

**FINAL STATEMENT OF REASONS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
CALIFORNIA STATE LANDS COMMISSION**

**REGARDING PROPOSED CHANGES TO  
THE CALIFORNIA BUILDING CODE  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2,  
CHAPTER 31F – MARINE OIL TERMINALS**

**2016 CALIFORNIA BUILDING CODE  
TRIENNIAL CODE CYCLE**

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a final statement of reasons. The Final Statement of Reasons (FSOR) shall be available to the public upon request when rulemaking action is being undertaken. The following FSOR documents the reasons for proposing this particular rulemaking action:

**UPDATES TO THE INITIAL STATEMENT OF REASONS:**

The California State Lands Commission (CSLC or Commission) is proposing amendments to *Chapter 31F – Marine Oil Terminals* of the 2013 California Code of Regulations (CCR), Title 24, Part 2 (otherwise known as the *California Building Code*). These proposed amendments are intended for publication and effect in the 2016 CCR, Title 24, Part 2, *Chapter 31F – Marine Oil Terminals*. The original amendments to Chapter 31F proposed in the Initial Statement of Reasons included 264 Express Terms.

These original amendments were the subject of the initial Public Comment Period (45-Days) held from June 28, 2015 through August 13, 2015, with 163 comments received. Pursuant to the comments received, non-substantive changes were made to 37 Express Terms of Chapter 31F, including the creation of two (2) Express Terms (#2.12a and #11.2a); all of these changes were sufficiently related to the original proposed Express Terms. However, for public input, promotion of transparency and validation of agency determination, a 15-Day Public Comment Period was held.

Pursuant to Government Code Section 8670.28 (a) and the Public Resources Code Section 8755 the Administrator of Oil Spill Prevention and Response of California Department of Fish and the United States Coast Guard were invited to submit comments on this rulemaking initiative during the 45-Day Public Comment Period. The Commission staff has determined that the regulatory action does not conflict with the regulations of the Administrator and the United States Coast Guard. The Office of State Fire Marshal provided comments on the regulatory action, and required changes were made in the Final Express Terms in response to those comments.

A second Public Comment Period (15-Days) was administered from August 28, 2015 through September 14, 2015, with 21 comments received. Pursuant to the comments received, non-substantive changes were made to 16 Express Terms, including the creation of three (3) Express Terms (#2.12b, #2.12c and #2.12d), partial withdrawal of Express Term #3.30 and total withdrawal of Express Term #4.6; all of these changes were sufficiently related to the original proposed express terms. Note that these modifications to the proposed language are without legal effect; therefore, recirculation was unnecessary.

Therefore, since issuance of the Initial Statement of Reasons, 49 Express Terms have been updated which are sufficiently related and non-substantive, as documented in the Final Express Terms, herein and listed below:

Express Term #	Section #	Section Title	Pursuant to Comment Period	Description of Action
1.5	3101F.6	<i>Oil spill exposure classification.</i>	1 <sup>st</sup> (45-Day)	Updated
1.7	3101F.7	<i>Management of Change.</i>	1 <sup>st</sup> (45-Day)	Updated
1.9	3101F.8.1	<i>Quality assurance.</i>	1 <sup>st</sup> (45-Day)	Updated
1.10	3101F.8.2	<i>Peer review.</i>	1 <sup>st</sup> (45-Day)	Updated
2.6	3102F.3.3.2	<i>Subsequent audits.</i>	1 <sup>st</sup> (45-Day)	Updated
2.12a	3102F.3.5.2	<i>Special inspection considerations.</i>	1 <sup>st</sup> (45-Day)	<b>ADDED</b>
2.12b	3102F.3.5.2.1	<i>Coated components.</i>	2 <sup>nd</sup> (15-Day)	<b>ADDED</b>
2.12c	3102F.3.5.2.2	<i>Encased components.</i>	2 <sup>nd</sup> (15-Day)	<b>ADDED</b>
2.12d	3102F.3.5.2.3	<i>Wrapped components.</i>	2 <sup>nd</sup> (15-Day)	<b>ADDED</b>
2.13	3102F.3.5.3	<i>Mechanical and electrical inspections.</i>	1 <sup>st</sup> (45-Day)	Updated
2.14	3102F.3.5.5	<i>Corrosion inspection.</i>	1 <sup>st</sup> (45-Day) 2 <sup>nd</sup> (15-Day)	Updated Updated
2.17	3102F.3.9	<i>Action plan implementation between audits.</i>	1 <sup>st</sup> (45-Day)	Updated
3.20	3103F.5.2.2	<i>3103F.5.2.1.2 Survival condition.</i>	1 <sup>st</sup> (45-Day)	Updated
3.28	3103F.5.4	<i>Wave loads.</i>	1 <sup>st</sup> (45-Day) 2 <sup>nd</sup> (15-Day)	Updated Updated
3.30	3103F.5.7	<i>Tsunamis.</i>	2 <sup>nd</sup> (15-Day)	<b>PARTIALLY WITHDRAWN</b>
3.34	3103F.6.5	<i>Configuration coefficient (<math>C_c</math>).</i>	2 <sup>nd</sup> (15-Day)	Updated
3.40	3103F.7.2	<i>Wind loads.</i>	2 <sup>nd</sup> (15-Day)	Updated
3.44	3103F.8.2	<i>Live load (L).</i>	1 <sup>st</sup> (45-Day)	Updated
4.6	3104F.2.1	<i>Design earthquake motions.</i>	1 <sup>st</sup> (45-Day) 2 <sup>nd</sup> (15-Day)	Updated <b>WITHDRAWN</b>
4.8	3104F.2.3	<i>Analytical procedures.</i>	1 <sup>st</sup> (45-Day)	Updated
4.16	3104F.2.3.2	<i>Nonlinear static demand procedure.</i>	2 <sup>nd</sup> (15-Day)	Updated
4.18	3104F.2.3.2.1	<i>Coefficient Method.</i>	1 <sup>st</sup> (45-Day) 2 <sup>nd</sup> (15-Day)	Updated Updated
4.23	3104F.2.3.2.2	<i>Substitute Structure Method.</i>	1 <sup>st</sup> (45-Day)	Updated
4.27	FIGURE 31F-4-7	<i>EFFECTIVE LATERAL STIFFNESS (ADAPTED FROM [4.4])</i>	1 <sup>st</sup> (45-Day)	Updated
4.28	3104F.2.3.3	<i>Linear modal demand procedure.</i>	2 <sup>nd</sup> (15-Day)	Updated
4.32	3104F.3	<i>New MOTs.</i>	2 <sup>nd</sup> (15-Day)	Updated
4.42	3104F.7	<i>Symbols.</i>	1 <sup>st</sup> (45-Day)	Updated
5.2	3105F.2	<i>Mooring analyses.</i>	1 <sup>st</sup> (45-Day)	Updated
5.4	3105F.3.4	<i>Tsunami.</i>	2 <sup>nd</sup> (15-Day)	Updated
5.10	3105F.6.1	<i>Mooring analyses.</i>	1 <sup>st</sup> (45-Day)	Updated
5.11	3105F.6.2	<i>Design of mooring components.</i>	1 <sup>st</sup> (45-Day)	Updated
5.13	3105F.8	<i>References.</i>	1 <sup>st</sup> (45-Day)	Updated
6.28	3106F.10.2	<i>Kinematic loading from lateral spreading.</i>	1 <sup>st</sup> (45-Day)	Updated
7.7	FIGURE 31F-7-4	<i>METHOD A – MOMENT CURVATURE ANALYSIS</i>	2 <sup>nd</sup> (15-Day)	Updated
7.31	3107F.6	<i>Symbols.</i>	2 <sup>nd</sup> (15-Day)	Updated
8.7	3108F.3.2	<i>Emergency shutdown (ESD) systems.</i>	1 <sup>st</sup> (45-Day)	Updated
8.15	3108F.6.3	<i>Fire water.</i>	1 <sup>st</sup> (45-Day)	Updated
8.18	3108F.8	<i>References.</i>	1 <sup>st</sup> (45-Day)	Updated
9.6	3109F.8	<i>References.</i>	1 <sup>st</sup> (45-Day)	Updated
10.3	3110F.2.2.2	<i>Electrical components (N).</i>	1 <sup>st</sup> (45-Day)	Updated

<b>10.5</b>	<i>3110F.3</i>	<i>Oil transfer hoses (N/E).</i>	1 <sup>st</sup> (45-Day)	Updated
<b>10.13</b>	<i>3110F.10</i>	<i>Pumps (N/E).</i>	1 <sup>st</sup> (45-Day)	Updated
<b>10.14</b>	<i>3110F.12</i>	<i>References.</i>	1 <sup>st</sup> (45-Day)	Updated
<b>11.1</b>	<i>3111F.1</i>	<i>General.</i>	1 <sup>st</sup> (45-Day)	Updated
<b>11.2</b>	<i>3111F.2</i>	<i>Hazardous area designations and plans (N/E)</i>	1 <sup>st</sup> (45-Day)	Updated
<b>11.2a</b>	<i>3111F.3</i>	<i>Identification and tagging.</i>	1 <sup>st</sup> (45-Day)	<b>ADDED</b>
<b>11.4</b>	<i>3111F.5</i>	<i>Electrical service.</i>	1 <sup>st</sup> (45-Day)	Updated
<b>11.6</b>	<i>3111F.6</i>	<i>Grounding and bonding (N/E).</i>	1 <sup>st</sup> (45-Day)	Updated
<b>11.13</b>	<i>3111F.12</i>	<i>References.</i>	1 <sup>st</sup> (45-Day)	Updated

The modified regulatory text was submitted and approved by the Commissioners of the State Lands Commission on Friday, October 16, 2015. There was no testimony made by any interested parties at this Commission Meeting. A copy of the transcript showing the voting record of the Commissioners of the California State Lands Commission adopting these regulatory amendments is enclosed in the rulemaking file, as permanent record.

All of the data and technical, theoretical and empirical studies, reports, and similar documents identified in the Initial Statement of Reasons were made available for public review by the State Lands Commission during the entirety of this rulemaking process, including, but not limited to, every public comment period. Therefore, the requirements of Government Code Section 11347.2 are not applicable. Furthermore, there have been no changes in applicable laws or to the effect of the proposed regulations from the laws and effects described in the Notice of Proposed Regulatory Action.

**MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS**

The State Lands Commission has determined that the proposed regulatory action **WOULD NOT** impose a mandate on local agencies or school districts.

**OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).**

The Public Comments and CSLC responses are presented below for the 45-Day Public Comment Period and 15-Day Public Comment Period.

In addition, the Notice of Proposed Rulemaking, Initial Statement of Reasons, 45-Day Express Terms, modified 15-Day Express Terms and the Final Statement of Reasons are posted on the CSLC’s website ([www.slc.ca.gov](http://www.slc.ca.gov)) under the “Laws/Regulations” drop-down and “Proposed Regulations”.

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**45-DAY PUBLIC COMMENT PERIOD:**

One hundred sixty-three (163) comments were received during the 45-Day Public Comment Period, which extended from June 28, 2015 through August 13, 2015. A Public Hearing was also held on August 13, 2015 at 9:00 AM at the Port of Long Beach, Board Room. All comments received have been numbered, grouped and summarized for CSLC staff response; copies of the comment letters are in the rulemaking file. One (1) commenter gave oral testimony at the Public Hearing and also provided a script of the commenter’s testimony. These comments are included as part of the total received, and all of the comments have been numbered as shown in the table below.

<b>45-DAY PUBLIC REVIEW COMMENTS</b>				
<b>COMMENTS NUMBER*</b>	<b>TOTAL NUMBER OF COMMENTS*</b>	<b>COMMENTS NAME</b>	<b>COMMENTS AFFILIATION</b>	<b>DATE RECEIVED</b>
1	2	Marc Percher, P.E.	Moffatt & Nichol	06/30/2015 @ 11:11 AM
2	13	William M. Bruin, P.E.	Simpson, Gumpertz & Heger	07/22/2015 @ 5:35 PM
3	1	Gerald M. Diaz, P.E., G.E.	[Not Provided]	08/11/2015 @ 1:49 PM
4	1	Allen M. Yourman, Jr., P.E.	[Not Provided]	08/11/2015 @ 7:47 AM
5	55	Rod K. Iwashita, P.E.	Moffatt & Nichol	08/12/2015 @ 1:24 PM
6	32	James W. Kearney, Jr., P.E.	COWI Marine North America	08/12/2015 @ 5:14 PM
7	4	Diane Arend	CAL FIRE–Office of the State Fire Marshal	08/12/2015 @ 3:09 PM
8	11	Gayle S. Johnson, P.E.	Simpson, Gumpertz & Heger	08/13/2015 @ 10:11 AM
9	42	Catherine H. Reheis-Boyd	Western States Petroleum Association	08/13/2015
10	1	Gerald M. Diaz, P.E., G.E.	[Not Provided]	08/13/2015
11	1	45-Day Public Hearing	One speaker (Jerry Diaz)	08/13/2015 @ 9:00 AM to 9:13 AM

\* Note: Comment Numbers are assigned in the format “X-Y”, where:  
X = Commenter Number (for 45-Day Comment Period), and  
Y = Comment Number (each Commenter’s Comments are numbered sequentially starting at 1)

**GENERAL – COMMENTS 3-1, 4-1, 6-1, 6-2, 7-3, 10-1 and 11-1.**

These comments do not address specific sections or amendments proposed for Chapter 31F of the code or the Express Terms, including:

- (a) Comments 3-1, 4-1, 10-1 & 11-1:  
Suggest that MOTEMS reports should be made available for professional and/or public review, and that the regulatory amendments should ensure public availability of such documents by limiting the designation “proprietary” and related restrictions.
- (b) Comment 6-1:  
Suggests that clarification should be provided regarding the applicability of the proposed Chapter 31F amendments, such as plastic hinge length/location determination, soil structure interaction and geotechnical changes, to existing marine terminals.

- (c) Comment 6-2:  
Suggests that Section 3101F.3 in the existing Chapter 31F is inadequate in clearly defining what modifications to a facility trigger the “new” definition.
- (d) Comment 6-3:  
Remarks that they assume that existing Terminal Operating Limits diagrams will not have to be revisited for the minor changes in Rope/Tail factors of safety requirements, although new analyses would consider the new requirements.
- (e) Comment 7-3:  
Suggests that any reference to NFPA standards in the body of the proposed amendments should only have the standard identified without identifying an edition.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, these comments are not specifically directed at the proposed amendments for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. These comments are rejected.

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**EXPRESS TERM #1.1 – COMMENTS 5-1 and 9-1.**

The commenters (Comments 5-1 and 9-1) address the addition of LNG-specific language to Section 3101F.1 “*Authority*”, enquiring if compressed natural gas (CNG), liquefied petroleum gas (LPG) and other natural gas liquids (NGL) will also come under the California State Lands Commission’s jurisdiction.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the amendments to Section 3101F.1 “*Authority*” address LNG only; CNG, LPG and NGL are not addressed herein or within the proposed language for Chapter 31F of this code. Therefore, these comments are rejected and no changes are made.

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**EXPRESS TERM #1.3 – COMMENTS 5-2 and 9-2.**

The commenters (Comments 5-2 and 9-2) address the addition of LNG-specific language to Section 3101F.4 “*Overview*”, requesting that clarification be provided regarding the applicability of this proposed amendment to temporary transfer structures, barge-to-vessel transfer, hard pipe, and LNG transfer via truck or isocontainer. This includes appeal for definitions to be provided, including for “*marine terminal*”.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the California Building Standards Code contains “building standards”, as defined in Health & Safety Code § 18909. The scope of the California Building Code is further elaborated in 24 CCR, Part 2, *Chapter 1 – SCOPE AND ADMINISTRATION*, Section 1.1.3. And the definition of “*marine terminal*” is provided in the governing statute, Lempert-Keene-Seastrand oil spill prevention and response act of 1990 (PRC §§ 8750-8760). Therefore, these provisions apply to the built environment and no further clarification is required beyond that provided in existing standards. These comments are rejected and no changes are made.

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**EXPRESS TERM #1.4 – COMMENTS 5-3, 5-4, 5-5, 8-1, 8-2, 8-3, 9-3 and 9-4.**

These comments address Section 3101F.5 “*Spill prevention*” and remark on the following:

- (a) The commenters (Comments 5-3 and 9-3) question if these Risk and Hazards Analysis requirements apply to existing or new MOTs.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, Section 3101F.3 of this code clarifies that: “*If no classification is indicated, the classification shall be considered to be (N/E).*” Therefore, these Risk and Hazards Analysis standards apply to existing and new MOTs, and further clarification is unnecessary. These comments are rejected and no changes are made.

- (b) The commenter (Comment 5-4) questions if these Risk and Hazards Analysis requirements are within the California State Lands Commission’s or Office of Spill Prevention and Response’s (OSPR – a Division of California Department of Fish and Wildlife) jurisdictional authority, and claim that OSPR’s Risk and Hazard Analysis regulations (14 CCR 817.02(c)(1)(B)) are not referenced.

**CSLC RESPONSE:** Comment rejected. The proposed language cites OSPR’s Risk and Hazard Analysis regulations as Reference [1.2], and requires that MOTs review and “*utilize*” such Risk and Hazard Analyses to mitigate risks in the design of the built environment. Therefore, no changes are made.

- (c) The commenter (Comment 5-5) suggests that Section 3101F.5 “*Spill prevention*” should be removed.

**CSLC RESPONSE:** Mitigation of the assessed consequences (as determined from Risk and Hazards Analyses) in the design of MOTs is appropriate. Therefore, this comment is rejected and no changes made.

- (d) The commenter (Comment 8-1) criticizes the addition of Section 3101F.5, questioning where, how and when these Risk and Hazard Analysis regulations are to be utilized, and asserting that these requirements should be relocated to more appropriate section(s), such as part of the fire hazard and risk assessment or elsewhere.

**CSLC RESPONSE:** Comment rejected. The introductory paragraph of the proposed language should be read together with the entire section for clarity. The proposed language articulates that Risk and Hazard Analyses shall be utilized during design of the built environment to ensure that risks are first mitigated in the design phase, prior to addressing residual risk through operational and administrative means. Therefore, no changes are made.

- (e) The commenter (Comment 8-2) asserts that the terminology “*up-to-date*” implies that this code requires recertification or redoing Risk and Hazard Analyses during Audits, and suggests that this terminology should be replaced with “*latest*”.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the terminology “*up-to-date*” is preferable since it better articulates that the Risk and Hazards Analyses utilized during the design phase must be consistent with the MOT conditions at such time. Therefore, this comment is rejected and no changes are made.

- (f) The commenter (Comment 8-3) questions the terminology “*best achievable technologies*”, and suggests that mitigation should be based more on As Low As Reasonably Achievable (ALARA) or As Low As Reasonably Practicable (ALARP) principles.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the terminology “*best achievable technologies*” comes directly from the governing statute, Lempert-Keene-Seastrand oil spill prevention and response act of 1990 (PRC §§ 8750-8760). Therefore, this comment is rejected and no changes are made.

- (g) The commenter (Comment 9-4) questions if the “oil” spill prevention requirements apply to LNG.

**CSLC RESPONSE:** Comment rejected. The last sentence of the proposed language specifically addresses LNG by stating: “*Risk and Hazards Analysis requirements specific to marine terminals that transfer LNG are discussed in Section 3112F.2.*” Therefore, no changes are made.

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**EXPRESS TERM #1.5 – COMMENTS 2-1, 5-6, 5-7, 6-4, 6-5, 9-5 and 9-6.**

These comments address Section 3101F.6 “*Oil spill exposure classification*” and remark on the following:

- (a) The commenters (Comments 2-1 and 9-6) claim that stored volume ( $V_s$ ) is not adequately defined, and suggest that stored volume is traditionally computed including all oil stored in an unstripped line offshore of the shore isolation valves (SIVs).

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the stored volume ( $V_s$ ) definition provided is adequate for the purpose of Chapter 31F and is performance based. Therefore, these comments are rejected and no changes are made.

- (b) The commenters (Comments 5-6 and 9-5) question if the proposed modifications to the “ $\Delta t$ ” definition will change the designation of existing MOTs, and state that this provision should not apply retroactively to existing terminals.

**CSLC RESPONSE:** Commission staff appreciates these comments. To address these concerns, the Commission staff reinstated the existing code terminology “*During a pipeline leak, a quantity of oil is assumed to spill at the maximum cargo flow rate until the ESD is fully effective.*” and definition of “ $\Delta t$ ”, and provided definitive language to distinguish existing vs. new MOTs.

- (c) The commenter (Comments 5-7) requests that units be provided for *Equation (1-1)*.

**CSLC RESPONSE:** Commission staff appreciates this comment. To address this concern, the Commission staff added the terminology “[seconds]” to the definition of “ $\Delta t$ ” to clarify the units of measurement.

- (d) The commenter (Comments 6-4) requests clarification regarding the renumbering of this section.

**CSLC RESPONSE:** Commission staff appreciates this comment, and corrected the typographical error by underlining the “ $\delta$ ” and adding a “5” with strikethrough.

- (e) The commenter (Comments 6-5) enquires if additional direction will be provided on how to determine the “*time required to activate ESD valve*”.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, no amendments are necessary. It is the terminal operators’ responsibility to ensure that best achievable protection is provided at all times. The time of activating the ESD is part of that protection. Therefore, no changes are made.

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**EXPRESS TERM #1.7 – COMMENT 2-2.**

The commenter (Comment 2-2) addresses Section 3101F.7 “*Management of Change*”, and states that this section is poorly defined, explaining that the definition of “*physical change*” and exclusion of operational changes contribute to this concern. The commenter suggests that any modifications that result in operational changes and revision of the Ops Manual be accompanied with the MOC.

**CSLC RESPONSE:** Commission staff appreciates this comment. To address this concern, the Commission staff added the clarifying terminology “*that significantly impact operations*”, to clarify that a MOC process shall be followed when physical change(s) are made to the MOT that significantly impact operations.

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**EXPRESS TERM #1.9 – COMMENTS 2-3, 9-7 and 9-8.**

These comments address Section 3101F.8.1 “*Quality assurance*” and remark on the following:

- (a) The commenters (Comment 2-3 and 9-8) state that the sentence regarding “*a concluding statement of compliance*” is poorly written and the intent is unclear. The commenters elaborate that the requirements for professional engineering certification are already addressed in other sections of Chapter 31F, and that the provisions appear to inappropriately require the Audit Team Leader to certify a statement made by the operator. A concluding suggestion to delete this sentence is provided.

**CSLC RESPONSE:** Commission staff appreciates these comments, and concur that standards already require MOT operators to submit their code-compliance documentation, and all engineering documents shall to be certified by the engineer-of-record. To address these concerns and reduce confusion and redundancy, the Commission staff modified the proposed language, including the removal of the terminology “*operator*” and “*as certified by the engineer-of-record*”.

- (b) The commenter (Comment 9-7) objects to the term “*all*” and states that requiring a statement of compliance for all submittals may be problematic.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #1.10 – COMMENTS 2-4, 2-5, 5-8, 6-6, 6-7, 6-8, 6-9, 6-10, 8-4, 8-5, 8-6, 8-7, 8-8, 8-9 and 8-10.**

These comments address Section 3101F.8.2 “*Peer review*” and remark on the following:

- (a) The commenter (Comment 2-4) objects to the proposed language: “*The peer reviewer(s)’ credentials shall be presented to the Division for approval prior to commencement of the review.*”, questioning why prior Division review is required, and asserting that this adds another layer of unnecessary oversight, when the Division can already reject reports, designs, and analysis from unqualified professionals. A concluding suggestion to delete this sentence is provided.

**CSLC RESPONSE:** Comment rejected. The proposed language is generally based on industry accepted peer review standards for professional engineering work, and safeguards the operator from having work completed by unqualified professionals which the Division would ultimately reject. Therefore, no changes are made.

- (b) The commenters (Comments 2-5, 6-7 and 8-9) object to item #7 regarding formal documentation of peer review correspondence. The commenters elaborate that it’s unclear why the Division would feel that such records of conversation would be within its purview, documentation of the peer review process is already covered by the other requirements in this section, and this is a waste of time and money. A concluding suggestion to delete this sentence is provided.

**CSLC RESPONSE:** Commission staff appreciates these comments. To address these concerns, the Commission staff modified the proposed language for clarity, including the addition of the term “*important*” and removal of the terminology “*telephone and meeting logs, etc.*”

- (c) The commenters (Comments 5-8 and 8-4) generally object to the requirements for independent peer reviewers. Comment 5-5 takes exception to the terminology “*external*” in the proposed sentence: “*Peer review shall be performed by an external independent source to maintain the integrity of the process.*”, and suggests that the language be modified for consistency with CALTRANS and CBC peer review requirements, which are claimed to require independent peer review. Comment 8-4 takes exception to the proposed sentence: “*The peer reviewer(s) and their affiliated organization shall have no other involvement in the project, except in a review capacity.*”, and argues that this should not be the Division’s default position, since voluntary peer reviews may not need to be completely independent.

**CSLC RESPONSE:** Comments rejected. The proposed language is generally based on industry accepted peer review standards for professional engineering work, and appropriately articulates the requirements for independent peer review processes. Therefore, no changes are made.

- (d) The commenters (Comments 6-6 and 8-6) appear to generally object to list of peer reviewer report requirements, stating that the list is too specific and only a final report is necessary to be submitted to the Division, with a statement as to whether the design or analysis meets the requirements of the code, and recommendations, if any.

**CSLC RESPONSE:** Comments rejected. The proposed language is generally based on industry accepted peer review standards for professional engineering work. Therefore, no changes are made.

- (e) The commenters (Comments 6-8 and 8-7) claim that the differences between items #3, #4 and #5 are unclear.

**CSLC RESPONSE:** Comments rejected. The proposed language is generally based on industry accepted peer review standards for professional engineering work. Item #3 “*Findings*” requires documentation of initial observations. Item #5 “*Conclusions*” requires presentation of final results at the end of the peer review process, including reflection on recommended corrective actions and resolutions (i.e. item #4). This is indicated by the sequential ordering of items #3, #4 and #5. Therefore, no changes are made.

- (f) The commenters (Comments 6-9 and 8-8) object to item #6 regarding the requirement for certification by peer reviewers. The commenters argue that the peer reviewers aren’t necessarily the final word on whether the work meets the requirements or even doing a review for code compliance, and are only certifying what they are reviewing. Further, the original designer should be able to defend their design or analysis to the Division, and the Division itself may form an independent opinion. Suggestions include the modification or deletion of this item.

**CSLC RESPONSE:** Commission staff appreciates these comments. To address these concerns, the Commission staff modified the proposed language, including the addition of the term “*reviewed*” to clarify the requirement that “*reviewed work meets the requirements of this code*”. The peer reviewer is not the originator of the final work and is only acting in a review capacity. The original designer is required to defend their design and analyses, and the Division does exercise independent judgement; however, this section addresses “*Peer review*” only.

- (g) The commenter (Comments 6-10) objects to the order of the list of peer reviewer report requirements, questioning if item #4 (*“Recommended corrective actions and resolutions...”*) should follow items #5 (*“Conclusions”*) and #6 (*“Certification by the peer reviewer(s)...”*).

**CSLC RESPONSE:** Comment rejected. The proposed language is generally based on industry accepted peer review standards for professional engineering work. Item #5 *“Conclusions”* requires presentation of final results at the end of the peer review process, including reflection on recommended corrective actions and resolutions (i.e. item #4). Hence, the sequential ordering of items #4, #5 and #6 is intentional. Therefore, no changes are made.

- (h) The commenter (Comments 8-5 and 8-10) objects to the proposed language: *“...the peer reviewer(s) shall submit a written report directly to the Division”*, stating that the peer review report should be submitted to whoever is paying them. Note that these comments are duplicative.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the proposed language does not prohibit the peer reviewer from submitting their report directly to the operator. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.1 – COMMENT 9-9.**

The commenter (Comment 9-9) addresses Section 3102F.1.2 *“Audit and inspection types”* and questions what constitutes *“significant change of operations”*.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this sentence restructuring is editorial in nature and requires no further clarification. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.5 – COMMENTS 5-9 and 6-11.**

These comments address Section 3102F.2 *“Annual compliance inspection”* and remark on the following:

- (a) The commenter (Comment 5-9) appears to object to the removal of the language: *“If a boat is not available or the under dock inspection cannot be performed by the Division during the annual inspection, the MOT operator shall carry out or cause to be carried out, such an inspection. The operator will then provide the Division with a report detailing the examination results including photographs, videos and sketches as necessary to accurately depict the state of the underside of the dock.”*

**CSLC RESPONSE:** Commission staff appreciates this comment. In general, the Commission staff has removed this language for brevity and accuracy purposes. This does not prevent the MOT operator from performing annual inspections. Therefore, this comment is rejected and no changes are made.

- (b) The commenter (Comment 6-11) questions if the following language, which was proposed during the informal comment period, has intentional been removed: *“The terminal owner and operator shall cooperate with the Division during the annual compliance inspection.”*

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the Commission staff did not propose this language during formal rulemaking, as it is duplicative of existing requirements in 2 CCR § 2320 (Article 5). Therefore, no changes are made.

**EXPRESS TERM #2.6 – COMMENTS 2-6, 6-12, 6-13, 6-14, 8-11 and 9-10.**

These comments address Section 3102F.3.3.2 “*Subsequent audits*” and remark on the following:

- (a) The commenters (Comments 2-6, 6-14, 8-11 and 9-10) appear to object to the initially proposed language: “*A subsequent audit report of each terminal shall be completed at a maximum interval of 4 years, and concurrently with the inspections...*” (Note that some comments misquoted this.) In general, the commenters argued that this implied that all inspections must be completed at least every 4 years, and that the concurrency of inspections with audits may accelerate some MOTs audit cycles or structural inspections due to the shortest underwater inspection cycle (based on different structural material types), without technical justification. Several suggestions were provided to address these concerns.

**CSLC RESPONSE:** Commission staff appreciates these comments. To address some of these concerns, the Commission staff modified the proposed language regarding subsequent audit timing for clarity, including more logically grouping the two (2) methods available for determining audit time intervals into a single sentence, and replacing the term “*maximum*” with “*default*”. However, the proposed language still requires concurrency of the audit and inspections processes, and requires the audit team leader to recommend the recurrence interval via either method with appropriate justification. In special circumstances, alternatives may also be requested in accordance with Section 3101F.9 “*Alternatives*”.

- (b) The commenter (Comment 6-12) requests that the term “*inspections*” be defined.

**CSLC RESPONSE:** Comment accepted. The language “(see Section 3102F.3.5)” is added after “*inspections*” in the first sentence of this section to clarify that all inspections (i.e. the entire *Scope of inspections*), including above water structural, underwater structural, special, mechanical and electrical and corrosion inspections, are to be completed concurrently with the audits.

- (c) The commenter (Comment 6-13) requests that the term “*concurrently*” be defined, and questions the timing this requires.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the term “*concurrently*” is adequate to convey that the audit and inspection processes shall be conducted in conjunction. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.7 – COMMENTS 5-10, 6-15, 6-16 and 9-11.**

These comments address Section 3102F.3.4.7 “*Corrosion specialist*” and remark on the following:

- (a) The commenters (Comments 5-10 and 6-16) object to these corrosion specialist requirements, and claim that the professional engineers currently overseeing inspections are qualified to fulfill this role. Comment 5-7 suggests deleting this requirement. Comment 6-21 questions if the intent is to widen the qualifications for performing the corrosion check to “qualified” non-professional engineers.

**CSLC RESPONSE:** Comments rejected. The proposed language adequately articulates the expertise requirements for a corrosion specialist. If an audit team already has personnel that meet these corrosion specialist requirements, then this provision is satisfied. This does not alter the audit team and professional engineer requirements defined in Section 3102F.3.4 “*Audit team*”. Therefore, no changes are made.

- (b) The commenter (Comment 6-15) appears to request that “*other professional*” be defined.

**CSLC RESPONSE:** Comment rejected. The proposed language adequately defines the expertise required to meet the corrosion specialist requirement. Therefore, no changes are made.

- (c) The commenter (Comment 9-11) questions if the corrosion specialist is required to be part of the structural inspection team or only intended for piping.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, as stated in this section, corrosion specialists shall perform corrosion assessments per Section 3102F.3.6.5, which includes “*all steel and metallic components, including the structure, pipelines, supports and other MOT ancillary equipment*”. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERMS #2.10 & #2.11 – COMMENTS 5-11, 5-12, 5-13, 5-14, 5-15, 6-17, 6-18, 6-19, 6-20, 6-21, 6-22, 6-23 and 9-12.**

These comments address Section 3102F.3.5.1.1 “*Above water structural inspection*” and/or Section 3102F.3.5.1.2 “*Underwater structural inspection*”, since multiple commenters combined their remark on the following:

- (a) The commenter (Comment 5-11) objects to the removal of the “+3 ft MLLW” boundary based on consideration of the practicalities of equipment and access. An example of Superlite helmets is provided.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language allows the operator the flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. Therefore, this comment is rejected and no changes are made.

- (b) The commenter (Comment 5-12) objects to the removal of the “+3 ft MLLW” boundary based on type of deterioration, stating that the mechanism and rates of deterioration for above water and underwater inspection differ significantly.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language allows the operator the flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. Therefore, this comment is rejected and no changes are made.

- (c) The commenter (Comment 5-13) objects to the removal of the “+3 ft MLLW” boundary based on scope and access considerations, stating that the scope and access considerations for above water and underwater inspections differ and that these differences are not properly recognized and accounted for if applied interchangeably.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language allows the operator the flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. Therefore, this comment is rejected and no changes are made.

- (d) The commenter (Comment 5-14) objects to the removal of the “+3 ft MLLW” boundary based on conflicting opinions, stating that there will exist a possible conflict of opinion between the above water and underwater inspection teams in the event that the inspections are conducted by different firms.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language allows the operator the flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. This allows the operator, inspection teams and audit team leader to negotiate and define each inspection teams' contractual obligations to ensure clear definition of boundaries and responsibilities, while ensuring that all components are inspected. Therefore, this comment is rejected and no changes are made.

- (e) The commenter (Comment 5-15) objects to the removal of the "+3 ft MLLW" boundary based on fundamental purpose, and claims that while the proposed language will accomplish the same purpose, it may be at a potentially considerable additional expense to the owner.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language allows the operator the flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. Therefore, this comment is rejected and no changes are made.

- (f) The commenter (Comment 6-17) objects to the removal of the "+3 ft MLLW" boundary in Section 3102F.3.5.1.1 "*Above water structural inspection*", stating that it literally would include everything above and below deck including below water since water does not require excavation.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this literal interpretation neglects the "*above water inspection*" terminology in this section. Therefore, this comment is rejected and no changes are made.

- (g) The commenter (Comment 6-18) suggests that the term "*waterline*" be added in Section 3102F.3.5.1.1 "*Above water structural inspection*" for clarity.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language adequately articulates the operator's flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. Therefore, this comment is rejected and no changes are made.

- (h) The commenter (Comments 6-19 and 6-21) objects to the addition of the terminology "*below deck*" in Section 3102F.3.5.1.2 "*Underwater structural inspection*", stating that it does not exclude those components inspected by the above water inspection team or which might require excavation or extensive removal of materials. The commenter also questions how "*below deck*" is defined.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the proposed language is adequate to articulate the operator's flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. Therefore, these comments are rejected and no changes are made.

- (i) The commenter (Comments 6-20 and 6-22) objects to underwater structural inspection team requirements (Section 3102F.3.4.3 - which require that at least 25% of the underwater examination be directed by a registered civil or structural engineer, but do not require CA P.E. licensure) in the context of the above water and underwater inspection boundary determination. The commenter further suggests adding language to Section 3102F.3.4.3 to limit the below water inspection to, at a minimum, those components or portions of components that cannot be inspected by the above water inspection team.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the proposed language is adequate to articulate the operator's flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. Therefore, these comments are rejected and no changes are made, but may be considered for future rulemaking.

- (j) The commenter (Comment 6-23) suggests that difference in structural systems and available daylight tides at the time of above water inspections will make the cut-off (by elevation) difficult for each facility, but indicates that this can be addressed.

**CSLC RESPONSE:** Commission staff appreciates this observation, and no changes are necessary.

- (k) The commenter (Comment 9-12) states that there is an overlap between the above water and underwater inspection scope, and suggests not changing the text from the "+3 ft MLLW" separation plane.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language allows the operator the flexibility to determine the boundary between the above water and underwater inspections, including a choice of the +3 ft MLLW boundary. This allows the operator, inspection teams and audit team leader to negotiate and define each inspection teams' contractual obligations to ensure clear definition of boundaries and responsibilities, while ensuring that all components are inspected. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.12 – COMMENTS 5-16, 6-24 and 9-13.**

The commenters (Comments 5-16, 6-24 and 9-13) address Table 31F-2-3 "SCOPE OF UNDERWATER INSPECTIONS [2.2]", and the addition of Levels II and III inspection requirements "As Necessary" and "Sonar Imaging, As Necessary" (respectively) for "Slope Protection, Channel Bottom or Mudline-Scour". The commenters request that "As Necessary" should be defined, and Comment 5-9 requests that the method for Level II inspection also be defined.

**CSLC RESPONSE:** Comments rejected. The "Slope Protection, Channel Bottom or Mudline-Scour" underwater inspection requirements are updated for consistency with the provisions in the referenced ASCE "Underwater Investigations – Standard Practice Manual" [2.2]. Therefore, these comments are rejected and no changes are made.

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**EXPRESS TERM #2.12a – COMMENT N/A.**

No comments were received during the 45-Day Public Comment Period directed at Section 3102F.3.5.23 "Special inspection considerations".

**CSLC RESPONSE:** During the 45-Day Public Comment Period, the Commission staff discovered an error in the Section 3102F.3.5.X numbering sequence. This Express Term was added to address this mistake.

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**EXPRESS TERM #2.13 – COMMENTS 5-17 and 9-14.**

These comments address Section 3102F.3.5.34 "Mechanical and electrical inspections" and remark on the following:

- (a) The commenter (Comment 5-17) states that the inspection of "utility and auxiliary piping" is already covered in item #3 of this section and that only process piping should be inspected to API RP 574, requesting that it be stated herein.

**CSLC RESPONSE:** Comment rejected. This requirement is not new and was relocated from Section 3109F.6. Relocation does not change existing regulatory effect. Therefore, no changes are made.

- (b) The commenter (Comment 9-14) questions if the API RP 574 external visual inspections of utility, auxiliary and fire protection piping are to be performed on the same inspection interval as the subsequent audits.

**CSLC RESPONSE:** Commission staff appreciates this comment. If concerns exist, this will be addressed on a case-by-case basis.

- (c) No comments were received during the 45-Day Public Comment Period directed at the numbering of this section.

**CSLC RESPONSE:** During the 45-Day Public Comment Period, the Commission staff discovered an error in the Section 3102F.3.5.X numbering sequence. This Section was renumbered to “3102F.3.5.3” to correct this mistake.

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**EXPRESS TERM #2.14 – COMMENTS 2-7, 5-18, 6-25 and 9-15.**

These comments address Section 3102F.3.5.45 “*Corrosion inspection*” and remark on the following:

- (a) The commenters (Comments 2-7 and 9-15) object to this section stating that the purpose of the corrosion inspection is unclear, and claims that the structural inspections, currently overseen by professional engineers, and API 570 certified pipeline inspections already assess corrosion. Concluding statements suggest that this requirement does not accurately address industry practice and seems to be a redundant inspection requirement, and suggests that this section be deleted.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the proposed language appears to address the commenters concerns, as it specifies that “*a qualified engineer or technician*” shall perform the corrosion inspection “*during each audit*” (i.e. the structural inspections can still be performed by professional engineers during the audit and inspection processes) and the “*API 570 inspection program*”, the latter of which is not required as part of the audit (i.e. the API 570 certified technician can inspect the oil pipelines on another schedule). The proposed language adequately articulates the corrosion inspection requirements. Therefore, these comments are rejected and no changes are made.

- (b) The commenter (Comment 5-18) objects to this section stating that the assessment of corrosion protection systems are already performed in accordance with the existing Section 3111F.10 “*Corrosion protection*”, and that the proposed language adds requirements that can be categorized as preventative maintenance, which should not be regulated. A concluding suggestion to delete this section is provided.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this section is added for relocation and rewording of existing Section 3111F.10 of this code, to consolidate all inspection requirements in Section 3102F. The proposed language herein expands upon the existing language to clarify the original intent, purpose and applicability of this code. It appears that the commenter’s “*preventative maintenance*” concern is in reference to the API 574 [2.3] requirements, and while Commission staff does not agree with the commenter’s assertions, the proposed language is revised to reduce confusion by replacing “*API 574 [2.3]*” with “*Section 3102F.3.5.4*”. [Note: During the 15-Day Public Comment Period, Commission staff discovered an error in this reference numbering and corrected it to “3102F.3.5.3”.] This clarifies that the utility, auxiliary and fire piping/pipelines inspections completed in accordance

with the Section 3102F.3.5.34 “*Mechanical and electrical inspections*” may also satisfy the corrosion inspection requirements and a redundant inspection is not required.

- (d) The commenter (Comment 6-25) objects to this section, claiming that the professional engineers currently overseeing inspections are qualified to fulfill this role, and questioning if the intent is to widen the qualifications for performing the corrosion check to “qualified” non-professional engineers.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the commenter appears to have confused the “*Corrosion specialist*” role (Section 3012F.3.4.7) and the “*Corrosion inspection*” requirements. The proposed language adequately articulates that “*a qualified engineer or technician*” shall perform corrosion inspections. The intent is not to widen the qualifications; however, the terminology “*a qualified engineer or technician*” is necessary to address structural inspection vs. API inspection qualifications, respectively. Therefore, this comment is rejected and no changes are made.

- (e) No comments were received during the 45-Day Public Comment Period directed at the numbering of this section.

**CSLC RESPONSE:** During the 45-Day Public Comment Period, the Commission staff discovered an error in the Section 3102F.3.5.X numbering sequence. This Section was renumbered to “3102F.3.5.4” to correct this mistake.

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**EXPRESS TERM #2.15 – COMMENTS 2-8, 5-19 and 9-16.**

These comments address Section 3102F.3.6.5 “*Corrosion assessment (N/E)*” and remark on the following:

- (a) The commenter (Comment 2-8) objects to this section stating that the purpose of the corrosion assessment is unclear, and questions if “*this corrosion inspection*” is intended to inspect the condition of corrosion protection systems. The commenter claims that structural components and piping systems are required to be inspected in other code sections. Concluding statements suggest that this requirement does not accurately address industry practice and seems to be a redundant inspection requirement, and suggests that this section be deleted.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the commenter appears to have confused “*Corrosion inspection*” (Section 3012F.3.5.45) and “*Corrosion assessment*” requirements. Furthermore, Section 3102F.3.6.5 is added for relocation and rewording of existing Section 3111F.10 of this code, to consolidate all inspection requirements in Section 3102F. The proposed language herein expands upon the existing language to clarify the original intent, purpose and applicability of this code. Therefore, this comment is rejected and no changes are made.

- (b) The commenters (Comments 5-19 and 9-16) question if this section requires an entirely new report for subsequent audits or is part of the inspection report, and whether this is already covered in Section 3111F.10. Comment 5-12 suggests that this section should be removed.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, Section 3102F.3.6.5 is added for relocation and rewording of existing Section 3111F.10 of this code, to consolidate all inspection requirements in Section 3102F. The proposed language herein expands upon the existing language to clarify the original intent, purpose and applicability of this code. Therefore, these comments are rejected and no changes are made.

**EXPRESS TERM #2.17 – COMMENTS 2-9, 6-26 and 9-17.**

These comments address Section 3102F.3.9 “*Action plan implementation between audits*” and remark on the following:

- (a) The commenters (Comments 2-9 and 9-17) object to the proposed language, stating that it implies that extensive documentation is required for all remediation work, no matter how small, and this should be limited to major projects. Comment 2-9 concludes that action plans are already included in the ES-2 negotiations and having another process makes compliance more difficult for all involved.

**CSLC RESPONSE:** Commission staff appreciates these comments. To address these concerns, the Commission staff modified the proposed language with the addition of “*in accordance with Section 3101F.8.3*”, to clarify that such submission requirements are limited to those projects which meet the “*Division Review*” standards.

- (b) The commenter (Comment 6-26) objects to the proposed language “*significant changes*” which require Division notification during project implementation, and suggests that the documentation required under this section be limited to actions requiring professional engineering review.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language “*During project implementation, the Division shall be informed of any significant changes*” allows adequate flexibility. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #3.5 – COMMENT 5-20.**

The commenter (Comment 5-20) addresses Section 3103F.4.2.3 “*Earthquake motions from site-specific probabilistic seismic hazard analyses*”, and question if existing audits based on previously accepted PSHA are required to be revised, are grandfathered as acceptable, or require to have a new peer review every time the USGS maps are revised.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, at this time, Commission staff does not intend to require reevaluation or new peer review as a result of USGS map revisions. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #3.16 – COMMENT 5-21.**

The commenter (Comment 5-21) addresses Section 3103F.4.2.8 “*Design Earthquake Magnitude*”, and requests clarification on the Design Earthquake, stating that it is not defined in the code and requesting the performance criteria if used for the liquefaction assessment.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. This comment is rejected.

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**EXPRESS TERM #3.17 – COMMENT 5-22.**

The commenter (Comment 5-22) addresses Section 3103F.4.2.9 “*Design Spectral Acceleration for various damping values*”, and suggest the deletion of FEMA 356 as a reference, updated with ASCE/SEI 41-13, 2014.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. Furthermore, it is not appropriate to simply update the reference because the damping modification formulas are different. Therefore, this comment is rejected and no changes are made.

**EXPRESS TERM #3.20 – COMMENT 5-23.**

The commenter (Comment 5-23) addresses Section 3103F.5.2.1.2 “*Survival condition*”, and objects to the requirement for vessels “*to be able to depart within 30 minutes*” and states that there is a typo in the reference “*Chapter 6 of ASCE/SEI 7 [3.5]*”.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the comment regarding “*to be able to depart within 30 minutes*” is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. Therefore, this part of the comment is rejected and no changes are made. Furthermore, to address the ASCE/SEI 7 [3.5] reference concern, the Commission staff updated the proposed language with “*Chapter 29 of ASCE/SEI 7 [3.5]*” for consistency with the reorganization of sections/chapters which occurred in the latest (2010) revision of the ASCE/SEI 7 standard.

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**EXPRESS TERM #3.27 – COMMENT 6-27.**

The commenter (Comment 6-27) addresses Section 3103F.5.3.3 “*Static current loads*”, and suggests that the term “*recent*” be removed from the existing language “*Kriebel’s recent wave tank study improves on an earlier work of Seelig [3.21].*”

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. This comment is rejected.

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**EXPRESS TERM #3.28 – COMMENT 5-24.**

These comments address Section 3103F.5.4 “*Wave loads*” and remark on the following:

- (a) The commenter (Comment 5-24) requests that the 4 seconds requirement be changed to 6 seconds to reflect more recent guidance.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. This comment is rejected.

- (b) No comments were received during the 45-Day Public Comment Period directed at the typographical errors in Section 3103F.5.4 “*Wave loads*”.

**CSLC RESPONSE:** During the 45-Day Public Comment Period, the Commission staff discovered a typographical error in this Express Term and corrected “*sections*” to “*seconds*”. [Note: The proposed language shown in the Initial Statement of Reasons document did not contain this error.]

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**EXPRESS TERM #3.29 – COMMENTS 5-25 and 9-18.**

These comments address Section 3103F.5.5 “*Passing vessels*” and remark on the following:

- (a) The commenter (Comment 5-25) suggests that the Kriebel [3.12] method for determining passing vessel forces on moored vessels should only be for first order approximation. The commenter highly recommends that a full dynamic analysis be required, notes that forces within an enclosed basin could be significantly higher, and requests that ROPES and other software, which are claimed to provide equal or better simulation results, be provided. A reference to ASCE Engineering Practice 129 is also provided.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. This comment is rejected.

- (b) The commenter (Comment 9-18) suggests that ROPES and other software also be referenced in this section, expressing concern for the reliability of determining the passing vessel forces on moored ships alongside the dock.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. This comment is rejected.

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**EXPRESS TERMS #3.43 and #3.44 – COMMENTS 2-10, 2-11, 5-26, 9-19 and 9-20.**

These comments address Table 31F-3-11 “*SERVICE OR ASD LOAD FACTORS FOR LOAD COMBINATIONS [3.19]*” and/or Section 3103F.8.2 “*Live load (L)*”, since multiple commenters combined their remark on the following:

- (a) The commenters (Comments 2-10 and 9-20) observe that it appears that the intent of this proposed Table 31F-3-11 requirement was to continue to allow most MOTs to neglect live load in earthquake combinations. However, the commenters claim that when the proposed modification is read in combination with the existing Section 31013F.8 language, “*As a minimum, each component of the structure shall be analyzed for all applicable load combinations...*”, it does not allow the exception of considering zero live load.

**CSLC RESPONSE:** Commission staff appreciates these comments. The design load is obtained by multiplying the load values defined in Sections 3103F8.1 through 3103F8.8 with the load factors in Table 31F-3-10 (for LRFD) or Table 31F-3-11 (for ASD). Section 3103F.8.2 provides guidelines which must be appropriately assessed on a case-by-case basis, and are consistent with the current state-of-practice, including allowing the live load value to be taken as zero (as appropriate). The non-zero value of the live load factor for load combination in Table 31F-3-10 or Table 31F-3-11 for such cases will result in zero effect due to live load. To better articulate this and address these commenters concerns, the Commission staff modified the proposed language, including minor sentence restructuring for improved clarity.

- (b) The commenter (Comments 2-11) objects to the proposed language in Section 3103F.8.2, stating that it does not appear to allow the MOT to ignore live load, and suggests alternate terminology.

**CSLC RESPONSE:** Commission staff appreciates this comment. To better articulate the intent and address these commenters concerns, the Commission staff modified the proposed language, including minor sentence restructuring.

- (c) The commenters (Comments 5-26 and 9-19) state that the Live Load factor of 0.75 for ASD is appropriate for dedicated MOTS, but is overly conservative for combined use facilities. The commenters continue to question if the intent was to make the combination equivalent with ASCE 7-10 load combination 6b, and suggests that 10-25% live load (force, not mass) is consistent with major container port seismic requirements.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the Live Load factor in Table 31F-3-11 for ASD was included to be consistent with the Live Load factor in Table 31F-3-10 for LRFD. The Live Load factor of 0.75 for ASD is selected as that used in ASCE 7-10. There is no intent to make the combination in Table 31F-3-11 on Chapter 31F to be equivalent to ASCE 7-10 load combination 6b. And the revised Section 3103F.8.2 provides for engineering judgment on appropriate value of live load on MOT depending on its

use. Furthermore, if a load factor of 0.1 had been proposed (similar to ASCE/COPRI 61-14 Section 3.6.1 which is intended for container wharfs where live load may be significant), this factor would not be appropriate for MOTs where live load, in most cases, may be very small. Therefore, these comments are rejected and no changes are made.

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**EXPRESS TERM #3.46 – COMMENT 9-21.**

The commenter (Comment 9-21) addresses Table 31F-3-12 “*SAFETY FACTORS FOR ROPES [3.7]*”, and requests that greater definition of line types (specifically polyamide) and a source for factors of safety be provided, and assert that higher factors of safety will impact future mooring analyses and result in reduced allowable wind speeds in future analyses.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, these Safety Factors are updated consistently with the current OCIMF reference [3.7] and industry practice. Appropriate engineering judgment and investigation into specific line types should be used when applying such Safety Factors. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #4.3 – COMMENT 5-27.**

The commenter (Comment 5-27) addresses Section 3104F.1.3 “*Configuration classification*”, and objects to the proposed language, claiming that the 3D finite element analysis required, to determine whether or not the structure is irregular, takes a lot of effort, and recommends that the existing language be reinstated.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the 2013 Chapter 31F code classifies an MOT as regular or irregular based on layout alone. However, an MOT classified as regular based on this 2013 Chapter 31F criteria may exhibit torsional behavior depending on pile configuration, length, and soil conditions at various pile locations. The revision was included to fully capture this possibility. While there are additional efforts in determining regular or irregular configuration, the information required for this analysis is an easy by-product of the pushover analysis that is needed to establish capacities; the user can monitor edge deformation during early, linear phase of the pushover analysis to implement the assessment of Figure 31F-4-1. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #4.6 – COMMENTS 5-28 and 9-22.**

The commenters (Comments 5-28 and 9-22) address Section 3104F.2.1 “*Design earthquake motions*”, and request that guidance be provided on what a “*major spill*” is. Comment 5-21 suggest no change.

**CSLC RESPONSE:** Commission staff appreciates these comments, and has reinstated the existing code language.

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**EXPRESS TERM #4.7 – COMMENT 5-29.**

The commenter (Comment 5-29) addresses Table 31F-4-1 “*SEISMIC PERFORMANCE CRITERIA*”, and state that the return periods specified for marine terminals transferring LNG are not consistent with NFPA 59A. The commenter concludes that the NFPA 59A values be used.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, if more stringent standards exist, they should be used. Furthermore, Section 3101F.2 states: “*Where there are differing requirements between this code and/or references cited herein, the choice of application shall be subject to approval of the Division.*” Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #4.8 – COMMENTS 5-30 and 9-23.**

The commenters (Comments 5-30 and 9-23) address Section 3104F.2.3 “*Analytical procedures*”, and object to the proposed terminology “*a portion of live load that may contribute to inertial mass during earthquake loading*”, stating that it is ambiguous and had previously been taken as no live load. Comment 9-26 requests that additional guidance be provided.

**CSLC RESPONSE:** Commission staff appreciates these comments. The existing Chapter 31F language does not include definition of seismic mass to be considered in the analytical procedure. The revision provides clarity on the seismic mass, which is consistent with ASCE 7-10, ASCE/COPRI 61-14, and other standards. The “exact” fraction of the live load that contributes to seismic mass is intentionally left out because it will depend on the type of live load and MOT use. However, to address these concerns, the Commission staff enhanced the proposed language with the addition of the example language “*such as a minimum of 25% of the floor live load in areas used for storage*”. Ultimately, such live load considerations shall be based on sound engineering judgement.

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**EXPRESS TERM #4.16 – COMMENTS 1-1, 1-2, 5-31, 5-32, 5-33 and 9-24.**

These comments address Section 3104F.2.3.2 “*Nonlinear static demand procedure*” and remark on the following:

- (a) The commenters (Comments 1-1 and 5-32) claim that preliminary evaluation of the Coefficient Method has found that the coefficients drop to 1.0 for typical marine structures, resulting in the standard *Equation (4-2)*, and suggest that it does not make sense to include this method.

**CSLC RESPONSE:** Comments rejected. The Coefficient Method is intended to capture amplification of displacement response due to nonlinearity, which is known to occur for short-period systems. For longer period structures, nonlinear displacement is essentially equal to the linear displacement and that is why user may see coefficient values equal to 1.0 for such cases. However, it does not imply that the coefficient values will always be equal to 1.0 for every shorter period structure. Furthermore, the “refined” analysis in existing Chapter 31F is required for structures with periods  $< T_o$  only. For such cases, the Coefficient Method is likely to give coefficient values larger than 1.0. Therefore, no changes are made.

- (b) The commenter (Comment 1-2) expresses concern that code users with use the Coefficient Method without doing any iteration, which could end up with unconservative results.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the iterative process is addressed in the proposed language and should be abided. Therefore, this comment is rejected and no changes are made.

- (c) The commenters (Comments 5-31 and 9-24) object the Coefficient Method, stating that this method was developed for building structures and is adapted for marine structures herein. The commenters further claim that it’s unclear if the original empirically based method is applicable to marine structures, and greater study of this method is necessary to confirm that it is appropriate.

**CSLC RESPONSE:** Comments rejected. Proposed earlier in FEMA 356, the Coefficient Method was refined in FEMA 440 and adopted in the ASCE 41-13 standard. The development of the Coefficient Method is based on studies of single-degree-of-freedom systems with ground motions selected from different site classes. Therefore, the Coefficient Method is not tied to building structures (see FEMA 440 for details).

The Coefficient Method represents current state-of-the-knowledge in nonlinear static seismic analysis procedures and provides a simple, non-iterative alternative to the Substitute Structure Method, which is still included in the revised Section 3104F.2.3.2.2. It is also useful

to note that the Substitute Structure Method was developed for bridge structures (see Priestley et al., Section 4.4.3), not marine structures, and makes assumptions on effective structural damping that may not always be applicable to marine structures (see Priestley et al., Figure 4.36). Therefore, no changes are made.

- (d) The commenter (Comment 5-33) requests that references, documentation and comparisons with currently accepted methods be provided, to show that the Coefficient Method is suitable.

**CSLC RESPONSE:** Comment rejected. References to both ASCE/SEI 41 [4.3] and FEMA 440 [4.6] are provided herein. And ASCE/SEI 41 [4.3] provides background for the Coefficient Method. Therefore, no changes are made.

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**EXPRESS TERM #4.18 – COMMENTS 5-34, 5-35, 5-36, 5-37, 5-38, 5-39, 5-40, 9-25, 9-26, 9-27, 9-28, 9-29 and 9-30.**

These comments address Section 3104F.2.3.2.1 “*Coefficient Method*” and remark on the following:

- (a) The commenters (Comments 5-34 and 9-25) object to the proposed language “*or at the displacement corresponding to the maximum lateral force, whichever is smaller*”, stating that the demand displacement should not be limited by the evaluated range of structural response, and that by forcing the maximum measured value to be used, there is a danger that the demand will be underestimated. Comment 5-34 further states that the Division needs to show that the “*Coefficient Method*” yields approximately the same results as the current “*Substitute Structure Method*”, and requests that documentation be provided as proof that these two results are reasonably close values for wharf-type structures. The commenters conclude by requesting that this statement be removed.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the “*Coefficient Method*” represents current state-of-the-knowledge in nonlinear static seismic analysis procedures, and provides a simple, non-iterative alternative to the “*Substitute Structure Method*”. This method was developed based on analyses of single-degree-of-freedom systems (and not building systems); FEMA 440 [4.6], provides the background and validation of the Coefficient Method.

It must be emphasized that even the Substitute Structure Method is developed based on single-degree of freedom systems and not based on any specific system type. Furthermore, the initial application of the Substitute Structure Method was for bridge systems and not wharf-type structures.

For a method to be acceptable, it is not essential that it provide results approximately the same as that from another approximate method. The “Coefficient Method” has been validated on its own based on extensive studies documented in FEMA 440 [4.6].

Although the “Coefficient Method” is adopted from ASCE 41-13 [4.3], which is a document widely used in the building industry, its foundation is not in building systems, but in studies with single-degree-of-freedom systems as documented in FEMA 440 [4.6]. Just like the “Substitute Structure Method”, which was adopted from bridge applications, it is appropriate to adopt the “Coefficient Method” from building application as long as it has been validated as has been documented in FEMA 440 [4.6]. Therefore, these comments are rejected and no changes are made.

- (b) The commenters (Comments 5-35 and 9-26) object to “*degradation slope*”, and state that it is unusual to develop a pushover curve that produces this degradation curve due to limitations in current software. The commenters request that a statement be added as to whether this degradation is required or optional in analysis.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the proposed language used in this section is in the context of establishing the post-yield slope of the idealized pushover curve. This procedure is consistent with the procedure that is well documented in ASCE 41-13 [4.3] document. Therefore, these comments are rejected and no changes are made.

- (c) The commenters (Comments 5-36 and 9-27) object to *Equation (4-1)*, stating that it is reduced from ASCE 41 to remove the  $C_0$  factor associated with higher modes, and therefore, it assumes a single story response. The commenters suggest that language discussing higher modes requirements, such as for structures with mezzanines or other elevated masses that may behave at a higher mode, be provided.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, *Equation (4-1)* is for use when higher modes do not participate and the MOT behaves as single-degree-of-freedom system. If higher modes contribute, the revised Table 31F-4-3 requires linear modal demand procedure. Furthermore, revised Section 3104F.2.3 defines the “*target*” node to be at the center of mass of the MOT structure. With this definition of the “*target*” node, there is no need to include the  $C_0$  factor in *Equation (4-1)*. Therefore, these comments are rejected and no changes are made.

- (d) The commenters (Comments 5-37 and 9-28) request that the units of coefficients and equation inputs be clarified for *Equation (4-3)*.

**CSLC RESPONSE:** Commission staff appreciates these comments. The coefficients  $C_1$  and  $C_2$  are empirical factors which depend on vibration period,  $T_e$ , which is in the well understood units of second(s), and “*a*” is site class factor. These definitions are consistent with other documents (e.g., ASCE 41-13 [4.3]) and there is no need to introduce units here. Therefore, these comments are rejected and no changes are made.

- (e) The commenters (Comments 5-38 and 9-29) object to the proposed language “*The Coefficient Method is not applicable where...*”, stating that it is unclear if this limitation is put in place as otherwise bad solutions would occur, and request clarification why it is not applicable.

**CSLC RESPONSE:** Comments rejected. The limit was introduced in FEMA 440 [4.6] and subsequently adopted in ASCE/SEI 41-13 [4.3] to avoid dynamic instability. The user is referred to commentary Section C7.4.3.3.2 of ASCE 41-13 [4.3] and Section 5.4 of FEMA 440 [4.6] for further clarification. Therefore, no changes are made.

- (f) The commenters (Comments 5-39 and 9-30) state that ASCE 41-06 Section 63.3.3.3.2 allows for  $C_2=1.0$  for systems with no stiffness or strength degradation, and enquire if this will be acceptable herein.

**CSLC RESPONSE:** Comments rejected. The Coefficient Method in the proposed language is based on ASCE 41-13 [4.3], which is an updated version of ASCE 41-06. ASCE 41-13 [4.3] does not provide for  $C_2 = 1.0$  for systems with no stiffness or strength degradation. Therefore, no changes are made.

- (g) The commenter (Comment 5-40) claims that *Equation (4-6)* appears to have a typo, as it does not match Equation (3-16) in ASCE 41-06.

**CSLC RESPONSE:** Comment rejected. *Equation (4-6)* is correct and consistent with ASCE/SEI 41-13 [4.3]. Therefore, no changes are made.

- (h) No comments were received during the 45-Day Public Comment Period directed at the definition of " $k_e$ " or typographical errors in Section 3104F.2.3.2.1 "*Coefficient Method*".

**CSLC RESPONSE:** Based on 45-Day Public Comment which requested clarification of the definition of " $k_e$ " in Section 3104F.2.3.2.2 "*Substitute Structure Method*" (i.e. Express Term #4.23), the Commission staff determined it prudent to better articulate similar terminology utilized in Section 3104F.2.3.2.1 "*Coefficient Method*". Therefore, the terminology "*effective elastic*" was enhanced in four (4) locations and the symbol " $k_e$ " was added in one (1) location (with associated grammatical modifications) to eliminate any potential for confusion between effective elastic lateral stiffness (" $k_e$ ") and effective secant lateral stiffness (" $k_{eff}$ "). And the symbol " $F_y$ " was similarly added in two (2) locations to eliminate any potential for confusion.

Furthermore, during the 45-day Public Comment Period, the Commission staff discovered two (2) typographical errors which were corrected, including modification of "*systems*" to "*system's*" below item #5 and "*Effective*" to "*effective*" under *Equation (4-6)*.

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**EXPRESS TERM #4.23 – COMMENTS 5-41 and 9-31.**

These comments address Section 3104F.2.3.2.2 "*Substitute Structure Method*" and remark on the following:

- (a) The commenters (Comments 5-41 and 9-31) request clarification on the "*elastic*" lateral stiffness (item 2) from the "*effective*" lateral stiffness given in *Equation (4-8)*. The commenters conclude that the iterative nature of the solution is not clear from this discussion.

**CSLC RESPONSE:** Commission staff appreciates these comments. " $k_e$ " in items #2 and #3 and in *Equation (4-8)* is the "*effective elastic lateral stiffness*". " $k_{eff}$ " in item #9 and *Equations (4-12)* and *(4-13)* are the "*effective secant stiffness*" and go into the iterative procedure. To improve clarity and address these concerns, the terms "*effective elastic*" are added to the definition of " $k_e$ " in items #2 and #3 (below *Equation (4-8)*) to clearly distinguish between effective elastic lateral stiffness (" $k_e$ ") and effective secant lateral stiffness (" $k_{eff}$ ").

Furthermore, the Commission staff determined it prudent to better articulate similar terminology utilized in Section 3104F.2.3.2.1 *Coefficient Method* (Express Term #4.18), Figure 31F-4-7 "*EFFECTIVE LATERAL STIFFNESS (ADAPTED FROM [4.4])*" (Express Term #4.27) and Section 3104F.7.6 *Symbols* (Express Term #4.42). Therefore, the terminologies "*effective*" and "*effective elastic*" are enhanced in multiple locations and the symbol " $k_e$ " added in one (1) location (with associated grammatical modifications) to eliminate any potential for confusion. And the symbol " $F_y$ " is similarly added in two (2) locations to eliminate any potential for confusion.

- (b) No comments were received during the 45-Day Public Comment Period directed at typographical errors in Section 3104F.2.3.2.2 "*Substitute Structure Method*".

**CSLC RESPONSE:** During the 45-day Public Comment Period, the Commission staff discovered five (5) typographical errors which are corrected, including three (3) missing commas in items #1, one (1) missing comma in item #4, and the improvement of "*systems*" to "*system's*" below item #5.

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**EXPRESS TERM #4.27 – COMMENT 5-42.**

These comments address Figure 31F-4-7 "*EFFECTIVE LATERAL STIFFNESS (ADAPTED FROM [4.4])*" and remark on the following:

- (a) The commenter (Comment 5-42) questions inconsistency in the symbolism for the ratio of second slope over elastic slope between Section 3104F.2.3.2.2, *Equation (4-10)* (i.e. Express Term #4.23) and Figure 31F-4-7 (i.e. Express Term #4.27).

**CSLC RESPONSE:** Commission staff appreciates this comment. To address this error, “ $\alpha$ ” is corrected to “ $r$ ” for consistency with the symbolism utilized in Section 3104F.2.3.2.2 (i.e. Express Term #4.23), as well as Figure 31F-4-5 (i.e. Express Term #4.24).

- (b) No comments were received during the 45-Day Public Comment Period directed at the definition of “ $k_e$ ” vs. “ $k_{eff}$ ” in Figure 31F-4-7 “*EFFECTIVE LATERAL STIFFNESS (ADAPTED FROM [4.4])*”.

**CSLC RESPONSE:** Based on 45-Day Public Comment which requested clarification of the definition of “ $k_e$ ” in Section 3104F.2.3.2.2 “*Substitute Structure Method*” (i.e. Express Term #4.23), the Commission staff determined it prudent to better articulate similar terminology utilized in Figure 31F-4-7. Therefore, the terminology “*effective*” was added to the title of this Figure for better articulation.

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**EXPRESS TERM #4.42 – COMMENT N/A.**

No comments were received during the 45-Day Public Comment Period directed at Section 3104F.7 “*Symbols*”.

**CSLC RESPONSE:** Based on 45-Day Public Comment which requested clarification of the definition of “ $k_e$ ” in Section 3104F.2.3.2.2 “*Substitute Structure Method*” (i.e. Express Term #4.23), the Commission staff determined it prudent to better articulate similar terminology utilized in Section 3104F.7 “*Symbols*”. Therefore, the terminology “*effective*” was added to the definition of “ $k_e$ ” for better articulation.

Furthermore, the Commission staff discovered that the definition of “ $\mu_{strength}$ ” provided in Section 3104F.7 is inconsistent with the definition provided under *Equation (4-3)* in Section 3104F.2.3.2.1 (i.e. Express Term # 4.18), and therefore, the word “*demand*” was added for consistency.

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**EXPRESS TERM #5.2 – COMMENT 5-43.**

The commenter (Comment 5-43) addresses Section 3105F.2 “*Mooring analyses*”, and requests that an error in the UFC 4-159-03 [5.5] be corrected.

**CSLC RESPONSE:** Commission staff appreciates this comment. To address this typographical error, “*UFC 4-152-03*” is corrected to “*UFC 4-159-03*”.

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**EXPRESS TERM #5.6 – COMMENTS 5-44 and 9-32.**

The commenters (Comments 5-44 and 9-32) address Section 3105F.4.3.1 “*Continuous fender system*”, and request clarification regarding the removal and reinsertion of the text “*for a vessel within the range listed in the table can be obtained by interpolation.*”

**CSLC RESPONSE:** Commission staff appreciates these comments. However, as stated in the Initial Statement of Reasons, this amendment is editorial and non-substantive; as printed, the existing code language is not italicized as required by the California Building Code editorial standards. Therefore, these comments are rejected and no changes are made.

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**EXPRESS TERM #5.10 – COMMENTS 5-45 and 9-33.**

These comments address Section 3105F.6.1 “*Mooring analyses*” and remark on the following:

- (a) The commenters (Comments 5-45 and 9-33) request clarification that this section is applicable only to offshore moorings.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, this is a subsection of Section 3105F.6 “*Offshore moorings*”. No further clarification is necessary. Therefore, these comments are rejected and no changes are made.

- (b) No comments were received during the 45-Day Public Comment Period directed at the references in Section 3105F.6.1 “*Mooring analyses*”.

**CSLC RESPONSE:** Based on 45-Day Public Comment regarding a typographical error in the reference title for “*UFC 4-159-03 [5.5]*” in Section 3105F.2 “*Mooring analyses*” (i.e. Express Term #5.2), the Commission staff determined it prudent to correct similar typographical errors throughout Section 3105F. Therefore, “*UFC 4-152-03*” is corrected to “*UFC 4-159-03*”.

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**EXPRESS TERM #5.11 – COMMENTS 5-46 and 9-34.**

These comments address Section 3105F.6.2 “*Design of mooring components*” and remark on the following:

- (a) The commenters (Comments 5-46 and 9-34) request that clarification that this section is applicable only to offshore moorings.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, this is a subsection of Section 3105F.6 “*Offshore moorings*”. No further clarification is necessary. Therefore, these comments are rejected and no changes are made.

- (b) No comments were received during the 45-Day Public Comment Period directed at typographical errors or the references in Section 3105F.6.1 “*Mooring analyses*”.

**CSLC RESPONSE:** Based on 45-Day Public Comment regarding a typographical error in the reference title for “*UFC 4-159-03 [5.5]*” in Section 3105F.2 “*Mooring analyses*” (i.e. Express Term #5.2), the Commission staff determined it prudent to correct similar typographical errors throughout Section 3105F. Therefore, “*UFC 4-152-03*” is corrected to “*UFC 4-159-03*”.

Furthermore, the Commission staff discovered a typographical error in the section title and removed the capitalization of “*mooring components*”.

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**EXPRESS TERM #5.13 – COMMENT N/A.**

No comments were received during the 45-Day Public Comment Period directed at Section 3105F.8 “*References*”.

**CSLC RESPONSE:** Based on 45-Day Public Comment regarding a typographical error in the reference title for “*UFC 4-159-03 [5.5]*” in Section 3105F.2 “*Mooring analyses*” (i.e. Express Term #5.2), the Commission staff determined it prudent to correct similar typographical errors throughout Section 3105F. Therefore, “*UFC 4-152-03*” is corrected to “*UFC 4-159-03*”.

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**EXPRESS TERM #6.5 – COMMENT 9-35.**

The commenter (Comment 9-35) addresses Section 3106F.2.2 “*Site-specific information*”, and states that the proposed language implies that CPTs are optional, required or an alternative. The commenter continues that this could be interpreted to require that an operator must perform additional CPTs, even if the operator already has adequate geotechnical borings for design purposes.

**CSLC RESPONSE:** Comment rejected. The commenter appears to have misinterpreted the proposed language. Note that borings by themselves are acceptable, but CPTs require at least one associated boring. Therefore, no changes are made.

**EXPRESS TERM #6.10 – COMMENT 6-28.**

The commenter (Comment 6-28) addresses the removal of item #2 in existing Section 3106F.4.2 “*Simplified Ground Movement Analysis*” language, and questions if there is no longer any potential for slope displacements below SSI to be ignored in the analyses (i.e. displacements of ≤6 inches can be neglected).

**CSLC RESPONSE:** Comment rejected. The commentator’s opinion is not considered safe and reasonable for uniform exemption by geotechnical experts, based on actual cases encountered during their practice. This must be assessed on a case-by-case basis by a geotechnical engineer. Therefore, no changes are made.

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**EXPRESS TERM #6.21 – COMMENTS 5-47 and 9-36.**

The commenters (Comments 5-47 and 9-36) address Section 3106F.8.1 “*Axial pile capacity*” and object to the proposed language “*a minimum factor of safety of 2.0*”, questioning if this prohibits the use of punching or pull-out of piles during seismic events.

**CSLC RESPONSE:** Comments rejected. The first paragraph of the proposed Section 3106F.8.1 is applicable to static loads. Punching or pull-out of piles during seismic events is not relevant to static loads or to minimum factor of safety of 2.0. Therefore, no changes are made.

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**EXPRESS TERM #6.22 – COMMENTS 5-48 and 9-37.**

The commenters (Comments 5-48 and 9-37) address Section 3106F.8.2 “*Axial springs for piles*” and object to the proposed language “*both upper-bound and lower-bound limits shall be estimated for use in the analyses*”, requesting clarity that this is applicable to static or inertial analysis only, not kinematic.

**CSLC RESPONSE:** Comments rejected. Section 3106F.8.2 addresses “*Axial springs for piles*” and is not relevant to kinematic loads. Therefore, no changes are made.

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**EXPRESS TERM #6.28 – COMMENTS 5-49 and 9-38.**

The commenters (Comments 5-49 and 9-38) address Section 3106F.10.2 “*Kinematic loading from lateral spreading*”, and object to the proposed item #2 language that “*...zero at and below the bottom of the layer to the maximum value at and above the top of the weak layer.*”, stating that a linear distribution of the kinematic motions over the full height of the soil layer may be overly generous. Comment 9-38 also asserts that it is not stated if performance criteria under kinematic loading are required to be the same as that for inertial response. Clarification is requested.

**CSLC RESPONSE:** Comments partially accepted. The terminology “*or as appropriate*” is added to item #2 to clarify that geotechnical engineering judgement should be utilized to appropriately determine the distribution of kinematic motions over the soil layer. In addition, note that the comment about performance criteria is irrelevant since this issue is already addressed in the proposed language, and is therefore rejected.

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**EXPRESS TERM #7.1 – COMMENT 9-39.**

The commenter (Comment 9-39) addresses Section 3107F.2.5.3 “*Plastic hinge length*”, stating that the ASCE 61 criteria is for design of new structures and may be overly generous for old structures which are poorly confined. A concluding statement suggests that the original hinge length requirements for poorly confined piles should be retained.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language provides the user to use the original plastic hinge length equation. The revision only provides the user the option to use the ASCE/COPRI 61 [7.5] values for those piles which are permitted for connections outlines in ASCE 61/COPRI 61 [7.5]. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERMS #7.6, 7.7, 7.8 and 7.9 – COMMENTS 5-50 and 9-40.**

The commenters (Comments 5-50 and 9-40) address Section 3107F.2.5.4.1 “*Method A*”, Figure 31F-7-4 “*METHOD A – MOMENT CURVATURE ANALYSIS*”, Section 3107F.2.5.4.2 “*Method B*”, and Figure 31F-7-5 “*METHOD B – MOMENT CURVATURE ANALYSIS [7.6]*”. The commenters claim that Methods A and B are not readily applicable to existing piles which are poorly confined and may have a large decrease in strength during spalling of the cover concrete and a small amount of ductility. The commenters also state that large initial peak loads may produce moment curvature relationships which do not correspond to the graphics shown.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the methods provided reflect current state of practice. Therefore, these comments are rejected and no changes are made.

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**EXPRESS TERM #8.1 – COMMENT 2-12.**

The commenter (Comment 2-12) addresses Section 3108F.2.2 “*Fire Protection Assessment (N/E)*” and objects to the proposed language “*The audit team shall review and field verify the firefighting equipment...condition to ensure operability*”, claiming that there is no need to change the previous wording and softer wording is needed. An example is provided that many terminals are not allowed to field test monitors due to environmental compliance restrictions.

**CSLC RESPONSE:** Comment rejected. If there are environmental restrictions preventing compliance with the proposed language, it will be addressed on a case-by-case basis. Therefore, no changes are made.

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**EXPRESS TERMS #8.2 and #8.7 – COMMENT 6-29.**

The commenter (Comment 6-29) addresses Section 3108F.2.3 “*Cargo liquid volatility ratings*” (i.e. Express Term #8.2) and Section 3108F.3.2 “*Emergency shutdown (ESD) systems*” (i.e. Express Term #8.7) in combination, and requests clarification on why the 2 CCR 2380 [8.3] (Article 5) reference is only cited in Section 3108F.2.3, observing that the Article 5 ESD requirements appear to apply to (N/E), but the item #3 requirement for remote actuation stations only applies to (N). [Note: See Section 3101F.3 for definitions of “(N/E)”, “(N)” and “(E)”.]

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. This comment is rejected, but may be considered for future rulemaking.

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**EXPRESS TERMS #8.7 and #8.15 – COMMENTS 7-2 and 7-3.**

The commenter (Comments 7-2 and 7-3) addresses references contained in Section 3108F.3.2 “*Emergency shutdown (ESD) systems*” (i.e. Express Term #8.7) and Section 3108F.6.3 “*Fire water*” (i.e. Express Term #8.15). See the summary of these comments and the corresponding CSLC responses in Express Term #8.18.

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**EXPRESS TERMS #8.18 – COMMENTS 7-1, 7-2, 7-3 and 7-4.**

The commenter (Comments 7-1, 7-2, 7-3 and 7-4) addresses Section 3108F.8 “References” and related NFPA standard references, and remarks on the following:

- (a) The commenter (Comment 7-1) states that the NFPA standards noted in the “Reference” sections are not consistent with what will be adopted in the 2016 CBC, Title 24, Part 2, Chapter 35 – *Reference Standards*, and suggests not identifying a year/edition with the reference NFPA standards and referencing Chapter 35 instead.

**CSLC RESPONSE:** Commission staff appreciates this comment. To address this concern, the Commission staff updated the proposed language for all NFPA references to cite Chapter 35, including the removal of year/edition and the addition of “*For edition, see California Code of Regulations (CCR), Title 24, Part 2, Chapter 35 – Referenced Standards.*” [Note: Exceptions were made for the NFPA 59A and NFPA 496 references, since these are unique to marine terminals only.]

- (b) The commenter (Comment 7-2) states that the NFPA 70 and NFPA 25 references should be replaced with “*California Electrical Code*” and “*California NFPA 25*”, respectively.

**CSLC RESPONSE:** Commission staff appreciates this comment. To address this concern, the Commission staff updated the proposed language for all NFPA references, including those within the body of the proposed text, to include the “*California Electrical Code*” and “*California NFPA 25*” terminology.

- (c) The commenter (Comment 7-3) states that any reference to NFPA standards in the body of the proposed text of regulations should only have the standard identified without identifying an edition.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, no NFPA reference editions are identified in the body of the proposed language (i.e. outside of the “References” sections, which are addressed above). Therefore, no changes are made.

- (d) The commenter (Comment 7-4) states that all standards noted in the “Reference” sections should be moved to the CBC, Title 24, Part 2, Chapter 35, to maintain consistency with the place holder for referenced standards and ensure there is no conflict with Part 2 of the CBC.

**CSLC RESPONSE:** Commission staff appreciates this comment. To address this concern, the Commission staff updated the proposed language for all NFPA references to be cited in Chapter 35. [Note: Exceptions were made for the NFPA 59A and NFPA 496 references, since these are unique to marine terminals.] The Commission staff will consider similar updates to non-NFPA references during future rulemaking.

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**EXPRESS TERM #9.6 – COMMENTS 7-1, 7-2, 7-3 and 7-4.**

The commenter (Comments 7-1, 7-2, 7-3 and 7-4) addresses references contained in Section 3109F.8 “References”. See the summary of these comments and the corresponding CSLC responses in Express Term #8.18.

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**EXPRESS TERM #10.3 – COMMENTS 7-2 and 7-3.**

The commenter (Comments 7-2 and 7-3) addresses references contained in Section 3110F.2.2.2 “*Electrical components (N)*”. See the summary of these comments and the corresponding CSLC responses in Express Term #8.18.

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**EXPRESS TERM #10.5 – COMMENTS 6-30 and 6-31.**

These comments address Section 3110F.3 “Oil transfer hoses (N/E)” and remark on the following:

- (a) The commenter (Comment 6-30) questions if the intent of the proposed language is that hoses of exactly 6 inches can meet either requirement.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the commenter has misunderstood that the 6 inch hose requirements may overlap, since this sentence separate the requirements by “or”. Therefore, this comment is rejected, and no changes are made.

- (b) The commenter (Comment 6-31) questions if the proposed hose diameter sizes are inner diameter (I.D.), outer diameter (O.D.) or nominal dimensions.

**CSLC RESPONSE:** Commission staff appreciates this comment. To address this concern, the Commission staff modified the proposed language with the addition of the terminology “nominal”.

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**EXPRESS TERM #10.13 – COMMENTS 7-2 and 7-3.**

The commenter (Comments 7-2 and 7-3) addresses references contained in Section 3110F.10 “Pumps (N/E)”. See the summary of these comments and the corresponding CSLC responses in Express Term #8.18.

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**EXPRESS TERM #10.14 – COMMENTS 7-1, 7-2, 7-3 and 7-4.**

The commenter (Comments 7-1, 7-2, 7-3 and 7-4) addresses Section 3110F.12 “References”. See the summary of these comments and the corresponding CSLC responses in Express Term #8.18.

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**EXPRESS TERMS #11.1 and #11.2 – COMMENTS 7-2 and 7-3.**

The commenter (Comments 7-2 and 7-3) addresses references contained in Section 3111F.1 “General” (i.e. Express Term #11.1) and Section 3111F.2 “Hazardous area designations and plans (N/E)” (i.e. Express Term #11.2). See the summary of these comments and the corresponding CSLC responses in Express Term #8.18.

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**EXPRESS TERM #11.2 – COMMENT 2-13.**

The commenter (Comment 2-13) addresses Section 3111F.2 “Hazardous area designations and plans (N/E)” and objects to the “professional electrical engineer” requirement.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this comment is not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. This comment is rejected, but may be considered for future rulemaking.

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**EXPRESS TERM #11.2a – COMMENTS 7-2 and 7-3.**

The commenter (Comments 7-2 and 7-3) addresses references contained in Section 3111F.3 “Identification and tagging”. See the summary of these comments and the corresponding CSLC responses in Express Term #8.18. This Express Term was added to address this matter.

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**EXPRESS TERMS #11.4 and #11.6 – COMMENTS 7-2 and 7-3.**

The commenter (Comments 7-2 and 7-3) addresses references contained in Section 3111F.5 “*Electrical service*” (i.e. Express Term #11.4) and Section 3111F.6 “*Grounding and bonding (N/E)*” (i.e. Express Term #11.6). See the summary of these comments and the corresponding CSLC responses in Express Term #8.18.

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**EXPRESS TERM #11.13 – COMMENTS 7-1, 7-2, 7-3 and 7-4.**

The commenter (Comments 7-1, 7-2, 7-3 and 7-4) addresses Section 3111F.12 “*References*”. See the summary of these comments and the corresponding CSLC responses in Express Term #8.18.

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**EXPRESS TERM Division 12 Title – COMMENTS 5-51 and 5-52.**

These comments address the title of Section 3112F “*REQUIREMENTS SPECIFIC TO MARINE TERMINALS THAT TRANSFER LNG*” and remark on the following:

- (a) The commenter (Comment 5-51) states that this section appears to be incomplete and very minimal, and further consideration of all items addressed should be incorporated prior to incorporating this into Chapter 31F of this code.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the comment does not provide any specific remarks to be accommodated. In general, the Commission staff recognizes that the proposed language is basic, and will consider further code development during future rulemaking. Therefore, this comment is rejected and no changes are made.

- (b) The commenter (Comment 5-52) misquotes the Division 12 title as “*LNG Transfer at Marine Terminals*”, and questions if this means this Division is applicable only to the transfer system.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the commenter appears to be confused about the title of this Division. This Division applies to the entire marine terminal that transfers LNG and not just the transfer system. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #12.1 – COMMENTS 5-53, 5-54 and 9-41.**

These comments address the Section 3112F.1 “*Purpose and applicability*” and remark on the following:

- (a) The commenters (Comments 5-53 and 9-41) state that this section needs significantly more guidance on jurisdictional boundaries and applicability to various means of transferring LNG and possible CNG. Examples are provided including berthed vessel-to-vessel transfer, isocontainers, truck to vessel transfer, FLSU to FSU or berthed vessel, and bunkering of smaller vessels such as ferries or barges.

**CSLC RESPONSE:** Commission staff appreciates these comments. However, the new Section 3112F.1 addresses LNG only; CNG is not addressed herein or within the proposed language for Chapter 31F of this code. Furthermore, the California Building Standards Code contains “building standards”, as defined in Health & Safety Code § 18909. The scope of the California Building Code is further elaborated in 24 CCR, Part 2, *Chapter 1 – SCOPE AND ADMINISTRATION*, Section 1.1.3. Therefore, these provisions apply to the built environment and no further clarification is required beyond existing standards. These comments are rejected and no changes are made.

- (b) The commenter (Comment 5-54) states that transfer operations below 10,000 gallons are not within the scope of Chapter 31F of this code, and therefore, should be noted as not applicable.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the basis of this comment is uncertain. Furthermore, Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 (PRC §§ 8750-8760) defines jurisdictional authority of the Commission over marine terminals. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #12.2 – COMMENTS 5-55, 6-32 and 9-42.**

These comments address Section 3112F.2 "*Risk and Hazards Analyses*" and remark on the following:

- (a) The commenters (Comments 5-55 and 9-42) question if quantitative risk analysis and gas dispersion modeling will be required, and request that appropriate references for performance of these studies be provided, stating that there is a large variance in possible techniques and data sets.

**CSLC RESPONSE:** Commission staff appreciates these comments. Both quantitative risk analysis and gas dispersion modeling will be required. However, in the absence of references, the operator is free to propose an appropriate method, subject to Division approval. Therefore, these comments are rejected and no changes are made.

- (b) The commenter (Comment 6-32) misquotes the proposed language in item #1, but generally objects, stating that there is no way to identify and "*isolate*" all "*intentional and external events...*", which are infinite in possibility.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the commenter interpreted "*all*", which is not stated in the proposed language. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #12.7 – COMMENTS 7-1, 7-2, 7-3 and 7-4.**

The commenter (Comments 7-1, 7-2, 7-3 and 7-4) addresses Section 3112F.7 "*References*". See the summary of these comments and corresponding CSLC responses in Express Term #8.18 above. [Note: No changes were necessary to Section 3112F.7.]

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**15-DAY PUBLIC COMMENT PERIOD:**

A 15-Day Public Comment Period was held from August 28, 2015 through September 14, 2015 to present proposed revisions resulting from the initial 45-Day Public Comment Period, with 21 comments received. All comments received were numbered as shown in the table below.

<b>15-DAY PUBLIC REVIEW COMMENTS</b>				
<b>COMMENTS NUMBER*</b>	<b>TOTAL NUMBER OF COMMENTS*</b>	<b>COMMENTS NAME</b>	<b>COMMENTS AFFILIATION</b>	<b>DATE RECEIVED</b>
12	1	Andrew Henning	CAL FIRE–Office of the State Fire Marshal	09/02/2015 @ 7:56 AM
13	16	James W. Kearney, Jr., P.E.	COWI Marine North America	09/13/2015 @ 2:06 PM
14	3	Sandra Burkhardt	Western States Petroleum Association	09/14/2015 @ 3:54 PM
15	1	Rod K. Iwashita, P.E.	Moffatt & Nichol	09/14/2015 @ 4:22 PM

\* Note: Comment Numbers are assigned in the format “X-Y”, where:  
X = Commenter Number (with new numbers assigned for 15-Day period), and  
Y = Comment Number (each Commenter’s Comments are numbered sequentially starting at 1)

**GENERAL – COMMENT 12-1.**

This commenter (Comment 12-1) addresses the compliance of the proposed amendments with Government Code Section 11359(1) and Health and Safety Code, Section 18930(a)(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*”. The comment concludes that the State Lands commission may consider this proposal as approved by the State Fire Marshal, having met the criteria of H&SC, Section 18930(a)(9).

**CSLC RESPONSE:** Commission staff appreciates and accepts this comment. No changes are necessary or made.

**GENERAL – COMMENT 13-1.**

The commenter (Comment 13-1) does not address specific sections or amendments proposed for Chapter 31F of the code or the Express Terms, and asserts that the Commission staff did not address the commenter’s 45-Day Public Comments (Comments 6-1, 6-2 and 6-3). The commenter believes that their previous comments (Comments 6-1, 6-2 and 6-3) are still issues which may cause confusion.

**CSLC RESPONSE:** Refer to the “CSLC RESPONSE” to 45-Day Public Comments 6-1, 6-2 and 6-3 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments.

**EXPRESS TERM #1.5 – COMMENTS 13-2 and 14-1.**

These comments address Section 3101F.6 “*Oil spill exposure classification*” and remark on the following:

- (a) The commenter (Comment 13-2) expresses agreement with the 15-day proposed revisions to this Section.

**CSLC RESPONSE:** Commission staff appreciates and accepts this comment. No changes are necessary or made.

- (b) The commenter (Comment 14-1) suggests that the language on the ESD timing may cause problems for existing oil terminals if their ESD timing is greater than 60 seconds due to current grandfather clauses.

**CSLC RESPONSE:** Commission staff appreciates this comment. The commenter appears to be concerned with the definition of " $\Delta t$ " stated as "*For MOTs that first transferred oil on or before January 1, 2017,  $\Delta t$  may be taken as (ESD time, 30 or 60 seconds)...*"; however, this definition is identical to that stated in the existing code (Section 3108F.2.3) of " $\Delta t = (\text{ESD time, 30 or 60 seconds})$ ." Since the existing code specifies "*(ESD time, 30 or 60 seconds)*", there are no "*current grandfather clauses*" greater than 60 seconds. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #1.10 – COMMENT 13-3.**

The commenter (Comments 13-3) addresses Section 3101F.8.2 "*Peer review*" and objects to item #6 regarding the requirement for certification by peer reviewers. The commenter reiterates a portion of the commenter's 45-Day Public Comment (Comment 6-9), arguing that the proposed language is lacking a word like "opinion" with regard to the peer reviewer's conclusion as to the work meeting the requirements of the code.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language appropriately articulates that the peer reviewer is not the originator of the final work and is only acting in a review capacity, and is therefore, providing certification which is limited to only the "*final reviewed work*". If desired, the peer reviewer may choose to elaborate on their "opinion" in their certification. Furthermore, the Professional Engineers Act (Business and Professions Code §§ 6700-6799), Section 6735.5 states: "*The use of the word "certify" or "certification" by a registered professional engineer in the practice of professional engineering or land surveying constitutes an expression of professional opinion regarding those facts or findings which are the subject of the certification, and does not constitute a warranty or guarantee, either expressed or implied.*" Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.5 – COMMENT 13-4.**

The commenter (Comment 13-4) addresses Section 3102F.2 "*Annual compliance inspection*", and asserts that the Commission staff did not address the commenter's 45-Day Public Comment (Comment 6-11).

**CSLC RESPONSE:** Express Term #2.5 for Section 3102F.2 "*Annual compliance inspection*" was not presented in the 15-Day Express Terms document. Refer to the "CSLC RESPONSE" to 45-Day Public Comment 6-11 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.6 – COMMENT 13-5.**

The commenter (Comment 13-5) addresses Section 3102F.3.3.2 "*Subsequent audits*" and expresses agreement with the 15-day proposed revisions to this Section, stating that this will allow for tailoring reinspection intervals based on facility specific conditions.

**CSLC RESPONSE:** Commission staff appreciates and accepts this comment. No changes are necessary or made.

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**EXPRESS TERM #2.7 – COMMENT 13-6.**

The commenter (Comment 13-6) addresses Section 3102F.3.4.7 “*Corrosion specialist*”, and asserts that the Commission staff did not address his 45-Day Public Comments (Comments 6-15 and 6-16), but that the subject of “Corrosion Check” is in Express Term #2.14.

**CSLC RESPONSE:** Express Term #2.7 for Section 3102F.3.4.7 “*Corrosion specialist*” was not presented in the 15-Day Express Terms document. Refer to the “CSLC RESPONSE” to 45-Day Public Comments 6-15 and 6-16 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.10 – COMMENT 13-7.**

The commenter (Comment 13-7) addresses Section 3102F.3.5.1.1 “*Above water structural inspection*”, and asserts that the Commission staff did not address the commenter’s 45-Day Public Comments (Comments 6-17 and 6-18).

**CSLC RESPONSE:** Express Term #2.10 for Section 3102F.3.5.1.1 “*Above water structural inspection*” was not presented in the 15-Day Express Terms document. Refer to the “CSLC RESPONSE” to 45-Day Public Comments 6-17 and 6-18 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.11 – COMMENT 13-8.**

The commenter (Comment 13-8) addresses Section 3102F.3.5.1.2 “*Underwater structural inspection*”, and asserts that the Commission staff did not address the commenter’s 45-Day Public Comments (Comments 6-19, 6-20, 6-21, 6-22 and 6-23), stating that this language remains potentially problematic for the reasons previously delineated.

**CSLC RESPONSE:** Express Term #2.11 for Section 3102F.3.5.1.2 “*Underwater structural inspection*” was not presented in the 15-Day Express Terms document. Refer to the “CSLC RESPONSE” to 45-Day Public Comments 6-19, 6-20, 6-21, 6-22 and 6-23 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.12 – COMMENT 13-9.**

The commenter (Comment 13-9) addresses Table 31F-2-3 “*SCOPE OF UNDERWATER INSPECTIONS [2.2]*”, and asserts that the Commission staff did not address the commenter’s 45-Day Public Comment (Comment 6-24), but interprets this to be “OK” because “As necessary” is to be determined by the Audit Team Leader since it is not objectively defined by the code.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language for Table 31F-2-3 “*SCOPE OF UNDERWATER INSPECTIONS [2.2]*” was not presented in the 15-Day Express Terms document. Refer to the “CSLC RESPONSE” to 45-Day Public Comment 6-24 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #2.12b – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3102F.3.5.23.1 “Coated components”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered additional errors in the Section 3102F.3.5.X numbering sequence. This Express Term was added to address this mistake. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #2.12c – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3102F.3.5.23.2 “Encased components”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered additional errors in the Section 3102F.3.5.X numbering sequence. This Express Term was added to address this mistake. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #2.12d – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3102F.3.5.23.3 “Wrapped components”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered additional errors in the Section 3102F.3.5.X numbering sequence. This Express Term was added to address this mistake. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #2.14 – COMMENT 13-10.**

This comment addresses Section 3102F.3.5.4 “Corrosion inspection” and remark on the following:

- (a) The commenter (Comment 13-10) asserts that the Commission staff did not specifically address their previous 45-Day Public Comments related to Express Terms #2.7 and #2.14 (Comments 6-15, 6-16 and 6-25). The commenter reiterates that the definition of qualified personnel remains murky, and that as such, the MFD is not in a strong position to question qualifications after the fact.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language appropriately articulates that the qualifications for engineers or technicians performing corrosion inspections. Also, refer to the “CSLC RESPONSE” to 45-Day Public Comments 6-15, 6-16 and 6-25 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

- (b) No comments were received during the 15-Day Public Comment Period directed at typographical errors in Section 3102F.3.5.4 “Corrosion inspection”.

**CSLC RESPONSE:** During the 15-day Public Comment Period, the Commission staff discovered a typographical error in the cross reference section number for the “utility, auxiliary and fire pipelines” language, which resulted from revisions to the Section 3102F.3.5.X numbering sequence. Therefore, the cross reference is corrected to “Section 3102F.3.5.3”. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #2.17 – COMMENT 13-11.**

The commenter (Comment 13-11) addresses Section 3102F.3.9 “*Action plan implementation between audits*”, and asserts that the amended language clarifies the review requirements (as presented in the 15-day proposed revisions to this Section).

**CSLC RESPONSE:** Commission staff appreciates and accepts this comment. No changes are necessary or made.

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**EXPRESS TERM #3.20 – COMMENT 14-2.**

The commenter (Comment 14-2) addresses Section 3103F.5.2.1.2 “*Survival condition*”, and objects to the existing language regarding the vessel being required to depart the berth if wind speeds exceed STOLs.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, these comments are not specifically directed at the proposed language for Chapter 31F of the code, and therefore, no response is required per Government Code § 11346.9. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #3.27 – COMMENT 13-12.**

The commenter (Comment 13-12) addresses Section 3103F.5.3.3 “*Static current loads*”, and asserts that the Commission staff did not address the commenter’s 45-Day Public Comment (Comment 6-27), stating that we can revisit this when “recent” will be 15 years old.

**CSLC RESPONSE:** Express Term #3.27 for Section 3103F.5.3.3 “*Static current loads*” was not presented in the 15-Day Express Terms document. Refer to the “CSLC RESPONSE” to 45-Day Public Comment 6-27 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #3.28 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3103F.5.4 “*Wave loads*”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered a typographical error in this Express Term, and corrected it by underlining the “3.11” and striking through the “~~3.18~~”. [Note: The proposed language shown in the Initial Statement of Reasons document did not contain this error.] This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #3.30 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3103F.5.7 “*Tsunamis*”.

**CSLC RESPONSE:** : During the 15-Day Public Comment Period, the Commission staff decided to reinstate the existing code language regarding the “*tsunami plan*” requirement, as tsunami-related regulations are currently presented in Chapter 31F. Therefore, this Express Term is “PARTIALLY WITHDRAWN”.

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**EXPRESS TERM #3.34 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3103F.6.5 “*Configuration coefficient ( $C_c$ )*”.

**CSLC RESPONSE:** During the 15-day Public Comment Period, the Commission staff discovered a typographical error in this section title in the existing Chapter 31F, and corrected it by replacing the subscript “*Configuration coefficient ( $C_c$ )-( $G_s$ )*.” This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #3.40 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3103F.7.2 “*Wind loads*”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered an error in the Chapter number for the ASCE/SEI 7 [3.5] reference in this section. A similar error was previously correct in Section 3103F.5.2.1.2 “*Survival condition*” as a result of the 45-Day Public Comment Period. Therefore, the Commission staff updated the proposed language with “*Chapter 29 of ASCE/SEI 7 [3.5]*” for consistency with the reorganization of sections/chapters which occurred in the latest (2010) revision of the ASCE/SEI 7 standard. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #4.6 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3104F.2.1 “*Design earthquake motions*.”

**CSLC RESPONSE:** Commission staff reinstated the existing code language in response to comments received during the 45-Day Public Comment Period. Therefore, this Express Term is “*WITHDRAWN*”.

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**EXPRESS TERM #4.16 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3104F.2.3.2 “*Nonlinear static demand procedure*”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered that the structural period criteria for the nonlinear static demand procedure was inadvertently removed from the existing Section 3104F “*SEISMIC ANALYSIS AND STRUCTURAL PERFORMANCE*” during the restructuring. Therefore, the Commission staff reinstated (with minor adjustments that have no change in regulatory effect) the existing structural period criteria (from existing Section 3104F.2.3.2.3 “*Target displacement demand*.”) in the last paragraph of this proposed Section 3104F.2.3.2 for clarity and to contextually fit its new location. This revision is sufficiently related and non-substantive.

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**EXPRESS TERM #4.18 – COMMENT 15-1.**

The commenter (Comment 15-1) addresses Section 3104F.2.3.2.1 “*Coefficient Method*” and remarks that there is a typographical error (the plus sign is missing) from *Equation (4-6)*.

**CSLC RESPONSE:** Commission staff appreciates and accepts this comment. This typographical error is corrected with the insertion of “+” into *Equation (4-6)*. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #4.28 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3104F.2.3.3 “*Linear modal demand procedure*”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered a typographical error in the structural period criteria for the linear modal demand procedure, where the fundamental period,  $T$ , was incorrectly compared to “1 second” instead of “ $T_0$ ” (as provided in the existing Section 3104F.2.3.3). Therefore, the Commission staff corrected this error and added the definition of “ $T_0$ ”, as presented in existing Section 3104F.2.3.2.3, for clarity. These revisions have no change in regulatory effect, and are sufficiently related and non-substantive.

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**EXPRESS TERM #4.32 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3104F.3 “*New MOTs*”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered a typographical error in the table number referenced in this section. Therefore, the Commission staff updated the proposed language with “*Table 31F-4-1*” (from “*Table 31F-1-1*”). This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #5.4 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3105F.3.4 “*Tsunami*”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered that the cross reference(s) for tsunami “*run-up values for the San Francisco Bay area, Los Angeles/Long Beach Harbors and Port Hueneme*” provided in this section were incomplete. Therefore, the Commission staff added the proposed language “*Section 3103F.5.7 and*”. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #5.10 – COMMENT 14-3.**

The commenter (Comment 14-3) addresses Section 3105F.6.1 “*Mooring analyses*” and states that mooring analysis must include ballast and laden conditions (unless this section only applies to offshore only).

**CSLC RESPONSE:** Commission staff appreciates this comment. However, this section only applies to offshore moorings, as it is a subsection of Section 3105F.6 “*Offshore moorings*”. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #6.10 – COMMENT 13-13.**

The commenter (Comment 13-13) addresses the removal of item #2 in existing Section 3106F.4.2 “*Simplified Ground Movement Analysis*” language, and asserts that the Commission staff did not address the commenter’s 45-Day Public Comment (Comment 6-28), reiterating the comment for the record.

**CSLC RESPONSE:** Express Term #6.10 for Section 3106F.4.2 “*Simplified Ground Movement Analysis*” was not presented in the 15-Day Express Terms document. Refer to the “CSLC RESPONSE” to 45-Day Public Comment 6-28 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

**EXPRESS TERM #7.7 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Figure 31F-7-4 “METHOD A – MOMENT CURVATURE ANALYSIS”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered a typographical error, where the y-axis label of “*Moment*” was unintentionally missing; however, this label is in the existing code. Therefore, the Commission staff corrected this by adding the “*Moment*” label along the y-axis. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #7.31 – COMMENT N/A.**

No comments were received during the 15-Day Public Comment Period directed at Section 3107F.6 “*Symbols*”.

**CSLC RESPONSE:** During the 15-Day Public Comment Period, the Commission staff discovered a typographical error in the definition of “ $N_u$ ”, where the terminology “*including load*” was repeated twice. Therefore, the Commission staff corrected this by removing the first “*including load*” and leaving the second occurrence “*including seismic load*”. This correction is sufficiently related and non-substantive.

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**EXPRESS TERM #8.2 and #8.7 – COMMENT 13-14.**

The commenter (Comment 13-14) addresses Section 3108F.2.3 “*Cargo liquid volatility ratings*” (i.e. Express Term #8.2) and Section 3108F.3.2 “*Emergency shutdown (ESD) systems*” (i.e. Express Term #8.7) in combination, and apologizes for missing that “Article 5” was removed prior to the “45 day PET”.

**CSLC RESPONSE:** Commission staff appreciates and accepts this comment. No changes are necessary or made.

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**EXPRESS TERM #10.5 – COMMENT 13-15.**

The commenter (Comment 13-15) addresses Section 3110F.3 “*Oil transfer hoses (N/E)*” and states that the revised language still allows 6 inch (nominal) diameter hoses to meet either requirement, assuming this is the intent of the code. Furthermore, the commenter asserts that the language of “shall” then “may” (for a mostly but not entirely different class of hose sizes) is still potentially confusing.

**CSLC RESPONSE:** Commission staff appreciates this comment. However, the proposed language appropriately articulates hose requirements. Refer to the “CSLC RESPONSE” to 45-Day Public Comment 6-30 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

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**EXPRESS TERM #12.2 – COMMENT 13-16.**

The commenter (Comment 13-16) addresses Section 3112F.2 “*Risk and Hazards Analyses*” and asserts that the Commission staff did not address the commenter’s 45-Day Public Comment (Comment 6-32), reiterating the comment for the record.

**CSLC RESPONSE:** Express Term #12.2 for Section 3112F.2 "*Risk and Hazards Analyses*" was not presented in the 15-Day Express Terms document. Refer to the "CSLC RESPONSE" to 45-Day Public Comment 6-32 above. Commission staff has complied with the California Rulemaking Law under the Administrative Procedure Act, including the requirements in Government Code Sections 11346.8(c) and 11346.9 regarding response to public comments. Therefore, this comment is rejected and no changes are made.

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**DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS**

The State Lands Commission has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective as and less burdensome to affected private persons than the adopted regulations. Furthermore, the State Lands Commission has determined that no alternative considered would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law, since this code does not affect private persons. These proposed changes to the existing code, as is that code, are directed only at marine oil terminals and no private persons. There are no other statutory policies or laws that pertain to marine oil terminals from an engineering perspective.

**REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES:**

This is not applicable, as there are no small businesses, as defined by Government Code § 11342.610, affected by these proposed regulations.