed Building Standards; Opposition to Proposed Amendment of CPC Sections 604.1, 604.11, 604.11.1, 604.11.2 and Table 6-4

Dear Mr. Morrison:

The following comments are respectfully submitted on behalf of the California State Pipe Trades Council in opposition to the proposed California Plumbing Code ("CPC") amendments that would permit the installation and use of cross-linked polyethylene tubing ("PEX") pipe and fittings for potable water piping in buildings under the jurisdictions of the Department of Housing and Community Development ("HCD"), the California Building Standards Commission ("CBSC" or "Commission"), the Office of Statewide Health Planning and Development ("OSHPD") and the Division of the State Architect ("DSA").

The specific HCD, CBSC, OSHPD and DSA PEX proposals are contained in their proposed amendments to CPC sections 604.1, 604.11, 604.11.1, 604.11.2, and Table 6-4 ("PEX amendments").[1] The proposed PEX amendments have been

[1] In addition, the California State Pipe Trades Council continues to oppose the CBSC PEX-AL-PEX proposals contained in its non-modified, previously proposed amendments to CPC sections 604.13, 604.13.1, 604.13.2. Counsel for the Pipe Trades Council has spoken with Commission staff and has been assured that the intent of the proposed amendments to CPC sections 604.13, 604.13.1, 604.13.2 is not to authorize the installation of PEX-AL-PEX. However, the Pipe Trades Council remains

submitted to the Commission for review and public comment as required under the California Building Standards Law and the Administrative Procedure Act ("APA").

These comments are submitted in response to the Notice of Post-Hearing Modifications to Text of Proposed Building Standards dated July 10, 2008 which revises the prior March 18, 2008 Notice of Proposed Changes to Building Standards of the California Building Standards Commission. The revised express terms amend the proposed authorization of the statewide approval of PEX drinking water pipe. HCD, CBSC, OSHPD and DSA continue to propose approving use of PEX and PEX fittings, but revise their proposals slightly to require the following restrictions and limitations on the use of PEX pipe and fittings:

> *All PEX pipe, tube, and fittings carrying water in potable water systems intended to supply drinking water for human consumption to fixtures and appliances shall also receive NSF certification that any leached concentrations of methyl-tert-butyl ether (MTBE), tertiary butyl alcohol (TBA), or California Proposition 65 chemicals are below the relevant California Maximum Contaminant Level (MCL), secondary MCL, notification, or Safe Harbor level or other applicable Proposition 65 level for those chemicals. The tubing shall be physically marked in a manner that indicates the pipe is NSF certified for human consumption uses in California.*
>
> *For water service areas that have detectable levels of MTBE or TBA in drinking water or where there is known MTBE or TBA contamination of a source of drinking water, PEX tubing installed to supply water for human consumption uses shall be certified by NSF not to leach detectable levels of MTBE or TBA, and be physically marked as such.*
>
> *When PEX tubing is placed in soil and is used in potable water systems intended to supply drinking water to fixtures or appliances, the tubing or piping shall meet one of the following:*

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concerned that the proposed removal of the express restriction of these sections for CBSC applications creates an inference that PEX-AL-PEX is authorized despite the continued non-adoption of PEX-AL-PEX by CBSC in footnote 1 of Table 6-4. The Pipe Trades Council thus continues to oppose the proposed amendments to CPC sections 604.13, 604.13.1, and 604.13.2 on the grounds that they appear to create an inconsistency in the code.
2057-029d

1. *The tubing is sleeved with a material approved for potable water use in soil or other material that is impermeable to solvents or petroleum products.*

2. *A Phase I Environmental Site Assessment is conducted in accordance with ASTM Standard E 1527-05 and concludes that contamination of the soil or groundwater by solvents or petroleum products in areas where PEX tubing would be placed is unlikely.*

PEX tubing shall meet the requirements of NSF P171 CL-R or an equivalent standard when used in continuously recirculating hot water systems where chlorinated water is supplied to the system and the PEX tubing is exposed to the hot water 100% of the time.

While the State Pipe Trades Council supports imposing restrictions on the use of PEX pipe and fittings in order to address the leaching, permeation, mechanical failure and other significant impacts of PEX use on public health and the environment, the restrictions and conditions contained in this revised regulatory proposal fail to adequately and fully mitigate the potential impacts of PEX approval. For that reason, the State Pipe Trades Council continues to oppose the proposed statewide approval of PEX pipe and fittings even with these proposed changes.

Moreover, the proposed approval of PEX in the California Plumbing Code must be rejected because the Commission's environmental review of PEX is incomplete and fails to meet the requirements of the California Environmental Quality Act ("CEQA"). The proposed approval of PEX must also be denied because the notices of the proposed action and the accompanying proposed express terms and Initial Statement of Reasons ("ISOR") (collectively "the PEX Adoption Notices") fail to meet the notice and justification requirements of the APA and of Health and Safety Code sections 18929.1 and 18930.

For these reasons, the State Pipe Trades Council respectfully requests that the Commission disapprove the proposed amendments that would approve the use of PEX or, in the alternative, table the proposal pending further study.

I. THE MAY 2008 PEX DEIR IS LEGALLY INADEQUATE TO SUPPORT THE STATEWIDE APPROVAL OF PEX

In May 2008, the Commission, as the lead agency under CEQA, prepared a draft EIR ("DEIR") on the proposed statewide approval of PEX. The DEIR was prepared with the assistance of the California Department of General Services ("DGS"). The State Pipe Trades Council commends the Commission for preparing the PEX DEIR. The DEIR corroborates many of the concerns that we have long raised regarding this product. These concerns include the leaching of methyl tertiary-butyl ether ("MTBE") and tert-butyl alcohol ("TBA") in amounts that greatly exceed the state standards for health, taste and odor, the permeation of PEX pipe by outside contaminants and the potential premature degradation and rupture of PEX pipe. For the first time, this DEIR proposes measures to attempt to mitigate these hazards. This represents a welcome turnaround from HCD's now abandoned 2006 Negative Declaration on the statewide approval of PEX and PEX-AL-PEX, which, without foundation or analysis, simply dismissed the undisputed evidence of these health, safety and performance issues.

Unfortunately, the DEIR has only partially performed its duties under CEQA. Numerous potential impacts of this Project are simply ignored or are dismissed without foundation. In addition, mitigation measures relied upon to address impacts identified in the DEIR are inadequate, improperly deferred or lack enforceability. The failure to meaningfully analyze or mitigate numerous potential impacts renders this document legally inadequate.

Public comment was taken on the PEX DEIR from May 8, 2008 to June 23, 2008. During this public comment period, the Coalition for Safe Building Materials submitted comments and supporting appendices to DGS demonstrating that the 2008 PEX DEIR fails to meet the requirements of CEQA, was legally inadequate, and must be withdrawn, revised and recirculated for public comment prior to certification ("the June 23, 2008 Coalition Comments"). The Coalition members include the California Pipe Trades Council, the Sierra Club, the Planning and Conservation League, Communities for a Better Environment, the Consumer Federation of California and the Center for Environmental Health. The environmental, consumer, public health and labor organizations that make up the Coalition represent literally millions of Californians concerned about the safety of new building materials.

A copy of the June 23, 2008 Coalition Comments on the PEX DEIR and supporting appendices accompany this letter. These comments and appendices are hereby incorporated by reference and made a part of the Pipe Trade's comments on the revised PEX amendments.

The June 23, 2008 Coalition Comments detail the numerous impacts and evidence that require further evaluation. The evidence presented by these comments and the supporting appendices overwhelmingly demonstrates that the proposed statewide approval of PEX may have significant impacts on health, safety and the environment that have not been adequately disclosed or evaluated in the DEIR.

As discussed in more detail in the attached June 23 Coalition Comments, the legal inadequacies of the DEIR include:

- Inadequate description of the Project, including failure to describe and evaluate all variations of PEX approved by the Project and failure to describe and evaluate PEX fittings approved by the Project;

- Inadequate mitigation of potential direct and cumulative contamination of drinking water due to the leaching of chemicals such as MTBE and TBA;

- Failure to evaluate or disclose potentially significant impacts of Ethyl tertiary butyl ether ("ETBE") leaching from PEX pipes;

- Improper deferral of analysis and mitigation of Proposition 65 chemicals that may leach from certain PEX formulations;

- Failure to evaluate the potential for PEX to leach Bisphenol A in amounts within the range of concern for infant and children exposure;

- Inadequate mitigation of the risk that drinking water may be contaminated due to the permeation of PEX piping by solvent-based pesticides and termiticides, benzene, gasoline constituents and other toxic substances;

- Inadequate evaluation and mitigation of the risk of PEX and PEX fitting failure due to exposure to numerous commonly encountered materials

and environmental conditions, including sunlight, high temperatures, chlorine, petroleum products, firestop material and asphalt;

- Failure to meaningfully evaluate reports of widespread failures of PEX and PEX fittings;

- Failure to evaluate the risk of illness due to higher biomass and more abundant virus-like particles found in PEX pipe compared to copper or CPVC pipe;

- Failure to adequately evaluate the direct and indirect solid waste impacts of the Project; and

- Failure to adequately evaluate the risk of toxic smoke when PEX is burned in building fires.

The DEIR must be revised to correct these deficiencies and recirculated for public review and comment. Until a legally adequate EIR is certified, the Commission may not approve PEX in the California Plumbing Code.

II. THE MITIGATION MEASURES PROPOSED IN THE REVISED EXPRESS TERMS ARE INADEQUATE, INCOMPLETE AND FAIL TO MEET THE REQUIREMENTS OF CEQA

The restrictions and conditions imposed on the use of PEX in the July 10, 2008 Post-Hearing Modifications to Text of Proposed Building Standards are a commendable attempt to address the potential health, safety and performance impacts identified in the DEIR. Unfortunately, they fall well-short of what is required under CEQA and what is necessary to ensure protection of installers, consumers, homeowners and building occupants.

CEQA imposes an affirmative obligation on agencies to avoid or reduce environmental harm by adopting feasible project alternatives or mitigation measures.[2] If an EIR identifies potentially significant impacts, it must then

[2] Pub. Resources Code §§ 21002-21002.1; 14 Cal. Code Regs. ("CEQA Guidelines") § 15002, subds. (a)(2)-(3); see also, *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553,

propose and evaluate mitigation measures and alternatives sufficient to minimize these impacts.[3] This requirement is the heart of CEQA.

Mitigation measures must be specific and fully enforceable through permit conditions, agreements or other legally binding instruments.[4] Mitigation measures that are vague or so undefined that it is impossible to evaluate their effectiveness are legally inadequate.[5]

While the mitigation measures imposed by the July 10, 2008 Post-Hearing Modifications to Text of Proposed Building Standards are seemingly well-intentioned, detailed examination reveals that they are in large part, inadequate, incomplete and ill-conceived. These measures fail to address numerous potential impacts that were identified in the PEX DEIR, identified in the DEIR's own expert reports or identified by undisputed evidence in the administrative record. In addition, the measures are inadequate because they fail to address significant elements of enforcement or application or are vague and undefined as to critical details.

The PEX mitigation measures proposed in the July 10, 2008 Post-Hearing Modifications to Text of Proposed Building Standards are almost identical to the measures proposed by the May 2008 PEX DEIR. Accordingly the analysis and critique of these mitigation measures in our attached June 23, 2008 Coalition Comments remain valid and are hereby incorporated and made a part of these comments.

The inadequacies of the proposed mitigation measures identified in the June 23, 2008 Coalition Comments include, but are not limited to, the following:

(1) The requirement that PEX pipe be certified to meet California drinking water standards is inadequate because it limits its applicability only to MTBE, TBA and Proposition 65 chemicals. The DEIR, however, identifies numerous other chemicals that may leach from PEX for which NSF 61 standards are higher than California

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564; *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 400.

[3] Pub. Resources Code §§ 21002.1, subd. (a), 21100, subd. (b)(3).

[4] CEQA Guidelines § 15126.4, subd. (a)(2).

[5] *San Franciscans for Reasonable Growth v. City & County of San Francisco* (1984) 151 Cal.App.3d 61, 79.

standards. The DEIR states that these include NSF standards for chemicals including benzene, cadmium, carbon disulfide, 1,1-dichloroethane, ethyl benzene, di(2-ethylhexyl) phthalate, benzo(a)pyrene, and toluene.[6] The requirement that PEX pipe be certified to meet California standards must thus be amended to apply to all chemicals that may leach from PEX, not just MTBE, TBA and Proposition 65 chemicals.[7]

(2) The requirement that PEX pipe be certified to meet California drinking water standards must also be amended to address the DEIR's identification of potentially significant leaching of chemicals that are not currently regulated by California drinking water standards, such as Bisphenol A and ETBE. The evidence disclosed in the expert reports contained in the appendices to the DEIR reveal that these chemicals may leach from PEX in amounts that may affect public health, as well as taste and odor.[8]

(3) The requirement to certify that PEX pipe meets California Proposition 65 standards must be clarified to be legally adequate. The PEX DEIR identifies three Proposition 65 chemicals that may leach from some PEX formulas, but for which no Proposition 65 safe harbor level has been set. These chemicals are butyl benzyl phthalate, toluene diamine and carbon black. Before the Commission may approve PEX that may contain these chemicals, the Commission must first determine what, if any, safe harbor level will be allowed for certification that Proposition 65 requirements have been met. Failure to make this determination prior to approval of PEX would constitute an unlawful delegation of decision-making regarding acceptable public health standards.[9]

(4) The requirement that PEX be certified only by NSF is unnecessarily narrow. As long as a specific testing protocol is required, any accredited third party certifying listing agency should be qualified to certify that PEX meets California standards. This would be consistent with the current application of NSF 61 which sets standards and

[6] DEIR at p. 4.4-13.
[7] See June 23, 2008 Coalition Comments at pp. 29-30.
[8] *Id.* at pp. 24-29.
[9] *Id.* at pp. 16-17.

testing protocol which any accredited third party certifying listing agency may certify products to meet.

(5) The requirement that any PEX installed in a water service area that has detectable levels of MTBE or TBA in the drinking water must be certified not to leach detectable levels of MTBE or TBA is vague as to certain critical enforcement and implementation details. The measure should be amended to require that all contractors must install PEX specially-certified to have no detectable levels of MTBE or TBA unless they first provide evidence to the authority having jurisdiction that the building's water supply has no detectable levels of MTBE or TBA. Such evidence should be either: (1) a certified statement from the applicable public water system agency that the building's water supply has no detectable levels of MTBE or TBA; or (2) a certified water quality report by a qualified third party testing laboratory demonstrating that the building's water supply has been tested and no detectable levels of MTBE or TBA have been found.[10]

(6) The requirement to either protect PEX installed in soil with a sleeve or obtain a clean Phase I Environmental Site Assessment is insufficient to reduce the risk of permeation impacts to a level of insignificance. If a Phase I Environmental Assessment is conducted, this measure would permit the installation of unprotected PEX under slab or underground between the water meter and the building. Such PEX would still be at risk for contamination from future spills or leaks or from unrecorded past spills or unknown leaking underground storage tanks that would not be identified by a Phase 1 Environmental Site Assessment. A 1991 study published in the Journal of the American Water Works Association found that soil contamination occurred mainly after pipe installation and about half of all permeation contamination incidents occurred in areas without known contamination risks, suggesting that soil analysis prior to pipe installation would not significantly decrease the number of permeation incidents.[11] This mitigation measure should be revised to prohibit any installation of PEX below slab or between the water meter and the building structure. Such a prohibition is

[10] See June 23, 2008 Coalition Comments at pp. 20-23.
[11] Holsen, et al., *The Effect of Soils on the Permeation of Plastic Pipes by Organic Chemicals*, Journal of the American Water Works Association (1991).

feasible and has been recommended by the California Professional Association of Specialty Contractors ("CALPASC") who stated, "the *consensus of the industry* is that PEX tubing should not be installed under slab."[12]

(7) The requirement that PEX tubing installed in continuously recirculating hot water systems shall meet the requirements of NSF P171 CL-R where chlorinated water is supplied to the system is grossly inadequate to address the potential failure impacts identified in the DEIR and in the administrative record. The limitation of this requirement to chlorinated systems is not supported by any substantial evidence.[13]

Moreover, this requirement does not address the DEIR's conclusion that ASTM F2023, one of the standards that would be allowed for PEX in non-recirculating hot water systems, only ensures an adjusted lifetime protection from chlorinated water of 25 years. Allowing the installation of PEX with a lifetime five years less than the typical home mortgage is unreasonable when other PEX chlorine-resistance standards are available that ensure an adjusted lifetime protection from chlorinated water of 40 years.[14]

This requirement also fails to address the numerous other inadequacies of PEX resistance standards detailed in our attached June 23, 2008 Coalition Comments. These inadequacies include the utter lack of standards for exposure to sunlight or other commonly encountered materials that degrade PEX and substantially reduce its resistance to chlorine and other commonly-used disinfectants.[15]

(8) The proposed restrictions also fail to address: (1) the widespread failures of PEX fittings throughout the United States;[16] (2) the

[12] See June 23, 2008 Coalition Comments at pp. 30-33 and Appendix 20, CALPASC Letter to Valerie Namba (November 27, 2007) at p. 1.
[13] See June 23, 2008 Coalition Comments at pp. 36-39.
[14] *Id.* at pp. 40-42.
[15] *Id.* at pp. 42-50.
[16] *Id.* at pp. 51-55.

tendency of PEX to promote the growth of significant biomass with abundant virus-like particles;[17] (3) solid waste impacts due to PEX's generally shorter lifespan, the greater amount of construction waste created by PEX installation and lack of recyclability of PEX plastic due to its thermoplastic characteristics;[18] and (4) the increased risk of toxic smoke when PEX burns in fires.[19]

It is critical to the health and safety of the California public that the potential impacts of PEX be fully disclosed, evaluated and mitigated before these materials are approved for use throughout California. The current mitigation proposals are a laudatory start, but significant revision is required to ensure that such measures address all potential impacts, and are feasible and enforceable.

III. PPFA'S OBJECTIONS TO THE IMPOSITION OF CONDITIONS ON THE APPROVAL OF PEX LACK FOUNDATION AND ARE CONTRARY TO THE EVIDENCE IN THE RECORD

The Plastic Pipe and Fittings Association ("PPFA") submitted comments dated June 23, 2008 ("the PPFA Comments"), which object to the proposed mitigation measures identified in the May 2008 PEX DEIR and incorporated into the proposed PEX regulations noticed by the July 10, 2008 Post-Hearing Modifications to Text of Proposed Building Standards. While objections from the PEX manufacturers to any restrictions on the use of their products are not surprising, the recommendations made in the PPFA Comments should be disregarded since they lack foundation, misrepresent the evidence in the record and misrepresent the Project setting.

A. The PPFA Comments Misrepresent the Evidence on PEX Pipe and Fitting Failures and Mischaracterize the Project Setting

Rather than addressing industry's failure to set PEX standards that would ensure an adequate lifetime, PPFA instead attempts to downplay the impacts from potential pipe failure. Moreover, the PPFA letter misrepresents both the evidence in the record and the Project setting.

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[17] *Id.* at pp. 55-57.
[18] *Id.* at pp. 57-58.
[19] *Id.* at pp. 59-60.

PPFA first argues that mitigation of the potential PEX impacts identified in the PEX DEIR is not required because "...use of PEX will result in lesser potential public health and environmental impacts – even without mitigation – than the most widely used pipe material allowed under the existing regulations, copper."[20] The PPFA's claims regarding copper pipe impacts are not only unfounded, they also fundamentally misapply the requirements of CEQA.

PPFA seems to assume that if it identifies impacts associated with the installation of copper pipe, the lead agency need not evaluate and mitigate the performance, health and safety impacts associated with the installation of PEX pipe. This assumption is incorrect.

An EIR prepared by the lead agency must include a detailed statement setting forth *all* significant effects of the proposed project.[21] Its purpose is "to provide the public and governmental decision-makers . . . . with *detailed information* of the project's likely effect on the environment; to describe ways of minimizing significant effects; to point out alternatives to the project."[22]

A lead agency may not disregard a Project's significant impacts simply because the Project may have some environmental benefit.[23] CEQA requires the identification of all project impacts, even if the project as a whole is environmentally preferable to the no-project alternative. An EIR is even required to discuss the impacts of mitigation measures if the inclusion of a mitigation measure would itself create new significant effects.[24]

Moreover, the impacts allegedly associated with copper installation are qualitatively different than the performance, health and safety impacts associated with PEX installation. PEX leaches chemicals that would not be leached by copper pipe; PEX would permit permeation of contaminants that would not permeate copper pipe; and PEX may fail when exposed to conditions such as sunlight that would have no impact on the performance of copper pipe.

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[20] PPFA Comments at p. 1.
[21] Pub. Resources Code § 21100, subd. (b)(1).
[22] *County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185*, 192; emphasis added.
[23] See, e.g., *Dunn-Edwards Corp. v. Bay Area Quality Management District* (1992) 9 Cal.App.4th 644; *Building Code Action v. Energy Resources Conservation and Development Commission* (1980) 102 Cal.App.3d 577.
[24] CEQA Guidelines § 15126.4, subd. (a)(1)(D).

If copper were the only potable water pipe currently approved in the state code, allegations of impacts associated with copper pipe could potentially be relevant in evaluating the no-project alternative. But the impacts associated with PEX would still have to be fully disclosed and mitigated. As it is, copper is not the only potable water pipe currently approved in the state code; CPVC pipe, cast iron pipe and galvanized steel are all approved options. Accordingly, alleged copper impacts are not even relevant in the consideration of alternatives since approval of PEX would not provide any alternative to copper that isn't already provided by CPVC or other approved pipe materials.

PPFA next incorrectly claims that there is no evidence that PEX tested to the current national consensus standards will fail "prematurely."[25] PPFA then proceeds to make the astounding claim that "PEX has been in use for more than 20 years with no evidence of failures due to contact with continuously circulating hot chlorinated water."[26] These claims lack foundation and are directly contradicted by the evidence in the record of the widespread PEX failures in recirculating (and other) systems in Washington, as well as the failures of PEX fittings throughout the United States and the failures of PEX-AL-PEX in Washington and other states.[27] As discussed in the comments of Dr. Clark, attached as Exhibit D to the June 23, 2006 Coalition Comments, the PEX pipes that failed in Washington were tested and certified to meet the national consensus standards.[28]

PPFA also makes the puzzling argument that PEX installed in recirculating systems should not be required to meet NSF P171-CL-R, the only currently available chlorine resistance standard for recirculating systems. PPFA argues that compliance with NSF P171-CL-R is unnecessary because "continuously recirculating hot water systems are not likely to be found in widespread use in California."[29] It's not clear what point PPFA is trying to make here. The issue before the Commission is not how often continuously recirculating hot water systems will be installed; the issue is what regulations are going to apply to such installations when recirculating systems *are installed*. Moreover, PPFA's revelation that ASTM is developing a new standard that will be required for recirculating

[25] PPFA Comments at p. 2.
[26] *Id.* at pp. 2-3.
[27] See June 23, 2008 Coalition Comments, Exhibit D.
[28] *Id.* at p. 1.
[29] PPFA Comments at p. 3.

systems is an implicit admission that the current ASTM F2023 standard is not meant to be applicable to such systems.[30]

PPFA also incorrectly claims that the Commission may not require compliance with P171-CL-R because it is not a national consensus standard.[31] PPFA states, without any citation or other substantiation, that the current California Plumbing Code and all model codes require compliance with consensus standards. This is simply incorrect. No such requirement appears in the California Plumbing Code, the Uniform Plumbing Code or the California Building Standards Code. Uniform Plumbing Code provisions are adopted pursuant to an ANSI-certified consensus process, but the standards adopted pursuant to this process do not, themselves, have to be consensus standards.

Moreover, the Commission has the express regulatory authority to adopt any building standards it deems appropriate.[32] While the Commission is encouraged to *consider* applicable "national specifications, published standards and model codes," there is no requirement that such national specifications, published standards and model codes be consensus standards.[33] Indeed, the California Building Standards Commission recently selected the International Building Code as the model code to serve as the basis for the California Building Code despite the fact that it, unlike a competing model building code published by NFPA, is not an ANSI-certified consensus model code.

PPFA also claims that premature failure of PEX pipe is not a significant impact because "it is not reasonable to assume that mold of any kind, let alone toxic mold, would form and persist undetected, subjecting anyone to a 'significant health risk.'"[34] PPFA claims that PEX failures are unlikely to result in mold because failure will be immediately noticeable and the reasonably foreseeable result of any such failures would be for the water service to be shut off and the system repaired.[35] This claim has several flaws.

First, the claim that PEX pipe failures are unlikely to result in mold is factually incorrect and lacks foundation. Homeowners have, in fact, suffered from

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[30] PPFA Comments at p. 5, fn. 5.
[31] *Id.* at p. 5.
[32] See Health & Saf. Code § 18930.
[33] *Id.*
[34] PPFA Comments at p. 4.
[35] *Id.*

mold problems as a result of PEX and PEX fitting failures.[36] Moreover, this claim assumes, without foundation, that all PEX failures would be immediately noticeable and immediately repaired. This assumption fails to take into account smaller leaks that may occur from initial cracks in degraded PEX pipes. It also fails to take into account PEX failures that leak into areas of the house that are not commonly accessed or failures that occur in temporarily unoccupied vacation homes or while occupants are away on extended trips.

Second, this claim relies upon mitigation of PEX failures *after* they happen. Without such mitigation, there is no dispute that PEX failures could result in toxic mold and other mold problems. The fact that mitigation would be required to prevent this impact supports a finding that this is a potentially significant impact. There is no question that the Commission has the authority to impose mitigation to prevent such failures before they occur rather than relying on mitigation after they occur.

Third, this comment overlooks the fact that the water and structural damage caused by PEX failures is an adverse impact on the physical environment, regardless of whether toxic mold occurs or not.

CEQA applies to physical changes in the environment which may be directly or indirectly caused by a project.[37] CEQA defines the environment to include both natural and man-made conditions and thus includes buildings and other structures. (CEQA Guidelines § 15360.) There is no question that PEX failures cause a physical change in the indoor environment in the form of water and structural damage.

Moreover, such damage is not required to result in adverse health impacts in order to be regarded as significant effect under CEQA. The economic and social effects of a physical change may be used to determine that the physical change is a significant effect on the environment.[38] CEQA thus is regularly applied to evaluate and mitigate potential structural damage due to flooding, or other hazards. For example, the CEQA Guidelines Environmental Checklist Form asks whether the

[36] See Exhibit A, August 8, 2008 Declaration of Shawn Raiter.
[37] CEQA Guidelines, §15064, subd. (d).
[38] CEQA Guidelines, §15064, subd. (e).

Project would "Expose people *or structures* to a significant *risk of loss* . . . involving flooding . . .."[39]

Here, the record contains substantial evidence that flooding from PEX failures have resulted in extensive physical damage to residences throughout the United States. These failures have resulted in class action suits alleging hundreds of millions of dollars in damages.[40] Accordingly, premature PEX failures result in significant adverse impacts to the environment under CEQA even where toxic black mold does not occur.

PPFA also makes the unsubstantiated claims that the Project would reduce the potential for mold growth because chloramine use is increasing; that the use of chloramines appears to be less aggressive to PEX than copper; that chloramines are known to adversely affect copper pipe; and that there is already substantial evidence of copper pipe failures. These claims lack foundation, misrepresent the current Project setting and are not relevant to the requirement to mitigate the potential for premature PEX failures.

First, the claims lack foundation. There is no evidence that chloramines are less aggressive to PEX than to copper. Chloramines will only affect corrosion of copper where water systems fail to properly optimize the pH of the water.[41] Chloramination, if not properly optimized, can result in nitrification which can lower the pH of the water, which can increase corrosion of copper.[42] Chloramines do not, however, directly corrode copper pipes.[43] On the other hand, chloramines do directly attack PEX pipes. Chloramines are an oxidant that *will* eventually consume the anti-oxidants in PEX and cause failure.[44]

Second, the PPFA Comments ignore the current Project setting which allows the use of not just copper pipe but also CPVC pipe. CPVC pipe is already widely used in areas of the state with corrosive water and soil conditions that may result in premature copper pipe failures. CPVC pipe is also permitted under the code in all

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[39] CEQA Guidelines, Appendix G, § VIII, subd. (i), emphasis provided; see also CEQA Guidelines, Appendix G, § VI, subs. (a) (regarding risk of loss posed to structures from geologic or soil conditions).
[40] See June 23, 2008 Coalition Comments, Appendix 19.
[41] See PPFA letter, Exhibit C, U.S. EPA, *Information about Chloramines in Drinking Water* at p. 3.
[42] *Id.*
[43] *Id.*
[44] June 23, 2008 Coalition Comments, Exhibit D at p. 6.

other areas of the state, including jurisdictions that disinfect with chloramines. PPFA has made no claim that CPVC pipe presents a greater risk than PEX for toxic mold growth or failure due to exposure to chloramines. In jurisdictions where corrosive water or soil conditions may result in premature copper pipe failures, PPFA does not claim that PEX would provide any benefit above and beyond what is already provided by CPVC. Accordingly, there is no foundation for the claim that approval of PEX pipe would create a beneficial impact even if its other claims regarding copper failures had any foundation.

Third, even if copper pipe may fail in corrosive water and soil conditions (including where the pH of water disinfected with chloramines is not properly optimized), this does not relieve the lead agency of its duty to mitigate potential impacts related to PEX pipe. CEQA imposes an affirmative obligation on agencies to avoid or reduce environmental harm by adopting feasible project alternatives or mitigation measures.[45] If a lead agency identifies potentially significant impacts, it must then propose and evaluate mitigation measures and alternatives sufficient to minimize those impacts.[46]

B. NSF Toxicity Standards Are Appropriately Evaluated by Reference to California Drinking Water Standards

1. PPFA Lacks Foundation for its Assumption that California Standards for MTBE are Inapplicable to NSF Standards

PPFA argues that the DEIR improperly relies on California Maximum Contaminant Levels ("MCLs") as a threshold of significance to evaluate leaching impacts. PPFA argues that MCLs are not appropriate thresholds of significance because they are drinking water standards designed to guard against adverse health effects due to long term exposure to constituents of concern.

PPFA fails, however, to disclose that, for MTBE, the NSF Short Term Exposure Levels ("STELs") and long term exposure standards (TACs and SPACs)

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[45] Pub. Resources Code §§ 21002-21002.1; CEQA Guidelines § 15002, subds. (a)(2)-(3); see also, *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors, supra,* 52 Cal.3d at 564; *Laurel Heights Improvement Assn. v. Regents of University of California, supra,* 47 Cal.3d at 400.
[46] Pub. Resources Code §§ 21002.1, subd. (a), 21100, subd. (b)(3).

are all the same: 100 ppb.[47] In its MTBE Oral Risk Assessment Document, NSF expressly finds that it is not appropriate to set a short term exposure standard higher than the long term exposure standard because MTBE is a genotoxic carcinogen.[48] In other words, it doesn't matter if MTBE leaching would quickly fall below the California standard because short term exposure to MTBE poses the same risk as long term exposure.

Even if the STEL for MTBE was higher than the TAC and SPAC for MTBE, California MCLs and NSF 61 TACs and SPACs would still be comparable standards. NSF bases its TACs and SPACs on the MCL for adults set by the U.S. Environmental Protection Agency ("EPA") and the maximum allowable contamination ("MAC") level set by Health Canada MAC. The California MCL is the state version of the U.S. EPA MCL and thus is an equivalent standard to NSF's TACs and SPACs. PPFA's comments appear to be confusing NSF's STEL standards, which are short term exposure standards, with NSF's TAC and SPAC standards, which are long term exposure standards.

Under NSF 61, short term STEL standards must be met after first being conditioned with formulated water for 16 days (with water being changed on 12 of those days). TACs and SPACs must be met after 90 days of product use after first being conditioned with formulated water for 16 days (with water being changed on 12 of those days). No testing or requirements evaluate leaching from PEX after these first 106 days.

In other words, TACs and SPACs are NSF's long term standards. There is no requirement that PEX leachates decline any further than the TAC and SPAC standards after 106 days. Without mitigation, the proposed building standards would thus approve PEX formulations that could leach MTBE up to 100 ppb (almost 10 times the California MCL for MTBE) for the lifetime of the product, yet still comply with NSF 61.

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[47] The DEIR and our May 23, 2008 comments assumed, based upon prior information disclosed by the PEX industry, that the NSF 61 long term leaching standard for MTBE was 50 ppb. In its June 23, 2008 letter, NSF for the first time discloses that the actual NSF 61 long term leaching standard for MTBE is 100 pbb, double the amount assumed in the DEIR. Accordingly the impact from MTBE leaching is potentially much greater than disclosed and evaluated in the DEIR. It is unclear why this information was not disclosed by the PEX industry in time for evaluation in the DEIR.

[48] NSF, MTBE Oral Risk Assessment Document (2008) at p. 48.

PPFA's statement that the "the majority of [PEX] samples" are below the secondary MCL for MTBE on day one and predicted to be below the primary MCL within 90 days" is irrelevant.[49] Even if this statement were true, this would not support a finding that the Project as a whole would have no impacts. Without appropriate mitigation, the proposed building standards would allow the installation of both PEX pipe formulations that leach MTBE below the California MCL and PEX pipe formulations that leach MTBE above the California MCL.

PPFA also inaccurately claims that the test results provided by NSF and contained in Appendix F of the DEIR demonstrate that MTBE and TBA levels released from PEX decline relatively rapidly to below regulatory levels. The test results provided by NSF in Appendix F, however, are of limited evidentiary value.

First, even short term exposures to MTBE above California MCLs pose a public health risk because MTBE is a genotoxic carcinogen.[50]

Second, the NSF test results do not provide data for all PEX products that would be approved by this proposed regulatory action. They only test 5 samples for TBA leaching and 9 or 10 samples for MTBE.[51] Currently, there are at least 271 types of PEX on the market that could be approved under this regulatory action.[52] Accordingly, no analysis whatsoever is provided on leaching from 97% of the PEX pipe available on the market. Due to the wide variety of PEX manufacturing formulas and methods, a random test of 9 samples does not sufficiently disclose potential leaching from PEX.

Third, the NSF test results are incomplete, preliminary and rely on a regression model that, admittedly, may not be the most suitable model to extrapolate long term leaching levels. Rather than use existing test data from NSF 61 product certification tests, NSF conducted new tests that do not meet NSF's own testing protocol. Under NSF 61 testing protocol, PEX leaching is tested for 107 days. The test results provided in the May 2, 2008 NSF letter, however, were based on only 21 days of testing. NSF then applied a regression analysis based on the 21 day data rather than the more accurate 107 day data available from the testing conducted when each PEX product line is certified to meet NSF 61. NSF

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[49] PPFA Comments at p. 7.
[50] NSF, MTBE Oral Risk Assessment Document (2008) at p. 48.
[51] The May 2, 2008 NSF Report at various times states that it tested 9 samples for MTBE levels and at other times states that it tested 10 samples.
[52] PEX DEIR at p. 4.4-9.

acknowledges that the test results are incomplete, expressly describing the testing as "preliminary."

Because of the short testing time period, it is impossible to determine if MTBE leaching levels off or continues to decline at the same rate seen during the first 21 days of testing. No explanation is provided for the failure to disclose and evaluate the available data from actual NSF certification testing.

Moreover, NSF further admits that the regression model chosen to estimate long term leaching "may not be the most suitable model to extrapolate" even the Day 90 level, much less to estimate leaching rates of up to two years later.[53] NSF states that it ran three different regression models (power, exponential and linear) on the limited data it collected, yet it fails to provide the results for each of these models. Accordingly, the data presented by NSF lacks foundation for determining long term leaching impacts even for the 3% of PEX pipes it does evaluate.

At a minimum, the actual test data used to certify the 271 types of PEX pipe to meet NSF 61 standards must be disclosed and evaluated before any assumption can be made regarding the validity of these preliminary results.

The more pertinent disclosure by NSF is not the leaching found in the limited, preliminary tests of 9 unidentified PEX formulas, but rather the maximum long and short term level of leaching allowed by NSF 61. The proposed regulation approves PEX generically as long as it meets certain standards. Accordingly, this regulatory action approves not just the 271 types of PEX that currently exist on the market, but also any new types of PEX that may enter the market in the future. On its face, NSF 61 allows the certification of PEX pipe that exhibits both short term *and* long term leaching of 100 ppb. Accordingly, additional mitigation is required to ensure that both current and future forms of PEX that would be approved under this regulatory action will meet California standards for MTBE.

2. Short Term Leaching from PEX Must Be Disclosed and Evaluated by the Lead Agency in Order to Protect Construction Workers

Because NSF 61 does not test for leaching until after a pipe has been conditioned and flushed out for 16 days, PEX pipe initially may not meet even the

[53] PEX DEIR, Appendix F, NSF Letter (May 2, 2008) at p. 2.

short term NSF STEL standards. PEX installed in homes is not first conditioned with formulated water for 16 days. Short term leaching from PEX must thus be evaluated from day one rather than after 16 days of conditioning.

Evaluation of initial leaching levels is particularly important from the public health perspective of construction workers. Construction workers are often the first persons to consume water from newly installed pipe. Moreover, because construction workers move from one job site to the next, they will be repeatedly exposed to these higher levels of MTBE leaching.

3. *In Re Groundwater Cases* Is Not Applicable Nor Is Its Underlying Analysis Contrary to the DEIR's Application of California Drinking Water Standards

PPFA claims that the Court of Appeal case *In Re Groundwater Cases*, prohibits the application of California Drinking Water MCL or Action Level standards as a threshold of significance in an EIR.[54] *In Re Groundwater Cases*, however, is not applicable to the Commission's current proceedings. The *In Re Groundwater Cases* Court held that isolated exceedances of maximum contaminant levels alone were not sufficient to establish liability for water purveyors regulated by the Public Utilities Commission ("PUC") or the Department of Public Health ("DPH").[55] This finding was based on the fact that, under the statutory scheme, violations of MCLs or Action Levels merely start the PUC or DPH enforcement process. Liability under the PUC and DPH regulations only occurs if the water purveyor fails to comply with subsequent compliance directives.

Here, the Commission is not seeking to impose liability on PEX manufacturers pursuant to PUC and DPH regulations, but rather is attempting to make the threshold determination if PEX leaches chemicals in an amount that violates California drinking water standards for the purposes of a CEQA significance determination. Accordingly, this holding lacks applicability to the case at hand.

Moreover, the underlying analysis contained in *In Re Groundwater Cases* supports the decision of the lead agency to use California MCL levels as the

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[54] *In Re Groundwater Cases* (2007) 154 Cal.App.4th 659.

[55] DPH is referred to in the *In Re Groundwater Cases* under its former name, the Department of Health Services ("DHS").

threshold of significance for leaching impacts. The Appellate Court found that the Legislature made an express policy choice to entrust the Department of Public Health in the setting of technical drinking water standards.[56] The Appellate Court further held that numerical standards, such as MCLs or Action Levels constituted enforceable drinking water standards.[57]

The Court's statement that MCLs and Action Levels are intended to protect against the possible health risk of prolonged exposure to contaminants rather than acute, or short term, exposure is generally correct. The Court defines acute exposure as "a single period of exposure of a duration measured in seconds, minutes, hours, or days."[58] Acute exposure is addressed under NSF 61 by its STEL standards, not by its NSF 61 TAC and SPAC standards. NSF 61 TAC and SPAC standards, on the other hand, address exposure beyond the first 106 days of PEX use. Accordingly, MCLs *are* equivalent to the NSF 61 TAC and SPAC. In any case, because MTBE is a genotoxic carcinogen, its short term exposure standard is the same as its long term exposure standard.[59]

4. PPFA's Suggestion to Rely on Privately Set NSF 61 Standards for TBA Over Standards Set by the Responsible State Regulatory Agencies Would Result in an Unconstitutional Delegation of Authority

PPFA challenges the DEIR's reliance on the DPH's action level of 12 ppb for TBA on the grounds that it is not based on a sufficient health risk assessment.[60] This claim lacks foundation and is contrary to law. PPFA admits that DPH's action level of 12 ppb for TBA is, in fact, supported by a health risk assessment prepared by the California Office of Environmental Health Hazard Assessment ("OEHHA").[61] PPFA nonetheless asks the Commission to disregard the expert judgment of OEHHA and DPH and instead rely on the standards of a private entity that are almost 750 times less protective than California standards. Under the maximum NSF 61 TAC standard for TBA of 9000 ppb, an occupant would consume as much TBA in a month as he or she would over 70 years at the DPH standard of 12 ppb. Under the maximum NSF 61 STEL standard for TBA of 40,000 ppb, an occupant

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[56] *In Re Groundwater Cases, supra,* 154 Cal.App.4th at p. 677-678.
[57] *Id*. at p. 679-680.
[58] *Id*. at p. 686.
[59] NSF, MTBE Oral Risk Assessment Document (2008) at p. 48.
[60] PPFA Comments at p. 8.
[61] *Id.*

would consume as much TBA in 10 days as he or she would over 70 years at the DPH standard of 12 ppb.

The Legislature has expressly entrusted DPH with the jurisdiction over the setting of MCLs, Action Levels and other technical drinking water standards.[62] The Commission has no authority to second guess DPH's expert judgment in the setting of these standards. Moreover, relying on privately set NSF 61 standards instead of standards set by the DPH would result in an unconstitutional delegation of regulatory authority to a private entity.[63] California MCLs and Action Levels are enforceable drinking water standards and may not be altered by private entities whose judgment on these standards differ significantly from the public agency's judgment.[64]

Moreover, PPFA's suggestion that NSF standards are more appropriate to apply than California standards lacks foundation and is contrary to law. A determination of the degree of contamination that would be permitted by the regulatory approval of a plumbing product coming in contact with public drinking water constitutes an exercise of police power that cannot be delegated to a non-governmental entity.[65] Reliance on NSF standards over the standards set by DPH would violate the constitutional bar against the delegation of police powers to non-governmental bodies. NSF standards are established in a non-public, confidential process by a non-governmental body. Moreover, NSF disclaims any responsibility or liability to the public or public regulatory agencies relying on such standards.

The EPA in "Federal Register Notices Vol. 53, No. 130 July 7, 1988" expressly states that NSF's privately created standards *do not* take the place of the authority and responsibility of federal or state jurisdictions to determine the acceptability of drinking water contact materials.[66] The Federal Register Notice states: "EPA recognizes the authority and responsibility of the individual states to determine the acceptability of drinking water additives. Hence, it is up to the states and the utilities to determine the suitability of any "third-party" certification."[67]

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[62] *In Re Groundwater Cases* (2007) 154 Cal.App.4th 659 at pp. 677-678.
[63] See 63 Ops.Cal.Atty.Gen. 566 (1980).
[64] See *In Re Groundwater Cases, supra* 154 Cal.App.4th at pp. 677-681.
[65] See 63 Ops.Cal.Atty.Gen. 566 (1980).
[66] 53 Fed. Reg. 130 (July 7, 1988) at pp. 25587-25588.
[67] *Id.* at p. 25588.

NSF itself does not claim that compliance with NSF 61 is adequate to ensure that there is no potential for any significant impacts from the use of PEX. NSF expressly disclaims responsibility or liability to anyone relying on its standards or testing and emphasizes the importance of independent judgment and regulatory action by any public agency relying on its standards:

> NSF International ("NSF"), in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. The opinions and findings of NSF represent its professional judgment. *NSF shall not be responsible to anyone for the use of or reliance upon this standard by anyone.* NSF shall not incur any obligations or liability for damages, including consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this standard. . . . Participation in NSF's standards development activities by regulatory agency representatives (federal, local, state) shall not constitute their agency's endorsement of NSF or any of its standards.[68]

Reliance upon NSF standards without an independent review of the underlying basis for the standards and the adequacy of NSF's testing and certification program is not a mere technical or legal defect. The Thomas Reid comments attached to the June 23, 2008 Coalition Comments demonstrate numerous substantive deficiencies in NSF standards. These deficiencies include the following:

1. NSF has set allowable levels of contamination that are higher than what has been determined by California agencies to adequately protect human health.
2. The entire NSF testing and certification process is confidential.
3. NSF is a private entity and not accountable to the public.
4. NSF's operations are almost entirely funded by manufacturers of plumbing products listed and tested by NSF.
5. NSF standards for unregulated contaminants are established largely on the basis of toxicity information and studies provided by and owned by the manufacturers of the regulated products.

[68] Appendix 2 at p. iii.

6. NSF's standards setting and testing-processes are dominated by the industrial participants that have an economic stake in the results of the process.

Certification of PEX to meet NSF 61 is simply not sufficient evidence that a product's leaching risks are below a level of insignificance. Without an independent review of product formula data, normalization calculations, actual performance test results and information on the number of products certified even after failing the testing process, the Commission simply has no foundation to conclude that compliance with NSF 61 standards is more appropriate than compliance with California standards set by DPH.

C. PPFA's Opposition to the Requirement to Meet California Taste and Odor Standards Lacks Foundation or Relevance

PPFA's argument regarding long term impacts is wholly inapplicable to taste and odor standards. Taste and odor standards for MTBE are not long term standards. The taste and odor standards address whether MTBE significantly affects the taste and odor of drinking water upon consumption. Although water purveyors may deliver water that exceeds taste and odor standards but meets MCL health standards, such taste and odor impacts are still significant under CEQA. Furthermore, those impacts would be significant whether they are short term or long term. CEQA addresses both short term and long term impacts. Accordingly, they must be mitigated, if feasible mitigation measures are available.

PPFA attempts to dismiss these impacts by claiming that only 24% of PEX pipe exceed California taste and odor standards.[69] This claim lacks foundation because PPFA bases this statistic on the preliminary test results of just 9 or 10 of the 271 PEX formulas currently on the market. But even if this claim were accurate, PPFA is, astoundingly, suggesting that it would be fine if one quarter of all PEX pipe violated California taste and odor standards. Moreover, the PPFA Comments seek to amend the proposed mitigation to expressly allow the very PEX formulas that do exceed California taste and odor standards.

[69] PPFA Comments at p. 10.

D. PPFA's Opposition to the Mitigation for Cumulative Leaching Impacts in Buildings with MTBE or TBA Contaminated Water Lack Substance

PPFA makes the perplexing claim that the proposed mitigation for cumulative impacts to water quality in areas with MTBE or TBA contaminated drinking water is not necessary because "the vast majority of California water sources are non-detect for MTBE and virtually all sources are below applicable drinking water standards."[70] This argument makes little sense because the proposed mitigation for cumulative impacts is narrowly tailored to only apply to water sources that do have detectable MTBE contamination.

If, as PPFA suggests, this narrowly tailored mitigation is not feasible, then this requirement must be applied to all PEX sold in California. If PPFA is suggesting that an even more narrowly tailored mitigation measure is appropriate, then it is incumbent upon them to identify what that narrower feasible mitigation measure would be.

E. PPFA's Objection to Permeation Mitigation Measures Lacks Relevance

PPFA questions why mitigation to protect against permeation is proposed for PEX when polyethylene ("PE") building supply pipe is approved in California without a requirement for sleeving. Under CEQA, an agency's failure to require mitigation for currently approved projects does not exempt new projects from the requirement to impose feasible mitigation. CEQA applies to new discretionary approvals, not to existing regulations.

IV. THE PEX AMENDMENT NOTICE IS PROCEDURALLY DEFECTIVE BECAUSE IT FAILS TO INCLUDE THE AGENCIES' JUSTIFICATION UNDER THE NINE-POINT CRITERIA OF SECTION 18930

The California Building Standards Law requires all building standards submitted to the Commission for approval to be accompanied by an analysis written by the proposing agency, which shall justify the approval in terms of the nine-point

[70] PPFA Comments at p. 12.

criteria listed in Health and Safety Code section 18930. The nine-point criteria required under Section 18930 to justify proposed building standards are as follows:

"(1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.

(2) The proposed building standard is within the parameters established by enabling legislation and is not expressly within the exclusive jurisdiction of another agency.

(3) The public interest requires the adoption of the building standards.

(4) The proposed building standard is not unreasonable, arbitrary, unfair, or capricious, in whole or in part.

(5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.

(6) The proposed building standard is not unnecessarily ambiguous or vague, in whole or in part.

(7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.

(A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a statement defining the inadequacy shall accompany the proposed building standard when submitted to the commission.

(B) If there is no national specification, published standard, or model code that is relevant to the proposed building standard, the state agency shall prepare a statement informing the commission and submit that statement with the proposed building standard.

(8) The format of the proposed building standards is consistent with that adopted by the commission.

(9) The proposed building standard, if it promotes fire and panic safety, as determined by the State Fire Marshal, has the written approval of the State Fire Marshal."

Health and Safety Code section 18929.1 requires that written notice of this nine-point justification be provided to the public for review and comment prior to its submittal to the Commission. Section 18929.1 requires that the proposing agencies provide for "[a]dequate public participation in the development of building standards prior to the submittal to the commission for adoption and approval." Section 18929.1 further requires "[a]dequate notice, in written form, to the public of the compiled building standards *and their justification*."[71] Finally, Section 18929.1 requires the procedures for public review to "meet the intent of the Administrative Procedure Act (Chapter 5 (commencing with Section 11500) of Division 3 of Title 2 of the Government Code) *and Section 18930*."[72]

Section 18929.1's requirement to provide the public written notice of the "justification" for the proposed building standards clearly refers to justification under the nine-point criteria of Section 18930. First, Section 18930's requirement that building standards be justified under the nine-point criteria is the only "justification" provided for in the California Building Standards Law. Second, Section 18929.1 requires the procedures for public review to meet the intent of Section 18930, thus underscoring that this section must be consulted when justifying proposed standards to the public.

The PEX Adoption Notice, however, fails to provide to the public written notice of HCD's, CBSC's, OSHPD's or DSA's justification for the proposed standards under the nine-point criteria analysis. Accordingly, the public has not been provided the notice and opportunity for public comment required by Section 18929.1.

This procedural defect represents a substantial failure to comply with the notice requirements of Section 18929.1 because it prevents the public from having an opportunity to review and comment on HCD's analysis of the nine-point criteria "prior to submittal to the commission for adoption and approval." Under the Commission's regulations, no new issue may be raised before the Commission that

[71] Health & Saf. Code § 18929.1, emphasis provided.
[72] *Id.*, emphasis provided.

was not raised during the public comment period on the PEX Adoption Notice.[73] Accordingly, the failure to include the nine-point criteria justification in the PEX Adoption Notice effectively precludes the public from critically analyzing the agencies' justification for their proposed building standards.

The PEX Adoption Notice does include an ISOR by each of the agencies as required by the APA under Government Code section 11346.2. The ISOR, however, is not equivalent to the justification under the nine-point criteria analysis required by Section 18930. The required elements of the ISOR substantially differ from the nine-point criteria listed in Section 18930. For example, unlike Section 18930, the APA does not require the ISOR to make written determinations that adoption of a proposed regulation is required by "the public interest," that adoption of a proposed regulation "is not unreasonable, arbitrary, unfair, or capricious, in whole or in part," or "that the applicable national specifications, published standards, and model codes have been incorporated . . . where appropriate."[74]

The APA does not limit the ISOR to the elements listed in Government Code section 11346.2, so there is no bar to including the nine-point criteria analysis in the Statement.[75] In other words, the ISOR contained in the PEX Adoption Notice could have been constructed to meet the intent of both the APA and Health and Safety Code section 18930, as required under Section 18929.1. The ISOR contained in the PEX Adoption Notice, however, is limited to the bare elements required under Government Code section 11346.2 and fails to include its justification in terms of the Section 18930 criteria. This failure violates the notice requirements of Section 18929.1.

Regulations that substantially fail to comply with notice requirements are invalid.[76] The 2007 notice for the proposed PEX amendments must be revised and re-circulated with a copy of the nine-point analysis of HCD, CBSC, OSHPD and DSA in order to correct this error.

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[73] Cal. Code Regs., tit. 24, part 1, § 1-901(d)(4).
[74] Gov. Code § 11346.2; see also Health & Saf. Code § 18930.
[75] Gov. Code § 11346.2, subd. (b) ("statement of reasons shall include, but not be limited to, all of the following . . . .").
[76] See Gov. Code § 11350.

V. THE PROPOSED STATEWIDE APPROVAL OF PEX FAILS TO MEET AT LEAST TWO OF THE NINE-POINT CRITERIA

Before the Commission may adopt a proposed building standard, it must be satisfied that HCD, CBSC, OSHPD and DSA have adequately justified adoption under the nine-point criteria analysis of Health and Safety Code section 18930. The proposed statewide approval of PEX, however, fails to meet at least two of the nine-point criteria. Accordingly, the Commission may not find that the proposed PEX amendments are justified under the Section 18930 criteria.

Section 18930 requires findings under the nine-point criteria to be supported by substantial evidence. If the Commission determines that a factual finding is arbitrary or capricious or lacks substantial evidence, it shall return the standard back to the proposing agency for reexamination.[77]

In the case at hand, there is substantial evidence that adopting the proposed statewide approval of PEX, without first finalizing a legally adequate EIR, would be contrary to the public interest and would be unreasonable, arbitrary and unfair. Furthermore, the record lacks substantial evidence to support a contrary finding. Accordingly, the proposed statewide approval of PEX lacks justification under at least two elements of the nine-point criteria.

A. Approval of PEX Without First Preparing an Adequate EIR Would Not Be In the Public Interest

Approval of PEX without first preparing an adequate EIR would not meet the "public interest" element of the nine-point criteria. Health and Safety Code section 18930, subdivision (3), requires agencies to determine if the "public interest requires the adoption of the building standards." In the case at hand, adopting the proposed statewide approval of PEX, without first finalizing a legally adequate EIR, would violate the requirements of CEQA. Such deliberate violation of the law would, in itself, be contrary to the public interest. The statewide approval of PEX would also be contrary to the public interest due to the numerous significant environmental and public health and safety impacts associated with these products.

[77] Health & Saf. Code § 18930, subd. (d) (1).

It is well settled that compliance with CEQA is in the public interest.[78] CEQA "protects not only the environment but also informed self-government."[79] CEQA informs the public and its responsible officials of the environmental consequences of their decisions before they are made, ensuring consideration of alternatives and requiring imposition of reasonable mitigation measures.[80]

As discussed in detail in the attached comments, reliance on the inadequate PEX DEIR would violate CEQA. The PEX DEIR fails to fully disclose, evaluate or mitigate potential impacts and violates numerous other requirements of CEQA. As a result, reliance upon the PEX DEIR to support the statewide approval of PEX pipe and fittings would be contrary to the public's interest in ensuring informed self-government and in protecting public health and safety and the environment.

The evidence in the record, including the expert comments and studies accompanying this letter, overwhelmingly demonstrates that the proposed statewide approval of PEX may have a significant effect on the environment, even with the newly proposed restrictions and requirements.

Approval of PEX pipe and fittings without full disclosure, evaluation and mitigation of these impacts would not be in the public's interest. Accordingly, adoption of the proposed PEX amendments may not be justified under the nine-point criteria.

B. Statewide Approval of PEX Without First Preparing a Legally Adequate and Technically Complete EIR Would Be Unreasonable, Arbitrary and Unfair

Health and Safety Code section 18930, subdivision (4), requires agencies to justify their proposed building standards on the grounds that the proposed standard "is not unreasonable, arbitrary, unfair, or capricious, in whole or in part." In the case at hand, it is manifestly unreasonable, arbitrary and unfair to propose the adoption of building standards in a manner contrary to law. As discussed in detail in the attached comments, allowing the statewide approval of PEX based upon the

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[78] See *Kane v. Redevelopment Agency of City of Hidden Hills* (1986) 179 Cal.App.3d 899, 905; *People By and Through Dept. of Public Works v. Bosio* (1975) 47 Cal.App.3d 495, 526; see also Pub. Resources Code § 21000.
[79] *Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal.App.4th 98, 108.
[80] *Id.*; Pub. Resources Code §§ 21063 & 21100.

inadequate analysis contained in the PEX DEIR is a clear violation of CEQA. Such approval may not be justified under the nine-point criteria.

Furthermore, the proposed statewide approval of PEX is unfair and unreasonable due to the substantial evidence of potential significant impacts associated with this approval. Approval of a building material without first requiring full disclosure, evaluation and mitigation of its potential impacts is unfair to the public. Moreover, a proposal by an agency to have a potentially hazardous building material approved without such disclosure, evaluation and mitigation is unreasonable.

VI. CONCLUSION

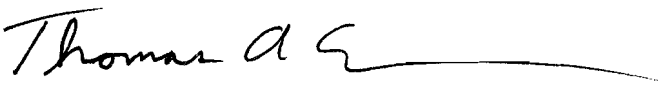
The comments, expert reports, studies and other evidence submitted herein to the Commission demonstrate that the statewide approval of PEX and PEX fittings may result in numerous significant impacts on public health and the environment, even with the recently proposed revisions. Such impacts include contamination of drinking water due to leaching and permeation, premature degradation and failure, increased risk of biofilm formation, increased solid waste disposal impacts and increased fire hazards.

The evidence submitted further demonstrates that the PEX DEIR fails to adequately evaluate and mitigate these impacts. As a result, the proposed approval of PEX would be contrary to the public interest. Full compliance with CEQA is necessary to fully disclose the extent of these potential impacts and to consider alternative pipe materials and mitigation measures.

The Commission must also correct the procedural errors of the PEX Amendment Notice to meet the notice and justification requirements of the APA and of Health and Safety Code sections 18929.1 and 18930.

The State Pipe Trades Council respectfully requests that the Commission require full compliance with CEQA, including the completion of a legally adequate EIR, prior to adopting the proposed amendments approving PEX. Until a legally adequate EIR is completed and feasible, meaningful mitigation is imposed, the PEX amendments proposed by HCD, CBSC, OSHPD and DSA must be disapproved or, in the alternative, held for further study. Thank you for your consideration of this letter and the enclosed comments.

Sincerely,



Thomas A. Enslow

TAE:cnh
Attachments

cc: Ted A. Reed
Executive Director
California State Pipe Trades Council

EXHIBIT A

Declaration of Shawn M. Raiter

DECLARATION OF SHAWN M. RAITER
IN SUPPORT OF THE COMMENTS OF
THE COALITION FOR SAFE BUILDING MATERIALS

Date: August 8, 2008

1. I am an attorney at law employed by the firm of Larson • King, LLP in St. Paul, Minnesota.

2. I represent numerous plaintiffs who have suffered damages to their homes as a result of the failure of PEX fittings. On behalf of these clients, I am an attorney of record in the class action lawsuit *Denise Cox and Terry Cox v. Zurn PEX, Inc.*, filed in Minnesota on August 8, 2007 as well as other similar lawsuits in other states.

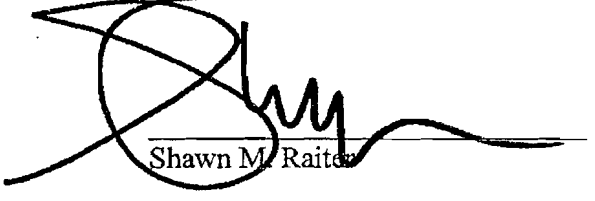
3. I have personally interviewed my clients regarding the damages they suffered from the failure of PEX fittings and have reviewed expert reports on the scope of such damage. I have also personally inspected dwellings and other buildings where PEX fittings have failed.

4. PEX fittings do not always fail catastrophically. They instead often begin to slowly leak water. In many instances, these leaks have gone unnoticed for significant periods of time, as evidenced by the nature of the damage once the leaks were discovered.

5. Among the damages suffered by property owners as a result of the failure of PEX fittings are mold problems that occurred when failure went undiscovered for some period of time.

I declare under penalty of perjury that the foregoing is true and correct.

Executed August 8, 2008 at St. Paul, Minnesota.



Shawn M. Raiter

EXHIBIT B

Methyl Tertiary-Butyl Ether
Oral Risk Assessment Document

METHYL TERTIARY-BUTYL ETHER

CAS # 1634-04-4

ORAL RISK ASSESSMENT DOCUMENT

NSF International
Ann Arbor, MI
February 2008

9.3 Exposure Assessment

The presence of methyl t-butyl ether in ambient air as a result of the manufacture and distribution of oxygenated fuel, vehicle refueling processes, and evaporative and tailpipe emissions from motor vehicles, is likely to be the principal source of human exposure (OEHHA, 1999). Methyl t-butyl ether is infrequently detected in public drinking water systems from groundwater (IPCS, 1998). There are inadequate data to characterize the concentration of methyl t-butyl ether in public drinking water systems from surface water. Methyl t-butyl ether has been found at high levels (i.e. ≥ 1,000 µg/L) in a few private wells used for drinking water (IPCS, 1998). Exposure of the public to methyl t-butyl ether can be principally by inhalation of fumes while refueling motor vehicles and drinking contaminated water (McGregor, 2006). Maximum internal doses resulting from such exposures are unlikely to exceed 0.05 mg/kg-day and will normally be very much lower.

9.4 TAC Derivation

The Total Allowable Concentration (TAC), is used to evaluate the results of extraction testing normalized to static at-the-tap conditions and is defined as the RfD multiplied by the 70 kg weight of an average adult assumed to drink two liters of water per day. A relative source contribution (RSC), applied when calculating a TAC for non-carcinogens, is used to ensure that the RfD is not exceeded when food and other non-water sources of exposure to the chemical are considered. Since the TAC value for methyl t-butyl ether is based on a carcinogenic endpoint, a RSC will not be applied. The TAC for methyl t-butyl ether will be set to the 10^{-5} cancer risk level for methyl t-butyl ether.

$$\text{TAC} = \frac{10^{-5} \text{ risk level} \times 70 \text{ kg}}{2 \text{ L/day}}$$

$$= \frac{(0.003 \text{ mg/kg-day})(70 \text{ kg})}{2 \text{ L/day}}$$

$$= 0.105 \text{ mg/L } (\textbf{100 ppb rounded})$$

9.5 STEL Derivation

NSF/ANSI 60 (2005) and 61 (2007) allow for the derivation and use of a STEL for materials that are initially present in potable water at relatively high concentrations, but rapidly decline in concentration because they are volatile or because they chemically or biologically degrade. The STEL is generally calculated from a repeated dose study in laboratory animals of 14 to 90 days in duration, adjusted for the default 10 kg body weight and 1 L/day drinking water consumption of a child. A product can initially contribute up to the STEL if the at-the-tap concentration decreases to a level at or below the TAC or SPAC within 90 days. Since methyl t-butyl ether is being evaluated as a genotoxic carcinogen, exposure to drinking water levels higher than the TAC, set at the 10^{-5} risk level, cannot be justified and it is not appropriate to derive a STEL for this chemical.