

FINAL

ANNUAL 2007

NFPA ASSOCIATION TECHNICAL MEETING

June 6, 2007

8:00 AM

BOSTON CONVENTION & EXHIBITION CENTER

BOSTON, MASSACHUSETTS

LEAVITT REPORTING, INC.

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1 P R O C E E D I N G S

2 MR. PAULEY: Good morning, ladies and  
3 gentlemen. If I could ask that you take your seats.  
4 My name is Jim Pauley, and I have the distinct  
5 pleasure and privilege of being a member of your  
6 Standards Council. I now declare that a quorum  
7 exists and convene the 2007 annual association  
8 technical meeting. To assist me is Leona Nisbet of  
9 NFPA staff who is serving as staff coordinator. I  
10 would also like to introduce, Milosh Puchovsky,  
11 secretary of the Standards Council; Phil DiNenno,  
12 chair of the Standards Council; and Casey Grant,  
13 former secretary of the Standards Council. The  
14 session will be recorded by Elaine Buckley of Leavitt  
15 Reporting Service.

16 First let me address our safety issues.  
17 Let's take a minute and note the exits from this  
18 room. Now that you have noted the closest exit to  
19 you, I would like to inform you that the fire alarm  
20 signal for the Boston Convention Center is a long  
21 tone followed by four beep tones repeated four times.  
22 The fire alarm signal also incorporates flashing  
23 strobe lights followed by a voice announcement.

1                   As with any organization, we have  
2 certain rules and protocols. First of all, the use  
3 of video or audio recording devices of any type are  
4 not allowed during the technical report session. I  
5 would like to call your attention to the Guide For  
6 Conduct of Participants in the NFPA Codes and  
7 Standards Development Process. As a participant in  
8 the process, you should review this guide.

9                   I would also like to call your  
10 attention to the NFPA Convention Rules and  
11 specifically the Convention Rules that were last  
12 amended in November 2006. The Convention Rules set  
13 the process to be followed today. Copies of both  
14 documents are contained in the NFPA Directory which  
15 is available at the NFPA registration desk.

16                   The reports will be taken in the order  
17 presented in the handout Certified Amending Motions  
18 for Documents for the June 2007 Association Technical  
19 Meeting, Tables II A and II B. The primary  
20 regulations governing the NFPA codes and standards  
21 development process including the processing of  
22 reports at association meetings are the regulations  
23 governing committee projects. These regulations are

1 also published in the NFPA Directory.

2 I would like to say a few words about  
3 the actions that can be taken and the voting  
4 procedures. At this session you're being asked to  
5 act on certain motions pertaining to the Technical  
6 Committee reports. The Technical Committee reports  
7 on these documents are contained in the 2006 NFPA  
8 Fall Revisions Cycle Report on Proposals and Report  
9 on Comments, yellow books, and the 2007 NFPA Annual  
10 Revision Cycle, Report on Proposals and Report on  
11 Comments, blue books, and the 2007 Annual Revision  
12 Cycle National Electrical Code Committee Report on  
13 Proposals and Report on Comments, the tan books.

14 Under convention rules before a motion  
15 can be considered for action at this Association  
16 Technical Meeting, the intended maker of the motion  
17 must have filed prior to the published deadline of  
18 April 6, 2007, for all documents other than the NEC  
19 and May 4, 2007, for the NEC a notice of intent to  
20 make a motion.

21 These NITMAMs were reviewed by the  
22 Motions Committee appointed by the Standards Council  
23 chair, and the Motions Committee certified those

1 NITMAMs as certified amending motions under proper  
2 NFPA rules. Only certified amending motions together  
3 with certain allowable follow-up motions, that is,  
4 motions that become necessary as a result of a  
5 successful certified amending motion will be allowed  
6 at this meeting.

7                   There is a further requirement that a  
8 person must sign in to indicate that they are, in  
9 fact, here to pursue a motion. As part of these  
10 procedures statements for the record, that is,  
11 statements concerning Technical Committee actions as  
12 to which floor motions are not available are no  
13 longer permitted.

14                   In accordance with 4.6.10 of the  
15 regulation, if a quorum is challenged and found to no  
16 longer be present -- and a quorum is 100 members --  
17 the session will be terminated without further action  
18 on the reports. Any motions to amend or return the  
19 reports that have passed prior to the loss of a  
20 quorum will be processed and forwarded to the  
21 council. The remaining documents will be forwarded  
22 directly to the council without a recommendation from  
23 the association.

1                   Any appeal based on an action by the  
2 association at this meeting must be filed with the  
3 Standards Council within 20 days of this meeting.  
4 That is by June 27, 2007. Any amendment accepted at  
5 this meeting that fails to pass a committee amendment  
6 ballot will be automatically docketed as an appeal to  
7 the Standards Council agenda in accordance with  
8 1.6.2 B of the regulations. Note, however, that if  
9 an automatically docketed appeal is not subsequently  
10 pursued by a party, the council need not consider it.

11                   The votes cast at this technical  
12 meeting today and the discussions that lead to the  
13 voting are an integral and important part of the NFPA  
14 consensus process. The association technical meeting  
15 is the forum where the membership considers changes  
16 to the reports prepared by NFPA technical committees  
17 concerning proposed new or revised NFPA codes and  
18 standards where there are certified amending motions.

19                   Through the motions, debate and voting  
20 at this meeting the membership makes recommendations  
21 to the Standards Council. The Standards Council  
22 under NFPA rules is the official issuer of all NFPA  
23 codes and standards. The majority vote of the

1 persons present here today is for the sole purpose of  
2 making a recommendation to the Standards Council on  
3 the disposition of the report.

4                   The Standards Council will meet July 24  
5 to 27, 2007, to make a judgment on whether or not to  
6 issue the document based on the entire record that is  
7 before the council including the discussion and vote  
8 taken at this NFPA meeting.

9                   Limited review following action by the  
10 Standards Council may also be available through a  
11 petition to the Board of Directors. Any such  
12 petition must be filed within 15 days of the council  
13 action in accordance with the regulations governing  
14 petitions to the Board of Directors from decision of  
15 the Standards Council. That is by August 10, 2007.

16                   With respect to voting procedures,  
17 regulations state that voting at NFPA meetings shall  
18 be limited to the following: Those present who are  
19 designated representatives of organization members,  
20 that is, those with gold ribbons attached to their  
21 badges, and those present who are voting members of  
22 the association, that is, with the badges with the  
23 word voting contained in the black strip across the

1 top of the badge.

2                   If you are not a member of either of  
3 these groups, I ask that you refrain from voting.  
4 You need not be a member of an NFPA section in order  
5 to vote. You must, however, be a voting member of  
6 record of the association duly registered at this  
7 meeting. Only voting members of record should be  
8 seated in the front sections. Those seated in the  
9 back sections will not be counted.

10                   Voting will be undertaken in the  
11 following manner: There will be no voice votes. The  
12 first vote will be by raising of hands. If that is  
13 not conclusive, we will proceed to a written  
14 organization ballot and a standing count of the  
15 regular voting members. I want to say at the outset  
16 that I will not cast a vote. Therefore, in the event  
17 of a tie vote the issue automatically fails.

18                   Once a report and certified amending  
19 motion is presented, it is open for discussion; and  
20 anyone in the room has the privilege of  
21 participating. The chair asks that you preface your  
22 remarks with your name and your company or  
23 organization affiliations. Let me repeat that.

1 Please state your name and your company, organization  
2 or affiliation prior to stating your remarks.

3           As you can see, we have red and green  
4 signs on the mikes the room. Red signs indicate  
5 opposition to a position, and green signs indicate  
6 support of a position. I would ask that you stand at  
7 the appropriate mike and state at the beginning of  
8 your remark whether or not you are in support of or  
9 in opposition of the motion being debated.

10           Please be aware that no one  
11 participating in the floor motions and debate at this  
12 meeting is authorized to act as an agent or speak on  
13 behalf of the NFPA, and views expressed during  
14 motions and debate including those expressed on  
15 behalf of NFPA technical committees or other entities  
16 operating within the NFPA system do not necessarily  
17 reflect the views of the NFPA.

18           Given the size of the agenda and amount  
19 of material that we have to get through, we will  
20 start out with five minutes per speaker; but it is my  
21 plan to limit the time as appropriate in the event  
22 that that becomes necessary. We have a timer in the  
23 middle of the front table. To let you know when you

1 are running out of time, this timer will flash yellow  
2 at four minutes and turn red at five minutes. The  
3 chair reserves the right to hear any new speaker  
4 before yielding the floor to anyone wishing to  
5 address the same issue for a second time.

6 Motions that are in order, the  
7 certified amending motions are contained in the  
8 Certified Amending Motions Table II A and II B on the  
9 documents for the June 2007 association technical  
10 meeting which were available at the registration desk  
11 and at the back of the room today and pertain to the  
12 documents contained on Page 70 of the annual meeting  
13 program.

14 As previously stated, this meeting is  
15 conducted in accordance with NFPA convention rules  
16 that are available at the NFPA registration desk.  
17 Upon completion of all action on certified amending  
18 motions relating to an NFPA document, the presiding  
19 officer shall entertain any follow-up motions. A  
20 follow-up motion is a motion that becomes necessary  
21 as a result of a previously successful amending  
22 motion.

23 A motion to return a document or to

1 return a portion of a document affected by a previous  
2 successful amending motion is always in order as a  
3 follow-up motion as long as it is not repetitious.  
4 The presiding officer shall make the determination  
5 whether a motion is a proper follow-up motion and a  
6 follow-up motion shall require two seconders.

7                   Finally I would like to stress that the  
8 rules we are operating under today are designed to  
9 improve the efficiency and quality of the association  
10 technical meeting by eliminating the need to present  
11 uncontested documents and by giving you, the NFPA  
12 membership, advanced notice of amending motions that  
13 are to be presented and by giving me as the presiding  
14 officer greater discretion at managing debate to  
15 ensure that the issues are as fully debated as  
16 possible within the available time.

17                   It is my hope and expectation that  
18 together we will make this association technical  
19 meeting a success, and I thank you in advance for  
20 your cooperation, patience; and when we are done, I  
21 will welcome your comments and suggestions for the  
22 future.

23                   (Special Achievement Awards and

1 Committee Service Awards presented.)

2 MR. PAULEY: Before we start I would  
3 like to announce that we will attempt to finish today  
4 if at all possible. We will be taking a 30-minute  
5 break for lunch at an opportune time, and comfort  
6 breaks will be taken periodically. Let's begin.

7 The first report this morning is that  
8 of the Committee on Airport Facilities. Here to  
9 present the committee's report is Chair Gene  
10 Benzenberg of Alison Control of Fairfield, New  
11 Jersey. This report can be found in the blue 2007  
12 Annual ROP and ROC. The list of certified amending  
13 motions is contained in the Motions Committee report  
14 behind me on the screen. We will proceed in that  
15 order. Mr. Benzenberg.

16 NFPA 415 MR. BENZENBERG: Mr. Chairman, ladies  
17 and gentlemen, the report of the Technical Committee  
18 on Airport Facilities can be found on Pages 415-1  
19 through 415-5 on the report of proposals and on Page  
20 415-1 through 415-2 on the Report on Comments of the  
21 2007 annual revision cycle.

22 The committee proposed a partial  
23 revision of NFPA 415, standard on airport terminal

1 buildings, fuel ramps, drainage and loading walkways.  
2 The committee ballot results can be found in the  
3 reports. Now I return the podium to the presiding  
4 officer to proceed with the certified amending  
5 motions for 415.

6 MR. PAULEY: Let's proceed with the  
7 discussion for the certified amending motions on NFPA  
8 415. Motion 1, microphone 3, please.

9 MR. NISJA: My name is Jon Nisja. I'm  
10 the chair of the Northcentral Regional Fire Code  
11 Development Committee and also president of the  
12 International Fire Marshals Association. I move to  
13 accepted Comment 415-1.

14 MR. PAULEY: The motion on the floor is  
15 to accept Comment 415-1. Is there a second? I see a  
16 second. Please proceed.

17 MR. NISJA: This section of standard  
18 415 requires automatic sprinkler protection when the  
19 total assembly area exceeds 12,000 square feet. It's  
20 the position of our Regional Fire Code Committee that  
21 that is inconsistent with the requirements of NFPA  
22 101. That requires sprinkler protection in assembly  
23 occupancies when they exceed 300 persons. We would

1 like this document changed to reflect consistency  
2 with NFPA 101.

3                   There is an exception in 101 that  
4 allows a single assembly room of 12,000 square feet  
5 to be exempted from sprinkler protection, but that  
6 deals with like a VFW or a school auditorium or a  
7 multi-purpose room in a church. I think the 415  
8 committee is incorrectly interpreting this section.  
9 Thank you.

10                   MR. PAULEY: Mr. Benzenberg.

11                   MR. BENZENBERG: The committee in  
12 reviewing this request did not believe there was a  
13 conflict between NFPA 101 and 415. This has been in  
14 the standard for many years, and we specifically  
15 limited it to 12,000 square feet.

16                   MR. PAULEY: Is there further  
17 discussion on the motion to accept Comment 415-1?  
18 Seeing no one come to the microphone, we will proceed  
19 with a vote.

20                   The motion on the floor is to accept  
21 comment 415-1. All those in favor of this motion,  
22 please raise your hand. All those opposed. We are  
23 not starting out the best that we could. It seems

1 like we have a lot of folks not doing anything in the  
2 audience. I will ask to do this again so I get a  
3 little wider view of the audience as I do it. If I  
4 can't call it from there, I will call a standing  
5 vote. All those in favor of the motion, please raise  
6 your hands. Thank you. All those opposed.

7                   Folks, we will have to stand up. I'm  
8 going to ask that those of you that are  
9 organizational delegates please fill out your  
10 organizational ballots, and I will ask for a standing  
11 count of the members. All those in favor of the  
12 motion, please stand. Please remain standing while  
13 they do the counts.

14                   At the same time I remind  
15 organizational members, those of you with the gold  
16 delegate ribbon, you can also fill out your  
17 organizational ballot and make sure you give that to  
18 NFPA staff.

19                   You may be seated. All those opposed  
20 to the motion, please stand. You may be seated. The  
21 result is that the motion fails. The final count is  
22 71 in favor, 81 opposed.

23                   We will move to the next certified

1 amending motion on NFPA 415. Microphone 3, please.

2 MR. NISJA: John Nisja with the  
3 Northcentral Regional Fire Code Development  
4 Committee. I move to accept Comment 415-3.

5 MR. PAULEY: The motion is to accept  
6 Comment 415-3. Is there a second? I see a second.  
7 Please proceed.

8 MR. NISJA: This section of standard  
9 415 requires hydraulic calculations for fire  
10 sprinkler systems installed in aircraft terminal  
11 buildings. It also goes on to require certain  
12 minimum sizes of mains, either 6 inch or 8 inch.  
13 This is inconsistent with the requirements of NFPA 13  
14 that simply requires hydraulic calculations, it does  
15 not prescribe a minimum main size.

16 The committee states that this is  
17 needed for possible future expansion needs of an  
18 aircraft terminal. Once again our committee feels  
19 that is inconsistent with the scope of most NFPA  
20 standards that deal with real situations, not future  
21 proposed possible who knows what could happen,  
22 sometime unknown. So we really want to deal with what  
23 is there now; and if they have to provide additional

1 water because they are putting an addition on ten  
2 years down the road, that's fine.

3                   It also uses the term lateral which is  
4 a term that is neither defined in NFPA 415 nor NFPA  
5 13. Although the term is used in 13, but it deals  
6 primarily with bracing and hangers and stuff, not a  
7 term for a water main. So I ask your support in this  
8 comment. Thank you.

9                   MR. PAULEY: Thank you.  
10 Mr. Benzenberg.

11                   MR. BENZENBERG: The committee first of  
12 all reviewed the scope of the committee and find that  
13 this is within our scope. Furthermore, we do specify  
14 specific requirements that do not necessarily agree  
15 with the other standards like 13. So we believe that  
16 the reason we put this in is proper and believe it  
17 should have a minimum size.

18                   MR. PAULEY: Further discussion?  
19 Microphone 1.

20                   KEN ISMAN: Ken Isman with the National  
21 Fire Sprinkler Association in support of the motion  
22 on the floor for two reasons. The first is that the  
23 section really does not give any discussion as to

1 whether we are talking about looped mains here or  
2 dead-end mains. The reality is a 6 inch loop main is  
3 a whole lot more efficient than an 8 inch dead-end  
4 main. So you don't want to necessarily prevent  
5 people from putting in 6 inch loop main systems as  
6 opposed to 8 inch dead-end mains.

7                   The second reason we are opposed to the  
8 motion is that we believe after review of the scope  
9 of the standards which we have some knowledge of,  
10 NFPA 13 and NFPA 16 and NFPA 15, that the sizing of  
11 pipe for hydraulic purposes is within the scope of  
12 those installation standards.

13                   Now, the Standards Council has ruled  
14 that an occupancy standard like NFPA 415 is allowed  
15 to go beyond what the installation standards say  
16 where they have a specific incidence, where they have  
17 a specific concern like this one we are talking  
18 about; but they are only allowed to do -- there is a  
19 Standards Council directive that says they are only  
20 allowed to go beyond the installation standard when  
21 they put an annex note in their document explaining  
22 why they want to go beyond the minimum requirements  
23 of the installation standard.

1                   415 committee has not done this. There  
2 is no annex note explaining about this need for  
3 future expansion consideration, and those kinds of  
4 issues actually could be dealt with in some kind of a  
5 performance-based plan. But since the user does not  
6 know that that is the issue, the 415 committee is in  
7 at least our opinion in violation of the Standards  
8 Council directive on the scoping issue.

9                   MR. PAULEY: Thank you. Further  
10 discussion? Seeing none we will proceed to vote. The  
11 motion is to accept comment 415-3. All those in  
12 favor, please raise your hand. Thank you. Those  
13 opposed. The motion passes. That concludes our  
14 motions on NFPA 415. Thank you, Mr. Benzenberg.

15                   MR. BENZENBERG: Thank you.

16 NFPA 30 MR. PAULEY: The next document that we  
17 have is NFPA 30. However, persons that were  
18 scheduled to make certified amending motions for the  
19 document have not signed in. Therefore, the document  
20 will be sent to the Standards Council as a consent  
21 document and is deemed to be adopted, and we will  
22 move to the next document. We would like to thank  
23 the committee for the work on that document.

1                   The next report this morning is that of  
2 the Committee on Gaseous Fire Extinguishing Systems.  
3 Here to present two parts of the committee's report  
4 is Chair Jeffrey Harrington of the Harrington Group  
5 Duluth, Georgia. The report for NFPA 12 can be found  
6 in the yellow 2006 fall ROP and ROC, and for 2001 the  
7 report can be found in the yellow 2006 fall ROP and  
8 blue 2007 annual ROC. The list of certified amending  
9 motions is contained in the Motions Committee report  
10 that you will see on the screen. We will proceed in  
11 that order. Mr. Harrington.

12 

NFPA 12
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 MR. HARRINGTON: Mr. Chair, ladies and  
13 gentlemen, the report of the Technical Committee on  
14 Gaseous Fire Extinguishing Systems is presenting two  
15 documents. NFPA 12 can be found on Pages 12-1  
16 through 12-14 on the report of proposals and Pages  
17 12-1 through 12-5 of the report on comments for the  
18 2006 fall revision cycle.

19                   The committee proposed a partial  
20 revision to NFPA 12, the standard on carbon dioxide  
21 extinguishing systems. The committee ballot results  
22 on each proposal and comment can be found in the  
23 reports. I will now return the podium to the

1 presiding officer to proceed with the certified  
2 amending motions on NFPA 12.

3 MR. PAULEY: Let's proceed with NFPA  
4 12. The first motion, microphone No. 5, please.

5 MR. WYSOCKI: I am Thomas Wysocki, a  
6 member of the NFPA Technical Committee employed by  
7 Guardian Services Incorporated. I move to accept  
8 comment 12-1 found on Page 2 of the fall ROC.

9 MR. PAULEY: The motion is to accept  
10 comment 12-1. Is there a second? I see a second,  
11 please proceed.

12 MR. WYSOCKI: We've handed out a sheet  
13 entitled NFPA 12 information. The left column of the  
14 sheet is the current wording of NFPA 12 4.1.1 while  
15 the right column is the proposed ROP's wording. Both  
16 versions prohibit the use of total flood carbon  
17 dioxide in normally occupied spaces. Both versions  
18 permit continued use of existing installations so  
19 long as required personnel safety provisions are  
20 implemented.

21 The current standard also permits the  
22 following two exceptions. You will see them on the  
23 left-hand side. New installations permitted if there

1 is no suitable agent that can provide an equivalent  
2 level of fire protection to CO 2 and the designer  
3 provides supporting data to the satisfaction of the  
4 authority having jurisdiction to permit this  
5 exception. The second exception, it permits marine  
6 installations so long as all personnel safety  
7 provisions are required, as required by NFPA 12, are  
8 permitted.

9                   The ROP permits five exceptions in  
10 addition to that for existing systems. The  
11 exceptions are intended to be a clarification of the  
12 existing 4.1.2. They are on the right-hand side.  
13 Exception No. 1, total flood CO 2 in normally  
14 occupied spaces is permitted if it is determined that  
15 an inerting concentration is required and if the  
16 inerting concentration is about the low AEL for the  
17 gaseous agents.

18                   This is a fine exception except NFPA  
19 does not define low AEL. This is a key term that  
20 should be defined in the standard if this exception  
21 is to hold. Inerting concentration, likewise, is not  
22 defined nor does NFPA 12 tell how to determine if  
23 such a concentration is required. The proposal is

1 incomplete.

2                   4 1 1 2, C0 2 is permitted for  
3 energized electrical hazards with voltages greater  
4 than 400 volts or with group electrical cables if no  
5 alternate agent has been successfully tested. There  
6 are multiple problems with this exception. First, no  
7 data of any kind was presented in support of the  
8 proposal. ROP, ROC, you will find no substantiating  
9 data. It's no wonder that we have the following  
10 flaws and errors. First, group electrical cables are  
11 undefined. How many cables? How close constitute a  
12 group? Is it two, three, four? There's no  
13 definition.

14                   Secondly, linking this exception to  
15 voltage is technically incorrect. Later this morning  
16 during discussion of NFPA 2001 we will hear a  
17 discussion about protecting electrical equipment with  
18 gaseous clean agents. We will see that the required  
19 agent concentration is not a function of voltage but  
20 a function of temperature of the energized  
21 conductors. This exception based on voltage is  
22 technically indefensible.

23                   The next exception is reasonable, would

1 already be permitted by existing language. The  
2 exception for marine cargo holds does not belong  
3 since this proposal deals with normally occupied  
4 spaces and marine cargo holds are not normally  
5 occupied.

6                   Finally 4 1 1 5, again we have an  
7 exception based on inerting concentration and low  
8 AEL, important terms neither of which are described  
9 and defined in NFPA 12. We also have a curious  
10 parenthetical, "Add footprint here limit," which is  
11 part of that proposal.

12                   It was the committee's intent to  
13 provide an exception for cases where vessels were  
14 being retrofit and available space or location of the  
15 storage space required extinguishing agent prevents  
16 the use of any other gaseous agent than CO 2. The  
17 footprint, while recognized as a needed item, has not  
18 been completed by the Technical Committee. Still it  
19 remains a part of the proposal.

20                   For these reasons we make the motion to  
21 accept comment 12-1 which will retain the language  
22 shown on the right-hand side from the existing 12  
23 standard. Thank you.

1 MR. PAULEY: Mr. Harrington.

2 MR. HARRINGTON: The committee felt and  
3 came to consensus on the desire to essentially  
4 eliminate installing CO 2 systems, new CO 2 systems  
5 in occupied spaces and felt that the existing wording  
6 was too vague and needed to be a little stronger but  
7 was also sensitive to others on the committee who  
8 felt that there needed to be, rather than a blanket  
9 prohibition there needed to be some stated  
10 exceptions.

11 So the proposed wording that was  
12 accepted by ballot of the committee was an attempt to  
13 find compromise on both in terms of both positions  
14 and go forward with the desire to not use CO 2 in  
15 occupied spaces but recognized that in certain  
16 relatively rare instances it might be okay and be  
17 more specific so it was not so vague.

18 MR. PAULEY: Thank you. Further  
19 discussion? Microphone No. 1, please.

20 MR. MAKOWKA: My name is Norbert  
21 Makowka. I represent the National Association of  
22 Fire Equipment Distributors, and I am a member of the  
23 Technical Committee. The National Association of

1 Fire Equipment Distributors is in favor of the motion  
2 on the floor. This change removes the ability of a  
3 fire protection engineer or system designer the  
4 flexibility to use an agent as proven with an 80-year  
5 history.

6 There are a lot of restrictions in the  
7 current 2005 edition, that it is not used in normally  
8 occupied areas but the proposed change would  
9 eliminate the ability of a designer to show cause why  
10 CO 2 is the best agent to use in a specific  
11 application. Thank you.

12 MR. PAULEY: Thank you. Further  
13 comments? Microphone No. 3, please.

14 MR. WESCOM: My name is Robert Wescom.  
15 I am the principal of Wescom Associates, a consulting  
16 engineering firm in Stratum, New Hampshire. I am  
17 also a member of the Technical Committee responsible  
18 for the standard.

19 I would like to speak in opposition to  
20 the motion to accept Comment 12-1. Section 4.1 in  
21 the 2005 edition contains a requirement that is not  
22 only unenforceable but which contains language that  
23 can be construed as ways to avoid complying with the

1 requirement.

2                   In its current form in the 2005 edition  
3 the section is nearly useless due to this focus on  
4 how to work around the requirement. The Technical  
5 Committee recognized this shortcoming and formed a  
6 working group to develop a comprehensive list to  
7 describe the specific circumstances under which CO<sub>2</sub>  
8 total flooding systems could be used in normally  
9 occupied enclosures.

10                   The premise was and is that there may  
11 be fire hazards that alternatives to carbon dioxide  
12 are unable to deal with in an effective manner, and  
13 thus it may well be appropriate to use carbon dioxide  
14 under these circumstances in spite of the danger of  
15 death or injury to the occupants.

16                   The working group developed a list of  
17 four circumstances where there are no obvious  
18 alternatives to carbon dioxide that can do the job as  
19 well as carbon dioxide. Those four circumstances are  
20 clear and unambiguous and form the basis for the  
21 committee comment that changed section 4.1 into  
22 something providing useful guidance to the users of  
23 the standard.

1                   The intent of the Technical Committee  
2 is clear. It is to prohibit the frivolous use of  
3 carbon dioxide systems when safe alternatives,  
4 whatever they might be, are available. The committee  
5 also demonstrated with its comment a willingness in  
6 the ROC to make specific exceptions where current  
7 alternatives to carbon dioxide are not up to the  
8 task.

9                   The arguments you heard with the motion  
10 this morning are identical to those heard by the  
11 Technical Committee both at the proposal and comment  
12 stages of this document. In both instances the  
13 Technical Committee was unconvinced by the arguments  
14 and rejected the action sought.

15                   I ask the members today to support the  
16 actions of the Technical Committee by voting to  
17 reject the motion on the floor. Thank you.

18                   MR. PAULEY: Thank you. Further  
19 comment? Microphone 3, please.

20                   MR. SENEAL: I'm Joseph Senecal. I'm  
21 an employee of Kidde-Fenwal, Inc., a manufacturer of  
22 carbon dioxide systems as well as other Halon  
23 alternative gaseous systems. I am a member of the

1 NFPA Committee on Gaseous Fire Extinguishing Systems.

2 I am opposed to the motion on the  
3 floor. I do not want to repeat comments that have  
4 already been made, but there are multiple  
5 alternatives to carbon dioxide for use in total  
6 flooding protection of normally occupied spaces.

7 There are today at least seven listed  
8 or approved gaseous fire extinguishing agents for  
9 use, listed for use in normally occupied spaces in  
10 various applications. There are many choices in  
11 addition to which there are other technologies as  
12 well as gaseous systems for uses in these  
13 applications. For this reason I am opposed to the  
14 motion. Thank you.

15 MR. PAULEY: Thank you. Microphone  
16 No. 2.

17 MR. RIVERS: My name is Paul Rivers. I  
18 am with 3M Company, and I am a principal member on  
19 the NFPA Gaseous Fire Extinguishing Committee. I am  
20 speaking in opposition to the motion on the floor to  
21 reject the committee's action.

22 My company is heavily dependent upon  
23 the use of CO 2 in the protection of processes

1 historically with total flooding applications but  
2 mostly for use in local applications. Where we have  
3 actively gone away from the use of CO 2 in total  
4 flooding applications due to safety concerns where  
5 employees are unnecessarily exposed to the risk of  
6 being trapped in a protective space where CO 2 is  
7 applied in a total flooding fashion, there exist  
8 gaseous alternatives for use as was stated before  
9 where total flooding fire suppression is necessary  
10 and where CO 2 is not needed. Therefore, I recommend  
11 a vote to reject the motion on the floor. Thank you,  
12 Mr. Chairman.

13 MR. PAULEY: Microphone No. 3, please.

14 MS. MARANION: Good morning. My name  
15 is Bella Maranion. I'm a federal employee with the  
16 U S Environmental Protection Agency headquartered in  
17 Washington, D. . I am a member of NFPA. I am  
18 speaking today to oppose the motion to accept Comment  
19 12-1.

20 My interest has been in the smooth and  
21 safe transition away from ozone depleting Halon.  
22 I've worked over the years with the fire protection  
23 industry to achieve that. Over four years of efforts

1 to work within the NFPA consensus standards making  
2 process yielded a significant shift in the technical  
3 committee's deliberations in the language. The  
4 current NFPA 12 which states a carbon dioxide total  
5 flooding system shall not be installed in normally  
6 occupied enclosures, this restriction remains  
7 unchanged and unchallenged. At issue today is the  
8 motion of how the exception language should be  
9 worded.

10 I am here today to reaffirm and support  
11 the work of that Technical Committee and its  
12 revisions, and in providing reasonable requirements  
13 for best essential uses of carbon dioxide systems in  
14 normally occupied enclosures and offering useful  
15 guidance to users of that standard.

16 To be frank, I don't understand the  
17 reason for a motion that would seek to provide less  
18 clarity rather than more to users of the standard.  
19 The EPA strongly supports the consensus standards  
20 making process under NFPA.

21 I believe this Technical Committee  
22 exercised due diligence in its review of all new  
23 information presented to it on this issue, and with

1 the changes Section 4 1 of NFPA 12 has carried out  
2 its responsibility to achieving harmony and  
3 consistency in its approach to gaseous agents.

4                   With regard to public safety, the trend  
5 will continue to be more rather than less scrutiny;  
6 and I believe that our actions taken will be judged  
7 based on how much we do, not how little. I ask the  
8 members today to support the work of the Technical  
9 Committee by opposing the motion and rejecting the  
10 motion to accept Comment 12-1.

11                   MR. PAULEY: Thank you. Microphone  
12 No. 5, please.

13                   MR. WYSOCKI: I'm Tom Wysocki of  
14 Guardian Services, a member of the Technical  
15 Committee. So there is no misunderstanding here, we  
16 are not asking that carbon dioxide be given a carte  
17 blanche for use in normally occupied spaces. Quite  
18 the contrary. We believe that carbon dioxide should  
19 not be used in such spaces if there is a suitable  
20 alternative, and in most cases there is a suitable  
21 alternative. However, these will vary on a  
22 case-by-case basis, and we believe it is the province  
23 of the fire protection professional to do an analysis

1 of each case and in those rare cases where such  
2 analysis shows there is no equivalent to CO 2 for  
3 such protection, he may then seek relief from the  
4 authority having jurisdiction.

5 That notwithstanding I have not heard  
6 anyone address the flaws in the exception, lack of  
7 definition and the technical error with respect to  
8 electrical hazards basing it on voltage as opposed to  
9 basing it on the proven fact that it is temperature  
10 of the conductor that will affect the agent  
11 concentration. Thank you.

12 MR. PAULEY: Microphone No. 3, please  
13 Chris.

14 THE FLOOR: I'm Chris Aneska, senior  
15 fire protection engineer at Hughes Associates and a  
16 member of the Technical Committee. I'm speaking in  
17 opposition to the motion.

18 As a fire protection engineer working  
19 in this business for quite some time I think I would  
20 disagree that we need these blanket exceptions that  
21 Tom is advocating. There are plenty of alternative  
22 agents and technologies that can provide the  
23 protection in these applications that are not lethal

1 at designed concentrations.

2 I am speaking in opposition. I think  
3 the language the committee is proposing farther  
4 clarifies the exceptions where you may still need to  
5 use CO 2 in a normally occupied space; and while it  
6 may not be perfect, it's much better than the current  
7 language.

8 MR. PAULEY: Further comments.  
9 Microphone No. 3, please.

10 MR. WEBB: My name is Bill Webb. I  
11 call the question.

12 MR. PAULEY: The motion has been made  
13 to end debate. Is there a second to the motion?

14 THE FLOOR: Second.

15 MR. PAULEY: All those in favor of  
16 motion to end debate, please raise your hand. Those  
17 opposed --

18 MR. PAULEY: The motion passes. We  
19 will proceed directly to the voting of the motion on  
20 the floor. Microphone No. 6.

21 THE FLOOR: Point of order. Does not  
22 the presenter have the right by NFPA rules to make a  
23 concluding statement?

1 MR. PAULEY: No. When a motion is  
2 made to end debate and it's voted on by the body,  
3 that ends debate. We proceed directly to the motion  
4 on the floor.

5 THE FLOOR: Thank you, Mr. Chairman.

6 MR. PAULEY: The motion on the floor is  
7 to accept comment 12-1. All those in favor of the  
8 motion, please raise your hand. All those opposed.  
9 The motion fails. We will now move to the next  
10 document. Mr. Harrington, would you please introduce  
11 the next document.

12 NFPA 2001 MR. HARRINGTON: The report of the  
13 Technical Committee on Gaseous Fire Extinguishing  
14 System on NFPA 2001 can you found on Pages 2001-1  
15 through 2001-33 of the report on proposals for the  
16 2006 fall revision cycle and 2001-1 through 2001-45  
17 of the 2007 annual revision cycle report on comments.

18 The committee proposed a partial  
19 revision to NFPA 2001 standard on clean agent fire  
20 extinguishing systems. The committee ballot results  
21 can be found on Pages 2001-1 through 2001-2 of the  
22 ROP and on Pages 2001-1 through 2001-5 of the ROC.

23 I will now return the podium to the

1 presiding officer to proceed with the certified  
2 amending motions on NFPA 2001.

3 MR. PAULEY: Thank you,  
4 Mr. Harrington. We will proceed to the first motion  
5 that we have on NFPA 2001. I will note on your  
6 Motions Committee report that this was a motion that  
7 you will notice three names. Any of the three  
8 individuals listed for the motion do have the ability  
9 to make the motion. I am looking to see if anyone is  
10 going to the microphones. Microphone No. 5, please.

11 MR. ROBIN: I usually am kind of hard  
12 to miss. Thank you. Mark Robin, DuPont  
13 Fluoroproducts. I move to reject comment 2001-61 A.

14 MR. PAULEY: The motion on the floor  
15 is to reject Comment 2001-61 A. Is there a second?  
16 I see a second. Please proceed.

17 MR. ROBIN: The comment proposes to  
18 increase the minimum design concentration for class C  
19 fires by 33 percent for scenarios where power levels  
20 are less than 1,500 watts. For power levels greater  
21 than 1,500 watts the comment requires higher design  
22 concentrations but does not define these higher  
23 design concentrations.

1                   Acceptance of this comment would have a  
2 major impact on the clean agent marketplace. The  
3 comment would result in an increased agent  
4 requirement and, hence, increased agent costs of 33  
5 percent. The increase in the amount of agent  
6 employed will require additional storage space,  
7 additional storage equipment and result in increased  
8 transportation costs. An increase in total systems  
9 cost from 40 to 50 percent would likely result. Given  
10 the numerous clean agent applications involving class  
11 C hazards, the comment would affect approximately 75  
12 to 90 percent of clean agent system installations.

13                   Has some event occurred in the field  
14 which justified such a major change and demands  
15 urgent action? No. Clean agent systems have been in  
16 place for approximately 15 years. There are  
17 hundreds of thousands of installations world wide.  
18 Within that time period there has not been a single  
19 report of a failure of a clean agent system to  
20 suppress a class C fire.

21                   System design should be based on  
22 scientific facts and data, and this 15 years of field  
23 experience cannot be ignored. The field experience

1 provides no justification for the comment. In fact  
2 it provides strong evidence that current levels are  
3 indeed adequate.

4 Do past studies justify the comment?

5 No. The basis of the Technical Committee's decision  
6 on the comment was a series of reports. It's  
7 important to note that at the time of the Technical  
8 Committee's decision a detailed analysis of these  
9 past studies was not available nor were the results  
10 of recent tests conducted by Fike and DuPont.

11 A major flaw in all but one of these  
12 past studies, which was not evident at the time of  
13 the Technical Committee's decision, is these tested  
14 use of materials in conditions which were not  
15 representative of real world class C hazards. For  
16 example, the majority of these past studies employed  
17 an energized nichrome wire wrapped around a piece of  
18 PMMA. In real-world applications nichrome is never  
19 used as a power conductor. PMMA is not used as an  
20 insulator. Even on the surface allowing such tests  
21 are irrelevant to power conduction as practiced in  
22 the real world.

23 In addition, the properties of nichrome

1 wire and copper are vastly different. Copper wire  
2 fails at temperatures of approximately 1,000 degrees  
3 Farenheit. Nichrome wire is usable up to  
4 temperatures exceeding 2,000 Farenheit. This is an  
5 important point as the past studies employed nichrome  
6 wire at temperatures of approximately 1,800  
7 Farenheit. At this temperature copper wire fails  
8 within seconds.

9 PMMA, the plastic involved, is vastly  
10 different, especially in flammability characteristics  
11 from PVC and polyethylene which represent 99 percent  
12 of the installation materials employed in the field.

13 Only one of the past studies, that of  
14 Hughes Associates, employed realistic test conditions  
15 and materials. This study concluded that the minimum  
16 class A design concentration of HFC 227 EA was  
17 adequate for the suppression of class C fires.  
18 Fike and DuPont have recently carried out a series of  
19 tests which have been detailed in correspondence to  
20 the Technical Committee.

21 These tests employ characteristic  
22 materials and conditions and indicate that the  
23 currently employed class A design concentrations are

1 sufficient for the suppression of class C fires. For  
2 example, energized fires have all been PMMA,  
3 polyethylene, ABS, polyvinylchloride and polyethylene  
4 are extinguished and reignition suppressed by  
5 HFC 125, HFC 227 EA, IG 55 and NOVAC 1230 at their  
6 minimum class A design concentrations.

7                   In addition fires involving energized  
8 PVC cable bundles are also extinguished and  
9 reignition suppressed by these same agents again at  
10 their minimum class A design concentrations.  
11 Energized PVC cables represent a significant portion  
12 of class C hazards, and these results update strongly  
13 indicate that the current design levels are adequate  
14 for class C hazards.

15                   Finally, the comment is technically  
16 flawed, and Tom Wysocki touched on this in his talk.  
17 First there is no data available to justify division  
18 of hazards into those characterized by power levels  
19 less than 1,500 or greater than 1,500 watts.

20                   Second, the power level is not the  
21 characteristic of concern. The hazard here is one of  
22 reignition due to the wire temperature, not the power  
23 level. If the power level is very low but heat

1 dissipation from the wire is hindered, that wire will  
2 continue to heat and could reach a high temperature.  
3 Alternatively, if the power level is high but heat  
4 dissipation from the wire is sufficient, the wire  
5 will not heat up to any significant level.

6 MR. PAULEY: You have 20 seconds  
7 remaining.

8 MR. ROBIN: In closing, subsequent to  
9 the Technical Committee's decision new information  
10 has become available which identifies major flaws in  
11 past studies. This new information indicates the  
12 irrelevance of past studies to real class C  
13 scenarios, and recent testing conducted by Fike and  
14 DuPont provides a strong indication based on  
15 objective scientific analysis and sound science that  
16 class A design levels are adequate for class C  
17 hazards.

18 MR. PAULEY: Thank you.  
19 Mr. Harrington.

20 MR. HARRINGTON: The members of the  
21 committee are well aware of several facts about class  
22 C fire hazards. The issue of whether to allow  
23 continued energization of a class C hazard or

1 disconnect the power thereby turning it into a class  
2 A hazard, that issue has been a matter of debate and  
3 confusion for a long time.

4                   It's an old issue. The committee has  
5 addressed it in discussions several times over the  
6 years and felt that it was time to sort of not ignore  
7 it, it was not an acceptable position to ignore the  
8 issue and it felt that the current wording was more  
9 ignoring it than it was dealing with it in a  
10 technically sound manner.

11                   Therefore, a task group was established  
12 on class C fire hazards to evaluate the known  
13 knowledge, literature, review reports and test data  
14 and to develop some conclusions and make a  
15 recommendation to the committee. The task group also  
16 worked with sort of like a task group with FSSA  
17 looking at data together and sharing ideas and so on.

18                   The proposal was prepared, put forth to  
19 the committee and debated ultimately. The committee  
20 came to a consensus that on continuously energy  
21 augmented type of fire based on the test reports that  
22 were available, and there were about 13, seemed to  
23 indicate that some additional agent was necessary to

1 achieve extinguishment and prevent reflash.

2                   Based on the recommendation of the task  
3 group and the subsequent discussions, it was decided  
4 to put forth a proposed change and that is the change  
5 that you see in the ROC. A safety factor has been  
6 approved by the committee, and that is where we are  
7 today.

8                   MR. PAULEY: Thank you. Further  
9 discussion? Microphone No. 5, please.

10                   MR. EDLBECK: Good morning. My name is  
11 Dale Edlbeck. I represent Ansul Incorporated, a Tyco  
12 International Company on the Gaseous Fire  
13 Extinguishing System Technical Committee. I am  
14 speaking in favor of the motion to reject comment  
15 2001 61 A.

16                   This issue was introduced to our  
17 Technical Committee because of concerns by fire  
18 protection designers and installers that fires  
19 involving energized electrical equipment which will  
20 not be shut down during an incident require a higher  
21 design concentration of a clean agent to extinguish.

22                   Telecommunication and power generation  
23 facilities are prime examples of these hazards.

1 These people are concerned due to the high equipment  
2 value and down-time costs associated with the  
3 shutdown of the facility. The owners of these  
4 facilities have resisted and in many cases refused to  
5 should down power in the event of a fire.

6                   Designers and installers of the systems  
7 protecting these hazards are concerned with potential  
8 damage to those facilities, personal injury and  
9 liability issues in the event of a fire that is not  
10 properly extinguished.

11                   The Technical Committee assigned a task  
12 group to research available data in the hope of  
13 confirming or denying the need for higher design  
14 concentrations. The task group conducted a document  
15 search to identify such data to clarify this issue.  
16 A number of reports were located that indicated the  
17 need for higher design concentrations when energy was  
18 continually applied to electrical conductors in the  
19 presence of combustible plastic. This was the best  
20 information available at the time the committee  
21 proposal was developed.

22                   Based on this information the Technical  
23 Committee drafted comment 61 A which requires a

1 design concentration of 1.6 times the extinguishing  
2 concentration required to extinguish class A plastic  
3 material. This is an increase from the standard  
4 class A design concentration of 1.2 times the  
5 extinguishing concentration for class A materials  
6 that are not exposed to continuous heating from  
7 energized electrical equipment.

8                   Although many of the Technical  
9 Committee members had reservations about the proposal  
10 at the time it was adopted, I believe we all felt  
11 that doing nothing was worse than addressing this  
12 issue with the committee proposal so we accepted it.

13                   Subsequent to the Technical Committee  
14 meeting, some of the members of the Technical  
15 Committee have reviewed the reports more carefully  
16 and have discovered issues that cast doubt on the  
17 relevance of the test to real-world conditions. The  
18 summary of testing performed to verify these claims  
19 has been presented here by the people doing the  
20 research and performing those tasks.

21                   We have also received reports of  
22 successful extinguishment of fires involving energy-  
23 augmented fuels by systems using current requirements

1 for standard design class A design concentrations.  
2 This information casts doubt on the need for  
3 increased design concentration requirements at this  
4 time.

5                   The new requirement is also very  
6 limited in its scope. The requirement for a design  
7 concentration of 1.6 times the extinguishing  
8 concentration is limited to hazards where the current  
9 will not exceed 1,500 kilowatts. Although it  
10 addresses hazards involving higher concentration  
11 draws, it does not provide guidance as to what design  
12 concentration shall be used to protect them, only  
13 that they will require higher concentrations.

14                   We believe it would be imprudent to  
15 force the proposed increased concentrations on all  
16 energy-augmented fires without appropriate tests to  
17 verify the need for special requirements. Further  
18 research is necessary to establish when and where the  
19 increased protection is required. A standardized  
20 test procedure must be established to assure the  
21 systems protecting these hazards are capable of  
22 suppressing fires under these special conditions.  
23 Until such research indicating the need for higher

1 concentrations is completed and standardized tests  
2 are established, the standard should remain as is.

3                   Comment 61 A will result in an  
4 increased clean agent requirement of approximately 33  
5 percent for any system protecting a space that could  
6 include an energy-augmented fire. We believe that  
7 such an increase is not justified at this time based  
8 on closer review of reports submitted for the  
9 original proposal and data collected subsequent to  
10 acceptance of comment 61 A.

11                   MR. PAULEY: You have 20 seconds  
12 remaining.

13                   MR. EDLBECK: If comment 61 A is  
14 incorporated into the next edition of 2001 standards,  
15 we believe it will lead to a reluctance on the part  
16 of owners and operators of the affected facilities to  
17 include clean-agent protection. This could lead to  
18 reduced protection with the associated potential for  
19 longer down times, greater damage to property and  
20 possibly a higher incidence of personal injury or  
21 loss of life.

22                   MR. PAULEY: Thank you. Microphone  
23 No. 3, please.

1                   MR. ANESKA: I'm Chris Aneska. I'm a  
2 senior fire protection engineer with Hughes  
3 Associates, a member of the Technical Committee, and  
4 I'm speaking in opposition to the motion.  
5 Essentially I think there are three points being  
6 brought up to try to support the motion, and I want  
7 to address each one of those.

8                   No. 1, the McKenna report, there was  
9 testing that was conducted by Hughes Associates that  
10 actually supports a 35 percent safety factor, not the  
11 20 percent in the current standard. No. 2, the  
12 committee has not been able to review the report of  
13 the successes. Those are apparently confidential  
14 data so we don't really know what the safety factors  
15 were in those successes against energized electrical  
16 circuits, but the installed base of most of the  
17 systems in this country are actually at a 35 percent  
18 safety factor.

19                   The class A minimum extinguishing  
20 concentrations are truly at the very edge of being  
21 able to put out class A materials. Adding an  
22 energized electrical component to that increases the  
23 energy there and certainly seems to, based on the

1 data that was reviewed by the committee, require a  
2 greater concentration than the minimum class A  
3 concentrations.

4                   The new data that is being collected by  
5 the vendors on this issue is essentially being run at  
6 the class A design concentration which would normally  
7 correlate into an extinguishing concentration and  
8 require a safety factor. So their 1.2 times the  
9 class A minimum extinguishing concentration that they  
10 are running their tests at should have a safety  
11 factor added to that of 20 percent which is a minimum  
12 safety factor used in gaseous systems which would be  
13 normally a 40 percent safety factor when you add it  
14 all up.

15                   Sort of in summary the decision the  
16 membership has right now is either the 60 percent  
17 safety, support the 60 percent safety factor that the  
18 committee came up with or go back to the 20 percent  
19 safety factor. Neither number is probably correct  
20 once we have actually studied this, run more test,  
21 developed an agreed protocol for running these tests;  
22 but the decision now is if you go back to 20 percent  
23 you may simply not be using enough concentration to

1 extinguish these fires. If you stay at 60 percent,  
2 we may be overkill and it may cost a little extra.

3                   If they really do run the protocol and  
4 come up with numbers that justify something less than  
5 60 percent, they can provide a TIA, report that data  
6 back to the committee. The committee can review it;  
7 and if they want to reduce the 60 percent, they can.  
8 So I am speaking in opposition to the motion.

9                   MR. PAULEY: Thank you. Microphone  
10 No. 4, please.

11                   MR. SENECA: Thank you,  
12 Mr. Chairman. I'm Joseph Senecal, an employee of  
13 Kidde-Fenwal, Inc., a supplier of gaseous clean agent  
14 fire extinguishing systems. I am also a member of  
15 the NFPA Gaseous Fire Extinguishing Technical  
16 Committee and have been a member of the task group  
17 that was actually involved in developing the proposal  
18 for which the motion is to now reject.

19                   I originally supported the work that  
20 put the current language in the ROP. After fairly  
21 lengthy and careful reconsideration of what has  
22 transpired since the Technical Committee has met and  
23 new technical information and more careful review of

1 the text that is actually in the ROP in terms of  
2 implementation, I now support the motion to reject  
3 comment 61 A.

4 My position is based on the following  
5 two general points. One is technical. There has  
6 been fairly extensive discussion about the technical  
7 issues. At the time the proposal was developed,  
8 technical information was evaluated that came from  
9 multiple technical papers involving various what I  
10 call idiosyncratic research tests, by that I mean  
11 highly understandardized; but the Technical Committee  
12 and the task group were trying to do the best they  
13 could with what they had available at the time.

14 I think even since that time great  
15 attention has been given to a more systematic  
16 approach to evaluating this problem on a technical  
17 basis, and I think as the previous speaker noted  
18 there may be additional technical information that  
19 would help the committee come to a different point of  
20 view.

21 In addition to the technical concerns I  
22 have an implementation concern, and that is -- I  
23 think importantly since the last Technical Committee

1 meeting I have been quite concerned about how  
2 authorities having jurisdiction would actually  
3 interpret the language in Section 5 4 2 5 which is  
4 the section dealing with the application of this  
5 subject.

6                   The Technical Committee had a very  
7 specific type of fire protection application in mind  
8 when it constructed the language in connection with  
9 energized electrical combustion hazards. That has to  
10 do with data centers and telecommunication centers  
11 where lots of power and current would go into very  
12 congested electrical equipment.

13                   I now believe that the guidance  
14 provided in the current wording of the ROP can be  
15 easily and frequently misinterpreted to apply the  
16 requirement for very elevated gassy extinguishing  
17 agent concentrations where any electrical service is  
18 present. This is not the intent of the Technical  
19 Committee.

20                   The possibility and likelihood that  
21 this can happen is evident in the language of  
22 5 4 2 5 1 that requires that the traditional class A  
23 design approach with gaseous clean agents, successful

1 since 1993, be abandoned as it can be easily reasoned  
2 that power will not be shut off somewhere in any  
3 building with an electrical power supply. That is  
4 not the intent of the committee.

5 Further, the language of the sections  
6 which relate to quantifying the electrical energy  
7 load of a failure is impossible to interpret in the  
8 field. For that reason and the technical reasons  
9 already cited I support the motion.

10 MR. PAULEY: Thank you. Microphone  
11 No. 2, please.

12 MR. RIVERS: My name is Paul Rivers. I  
13 am with 3M Company, and I'm a principal member of the  
14 NFPA Gaseous Fire Extinguishing Committee, and I also  
15 sat on that committee, subcommittee on energized  
16 electrical fire scenarios.

17 I am speaking in opposition to the  
18 motion to reject the committee's action but doing so  
19 by speaking in favor of what must not be forgotten,  
20 that is, the need for an industry-developed standard  
21 for determining the extinguishing concentrations of  
22 fires affected by persistent energy source or energy-  
23 augmented combustion often referred to as class C.

1                   It has been recommended repeatedly in  
2 committee and industry meetings to develop a test  
3 protocol under the auspices of an independent  
4 recognized testing laboratory similar to what has  
5 been done for class A and B fire scenarios. It could  
6 be similar to the UL standard technical development  
7 process or under the National Fire Protection  
8 Research Foundation or other independent testing  
9 laboratories where experts who are members of NFPA  
10 75, 76, 2001, manufacturers, end users in the  
11 affected industries and telecommunications and  
12 computer server industry and so forth can  
13 collectively develop an agreed-upon peer-reviewed  
14 test protocol, the content of which is drawn from the  
15 various sources that will be designed to stand the  
16 test of time.

17                   While there may be questions regarding  
18 the validity of some of the research testing  
19 conducted today, two things must be considered.  
20 First, there are indeed tests conducted not involving  
21 protocols in question that indicate a concentration  
22 higher than the minimum class A extinguishing  
23 concentrations necessary to control and extinguish an

1 energized fire scenario, tests that involve real  
2 equipment and materials used in application today.

3           The second consideration is the  
4 possibility that we lose the notion to develop an  
5 independent test protocol by returning to the  
6 previous treatment in the standard, that is, class C  
7 equals class A, when we know the first consideration  
8 at higher concentrations may be required exists.

9           There are indeed arguments that such  
10 results don't justify the safety factor in question,  
11 but there exists data that justify not returning to  
12 the minimum class A as well. I believe the committee  
13 recognized this. The concern here is that returning  
14 to the previous treatment in the document will cause  
15 us to forget the notion of an industry-developed test  
16 protocol that is independent and agreed.

17           Rejecting this motion will provide  
18 protection for such energized fire scenarios that may  
19 require higher than minimum class A extinguishing  
20 concentrations and give us the needed impetus to once  
21 and for all collectively develop the test protocol  
22 needed through an independent process. With that in  
23 mind I recommend rejecting the motion on the floor.

1 Thank you, Mr. Chairman.

2 MR. PAULEY: Microphone No. 4, please.

3 MR. POPE: My name is Tim Pope, and I  
4 am with Chemetron Fire Systems. I am currently  
5 president of the Fire Suppression Systems  
6 Association. Our association is the largest  
7 professional association of manufacturers, designers  
8 and installers and maintainers of special hazard fire  
9 protection systems in North America.

10 Last year the FSSA as has been stated  
11 earlier here performed an in-depth review on the  
12 available laboratory test data on class C fire  
13 hazards. In October of 2006 the FSSA submitted that  
14 report to the NFPA 2001 Technical Committee. Like  
15 the majority of the NFPA Technical Committee members,  
16 at that time we felt the laboratory data available in  
17 the fall of 2006 pointed to higher design  
18 concentration requirement for class C fire hazards.

19 One of the positives about matters like  
20 this is that it generated additional discussion,  
21 thoughts and studies on the class C subject. One of  
22 those discussions was that in nearly 15 years of  
23 clean agent systems used we could not find one

1 instance where a clean agent system failed to  
2 suppress a class C fire, and we know that many  
3 successful fire extinguishments by the agents did  
4 occur. When Fike and DuPont presented their recent  
5 study, it made more sense as to why all the successes  
6 in the real-world applications and that additional  
7 studies are necessary and justified.

8                   Based on the association's review of  
9 the recently developed data from Fike and DuPont, the  
10 FSSA Technical Committee and Board of Directors  
11 representing the FSSA membership stand in favor of  
12 the motion on the floor to retain the currently  
13 mandated class C fire design concentration for clean  
14 agents. We ask that you join us in voting yes on  
15 this motion. Thank you.

16                   MR. PAULEY: Thank you. Microphone  
17 No. 5, please.

18                   MR. STILWELL: Hello. I'm Brad  
19 Stilwell, and I work for the Fike Corporation. I am  
20 a member of the 2001 Technical Committee, and I am  
21 also a member the FSSA organization.

22                   If you look at the meeting minutes of  
23 the 2001 ROC, you will see my name next to the

1 presenter as to the safety factor moving to 1.6.  
2 That was my proposal. I gave the proposal to the  
3 Technical Committee. What I had done is I personally  
4 read all 13 papers cover to cover and created a  
5 spreadsheet that listed the test that was conducted,  
6 how much agent was required to extinguish the fire  
7 and took an average of those. That is really why I  
8 presented the number of the 1.6.

9                   Since that time we went back to Fike,  
10 started looking further at the issue, talking to  
11 people in the telecommunication industry and trying  
12 to understand what is a realistic test. A lot of the  
13 tests -- those 13 papers are really grouped into four  
14 different categories. One was the wire wrap PMMA.  
15 There was one called a radiant fire where they took a  
16 nichrome wire and heated a block of PMMA. One was  
17 actually class B testing where they took a hot wire  
18 and ignited it over fuel or gas to extinguish it, and  
19 then the last was the Hughes report which did some  
20 conductive and heating test.

21                   We went back to Fike said what is a  
22 typical fire condition. We looked at copper  
23 conductors. The first thing we studied was copper

1 and looked at what are its characteristics, when will  
2 it fail and did a series of tests and realized that  
3 copper wire will fail around 1,000 degrees Fahrenheit.  
4 It was really on the upper end.

5                   At that point we said we needed to come  
6 up with a realistic test protocol to test the agents.  
7 We wanted to make sure our systems in the field -- we  
8 as the manufacturer, we care about putting fires out.  
9 We want to make sure our systems as installed will  
10 suppress fires in the world. We are not just trying  
11 to keep safety factors down. We are trying to make  
12 -- as stewards of the environment, as stewards of  
13 fire protection, we want our systems to work. We  
14 don't just want low concentrations.

15                   So we developed this test. Yes, we did  
16 not conduct the test at minimum extinguishing  
17 concentrations. What we did test, we tested six  
18 materials that we believe are found in  
19 telecommunications facilities with four different  
20 agents. We tested each test three times repeatedly.  
21 So in the last five months we have done, I believe,  
22 an unbelievable amount of effort. We put a lot of  
23 time into it to study this phenomenon.

1                   We have seen unequivocally that every  
2 fire test that we have conducted, these agents have  
3 suppressed and prevented reignition of these fires.  
4 We are not a standards organization. We don't write  
5 standards. We are trying to come up with a test  
6 protocol that makes sense.

7                   I believe more work needs to be done to  
8 understand the issue. I am here as a Fike employee  
9 saying that we are going to do that. We think it's a  
10 benefit to the industry to further study this to get  
11 the right answer so people do understand what it  
12 takes to extinguish a class C fire.

13                   If it ends up being 1.3, 1.4, then that  
14 is what we need to do; but we don't need to say it  
15 needs to be 1.6 based on what I believe is not solid,  
16 hard, good test protocol that generated that number.  
17 I believe we need to use good science and good  
18 technology. We have 15 years of successful  
19 extinguishment.

20                   During the committee meeting I handed  
21 out a flier. I asked our sales folks often, "Do you  
22 have any successful fires?" I have 65 documented  
23 fire extinguishments despite systems using clean

1 agents. Some of them were, as Chris said, 1.35.  
2 There was more information you would have to  
3 understand to know why that is. Some are indeed at  
4 the existing 1.2 design concentrations we need today.

5 We have also conducted all those tests  
6 that I said before. I'm saying we should leave it as  
7 it is today. It has worked since 1994 when the  
8 standard was first published. As a committee I think  
9 we need to keep our energized electric task group  
10 going. I think we need to involve NFPA 75 and NFPA  
11 76 to try to better understand what we really need to  
12 do on these class C fires. I don't think we should  
13 take a big leap and move everything up to 1.6 because  
14 that will make us work harder.

15 MR. PAULEY: You have about 20 seconds  
16 remaining.

17 MR. STILWELL: In closing I think the  
18 standard as it is today is good. It's worked for 15  
19 years. I think there is more work that needs to be  
20 done, and me as Fike, I am dedicated to doing that  
21 work. I spent a lot of time and Fike is very  
22 dedicated to fire protection. We spend a lot of --  
23 research is a big thing for Fike. We will continue

1 to do that, and I just hope that you support the  
2 motion to reject that comment.

3 MR. PAULEY: Thank you. Microphone  
4 No. 3.

5 MS. DUBRUCQ: Denyse Dubrucq with Air  
6 Wars Defense. I only want to include one line on my  
7 rejected section, and that is to include nitrogen in  
8 the gaseous fire extinguishing materials to be  
9 tested. That is all I am going to say. Thank you.

10 MR. PAULEY: Speaking in opposition to  
11 the motion?

12 MS. DUBRUCQ: I think so. Nitrogen  
13 should be included in the group of gaseous fire  
14 controls.

15 MR. PAULEY: Microphone No. 4,  
16 pleased.

17 MR. WEBER: Thank you, Mr. Chairman.  
18 My name is Ray Weber from the great state of  
19 Wisconsin. I call the question.

20 MR. PAULEY: A motion has been made to  
21 end debate. Is there a second? I see a second. All  
22 those in favor of the motion to end debate, please  
23 raise your hand. All those opposed. The motion to

1 end debate passes.

2 We will now move immediately to the  
3 motion that is on the floor which is to reject  
4 comment 2001-61 A. All those in favor of the motion  
5 to reject this comment, please raise your hand.  
6 Thank you. Those opposed. The most passes.

7 We will move to -- we have another  
8 motion on this particular document. I am looking for  
9 the submitter of this motion. I believe it deals  
10 with the same issue which would -- I see the  
11 submitter stood up. So you're not going to move that  
12 next motion, correct? Thank you. Then we will  
13 proceed on with the next document. Thank you,  
14 Mr. Harrington.

15 NFPA 25 The next report this morning is that of  
16 the Committee on Inspection, Testing and Maintenance  
17 of Water-Based Systems. Here to present the  
18 committee's report is Chair Kenneth Lender of Swiss  
19 Reed Global Asset Protection Services, Avon,  
20 Connecticut.

21 This report can be found in the yellow  
22 2006 fall ROP and ROC. The list of certified  
23 amending motions is contained in the Motion

1 Committee's report. We will proceed in that order.  
2 Mr. Lender.

3 MR. LENDER: Mr. Chair, ladies and  
4 gentlemen, the report on the Technical Committee on  
5 Inspection, Testing and Maintenance of Water-Based  
6 Systems can be found on Pages 25-1 through 25-107 of  
7 the report on proposals and on Pages 25-1 through  
8 25-19 of the report on comments to the 2006 fall  
9 revision cycle.

10 The committee proposed a partial  
11 revision to NFPA 25, standard for the inspection,  
12 testing and maintenance of water-based fire  
13 protection systems. The committee ballot results on  
14 each proposal and comment can be found in the  
15 reports. I will now return the podium to the  
16 presiding officer to proceed with the certified  
17 amending motions on NFPA 25.

18 MR. PAULEY: Let's proceed with the  
19 certified amending motions. The first motion is --  
20 I'm looking to see if anyone is moving to the  
21 microphone. No. Is there no one here to pursue  
22 certified amending motion No. 1 for NFPA 25?

23 Seeing none we will move on to

1 certified amending motion No. 2 for NFPA 25. Still  
2 seeing no one moving to the microphones, we will move  
3 to certified amending motion No. 3. Microphone  
4 No. 5, please.

5 MR. DUBAIN: My name is Jeffrey Dubain,  
6 regional fire protection engineer with U.S. General  
7 Services here to speak in support of comment No. 25  
8 13. Addressing this section --

9 MR. PAULEY: One moment, please. I  
10 understand you are the designated representative  
11 for --

12 MR. DUBAIN: Correct. I am the  
13 designated representative for Josh Elvove.

14 MR. PAULEY: Thank you. Staff has  
15 confirmed that for me. So the motion on the floor is  
16 to accept comment 25-13. Is there a second? I see a  
17 second. Please proceed.

18 MR. DUBAIN: As written this section  
19 requires responsible occupants to be notified about  
20 where the sprinkler control valves are located and  
21 how to shut down the system. We have two main  
22 problems with the section.

23 First, the scope of NFPA 25 establishes

1 the minimum requirement for periodic inspection,  
2 testing and maintenance of water-based fire  
3 protection systems. This proposal is outside of that  
4 scope and would allow occupants to shut down the  
5 system during non-routine events or possibly a post  
6 event, post-emergency event.

7                   Second, this requirement is relatively  
8 unenforceable. Several questions are raised on what  
9 is the definition of a responsible occupant. They  
10 are not defined. How will this occupant prove his or  
11 her responsibility? What training will be required  
12 to be designated responsible? If there are no  
13 responsible occupants, does the owner need to notify  
14 anybody?

15                   Albeit a noble effort to want to  
16 prevent unwanted water damage during a non-fire  
17 event, there are too many questions to this new  
18 section and it is also outside the scope of NFPA 25.

19                   MR. PAULEY: Thank you. Mr. Lender.

20                   MR. LENDER: The committee feels very  
21 strongly that someone who is normally occupying a  
22 property needs to understand where the fire  
23 protection control valves are, how to shut them down

1 if needed, how to handle proper impairments; and  
2 since the testing and maintenance which requires the  
3 operation of these valves is part of the committee's  
4 scope, the committee feels very strongly that it is  
5 within our scope and somebody at a property needs to  
6 understand where the valves are. It's as simple as  
7 that.

8 MR. PAULEY: Thank you. Further  
9 discussion? Seeing no one at the microphones we will  
10 proceed on to a vote on certified amending motion 3  
11 which is to accept comment 25-13 of NFPA 25. All  
12 those in favor of that motion, please raise your  
13 hand. Thank you. Those opposed. The motion fails.

14 We will move to the next certified  
15 amending motion. That is certified amending motion  
16 No. 4. Looking for -- are you for item No. 4?  
17 Microphone No. 5, please.

18 MR. VAN OVERMEIREN: I'm Frank  
19 Van Overmeiren with FP&C Consultants.

20 MR. PAULEY: Go ahead and state your  
21 motion, please.

22 MR. VAN OVERMEIREN: I move to accept  
23 my comment on proposal 25 10. This change would

1 change the inspection, testing frequency of fire  
2 pumps from monthly to annual -- I'm sorry -- from  
3 weekly to monthly.

4 MR. PAULEY: I just want to clarify.  
5 What we have on the motions report is to accept  
6 comment 25-31.

7 MR. VAN OVERMEIREN: My original  
8 comment was on proposal 25 110. You have it as  
9 25-31.

10 MR. PAULEY: Your motion is to accept  
11 comment 25-31?

12 MR. VAN OVERMEIREN: That is correct.

13 MR. PAULEY: The motion is to accept  
14 comment 25-31. Is there a second? I see a second.  
15 Please proceed.

16 MR. VAN OVERMEIREN: Again, this  
17 action would change the inspection and testing  
18 frequency for fire pumps from a weekly activity to a  
19 monthly activity.

20 The original motion -- the original  
21 proposal that was submitted by Mr. Elvove, his  
22 primary point was that substantiation should be  
23 provided for the inspection, testing and maintenance.

1 Frequency should be based upon loss experience and  
2 failure potential.

3                   The committee rejected his proposal,  
4 and as part of a comment I had gone through and  
5 submitted additional technical substantiation to go  
6 through and change the frequency from weekly to  
7 monthly. I had collected data at that point when I  
8 made the submission from 94 different facilities  
9 representing over 61,000 weekly inspection and test  
10 events. Of the total failures, 24 failures were  
11 identified that would substantially impact the  
12 operation of the fire pump.

13                   This relates to a failure rate of 0.04  
14 percent or a successful operational rate of 99.96  
15 percent. The failures that were noted that would  
16 substantially impact the fire pump, those would  
17 include in some cases improper installation of the  
18 fire pump that were identified in the very first  
19 weekly test. Then additional failures included  
20 closed valves, dead batteries, controller  
21 malfunctions, switch adjustments that were improper,  
22 worn bearing connections, frozen water supplies and a  
23 loss of electrical power.

1                   The technical substantiation that I  
2 provided shows that the loss experience and failure  
3 potential of the fire pump does not warrant a weekly  
4 inspection and testing maintenance activity, that a  
5 monthly activity is more appropriate for this type of  
6 device.

7                   If we go through and change the  
8 frequency from a weekly event to a monthly event,  
9 that is by a factor of 4; but when we look at the  
10 total frequency that we have and total loss  
11 experience and failure potential, we are in an  
12 extremely high success rate at this point in time to  
13 where a factor of 4 is essentially insignificant and  
14 not within statistical difference if we go through  
15 and change that frequency.

16                  We further have to go through and  
17 analyze that when we are in essence increasing the  
18 potential failure rate that we are doing that in a  
19 manner to where we don't always have fires. When we  
20 look at when fires occur and we take a statistical  
21 average of that and when they occur in buildings on  
22 an annualized basis and prorate that to a factor of 4  
23 that we are changing the frequency to a monthly

1 occurrence which has in effect an additional factor  
2 of 10 difference, again we are at a statistical  
3 difference that is insignificant and essentially no  
4 different between monthly and weekly.

5                   So, again, I support the change to go  
6 through and change the frequency from weekly to  
7 monthly.

8                   MR. PAULEY: Thank you. Mr. Lender.

9                   MR. LENDER: Thank you. The committee  
10 had significant debate on this issue as to what is  
11 the appropriate frequency to test fire pumps. The  
12 majority of the committee feels very strongly that we  
13 should continue on a weekly basis. They were not  
14 convinced that all of the data that was submitted was  
15 appropriate and that they were comfortable with the  
16 overall change from weekly to monthly. In fact one  
17 of the reports we reviewed suggested while monthly is  
18 probably okay, weekly is best.

19                   So the committee feels very strongly  
20 that the pumps need to be tested as a whole unit,  
21 they operate under load, that they need to be  
22 operated and get lubricated properly so the seals get  
23 wet and felt very strongly that weekly is the correct

1 frequency.

2                   The committee has added some additional  
3 language on performance-based testing to allow  
4 exceptions if you have a particular facility where  
5 you can demonstrate that monthly is a better  
6 frequency, and everybody is in agreement with that  
7 including AHJ, then the committee gives you an  
8 available option to deal with it that way.

9                   However, overall the committee members,  
10 manufacturers of the pumps and engines included felt  
11 very strongly that weekly was the right number.

12                   MR. PAULEY: Thank you. Microphone  
13 No. 1, please.

14                   MR. GARDNER: Mr. Chairman, I'm Tom  
15 Gardner. I'm chair of the healthcare section. The  
16 healthcare section through our code and standard  
17 review process voted as a section to support the  
18 motion on the floor because of the documented and  
19 extremely low failure rate of fire pumps. Again, the  
20 healthcare section stands in support of the motion on  
21 the floor.

22                   MR. PAULEY: Thank you. Microphone  
23 No. 5, please.

1                   MR. VAN OVERMEIREN: Frank Van  
2 Overmeiren with FP&C Consultants to address the  
3 comment of the performance criteria that the  
4 committee has now provided.

5                   A quick review of the state  
6 jurisdictions that regulate acceptance or denial of  
7 how an authority having jurisdiction could go through  
8 and accept the performance criteria identifies that  
9 there are 27 different state authorities, and I come  
10 up with a list of over 100 local authorities, that by  
11 state or local legislation the authority having  
12 jurisdiction cannot simply just approve a performance  
13 orientation.

14                  They are required by state law or local  
15 jurisdiction to go through and have an equivalency or  
16 variance submitted on each and every pump that they  
17 request a variance in the testing frequency. In many  
18 cases that would require a submission, a fee to be  
19 paid and evaluation by a committee to accept what  
20 that variation would be.

21                  That doesn't mean that the same  
22 frequency change in this case as I am proposing from  
23 weekly to monthly would go through and be approved by

1 the same jurisdiction in a consistent manner nor by  
2 jurisdictions consistently throughout the country.

3                   It is the responsibility of this  
4 Technical Committee and this organization to come up  
5 with minimum performance requirements for inspection,  
6 testing and maintenance of this type of equipment,  
7 not as what would be accepted or realized by other  
8 agencies or other groups.

9                   MR. PAULEY: Thank you. Microphone  
10 No. 6, please.

11                   MR. ADAMS: My name is Tom Adams. I am  
12 the principal member of NFPA 25, and I am an employee  
13 of a group of insurance companies, a property,  
14 casualty and risk engineer.

15                   As the submitter noted, there were 227  
16 failures in those statics. I'm not a statistician  
17 and I am not going to comment further on that, but  
18 other than the fact that I would not want to be in  
19 one of those facilities for that fire pump test  
20 during a fire. There were 22 failures during the  
21 testing in many occupancies. The current language in  
22 the standard needs to be maintained rather than  
23 loosening the frequencies for a few well-maintained

1 systems.

2                   The standard only provides for  
3 alternate inspection, testing and maintenance  
4 procedures. The new edition now provides a specific  
5 method to document the failure rates with respect to  
6 testing frequencies which can be submitted to the AHJ  
7 for review and acceptance. As such I recommend that  
8 we oppose the motion on the floor. Thank you.

9                   MR. PAULEY: Thank you. Microphone  
10 No. 4, please.

11                   MR. DAVE WECHSLER: Dave Wechsler,  
12 the American Chemistry Council. I will be brief. We  
13 support this NITMAM. Thank you.

14                   MR. PAULEY: Back to Microphone No. 6,  
15 please.

16                   MR. NASBY: My name is Jim Nasby. I am  
17 speaking in opposition to the motion to change from  
18 weekly to monthly testing on fire pumps. I have been  
19 in responsible charge of design of fire pump  
20 controllers since 1972. I work for Master Control  
21 Systems. We build and service both electric and  
22 diesel fire pump controllers.

23                   If I am not mistaken, NFPA 25 used to

1 specify monthly testing and was changed to weekly.  
2 The number I just heard as far as the number of fire  
3 pump installations that were found non-conforming is  
4 frightening to me.

5                   In my very early career I was asked by  
6 a major insuring agency to investigate and do a  
7 postmortem on a failed fire pump that cost a cleaning  
8 woman her life. It happened to be a diesel  
9 installation and was not my equipment. These fire  
10 pump installations -- if anyone wants to bet their  
11 life on their car starting after it sits in their  
12 driveway for a solid month, be my guest. I don't  
13 want to be one of them.

14                   I will tell you that based on my  
15 personal experience in testing and repairing fire  
16 pump controllers that you can find a pump in pump  
17 room installations that vary from clean enough to eat  
18 off the floor to junk shops; and many, many fire pump  
19 rooms have the three-legged chair rule where you have  
20 to be storing at least one broken chair in the pump  
21 room.

22                   These things are responsible for  
23 supplying the water to the sprinklers that are over

1 your head protecting property and life safety. I am  
2 speaking in opposition to relaxing the testing  
3 requirements.

4                   No. 2, there were comments about  
5 initial installations and defects. That acceptance  
6 testing of fire pump installations is the purview of  
7 NFPA 20, not 25. Further -- excuse me. I'm going to  
8 end it here.

9                   Again, I am strongly opposed to going  
10 back to the infrequent testing on fire pump  
11 installations. It's vital, particularly on engine  
12 drives that after a month there is too much that can  
13 go wrong.

14                   MR. PAULEY: Thank you. Microphone  
15 No. 3, please.

16                   MR. FULLER: David Fuller from FM  
17 Global speaking in opposition to the motion. I am a  
18 member of both NFPA 25 and 20 on fire pumps.

19                   I would like to bring to the group's  
20 attention two factors that would lead me to believe  
21 that the motion is not proper in that both the pump  
22 manufacturers and the driver manufacturers had strong  
23 opinions on this issue of relaxing inspection

1 frequency. The concerns were lubrication concerns,  
2 corrosion problems associated with non-lubrication  
3 and so forth.

4                   The other point I would like to make is  
5 that the current favorable statics that were quoted  
6 earlier -- I think we would all agree it's been good  
7 but there is always room for improvement -- are based  
8 on our current weekly requirements. Therefore, any  
9 extension of those statics to a monthly frequency  
10 have not been substantiated and, therefore, have no  
11 validity in my opinion. Thank you.

12                   MR. PAULEY: I am going to come back  
13 to you at Microphone No. 5 and give some new speakers  
14 an opportunity to speak first. Microphone No. 1,  
15 please.

16                   MR. BAKER: Claude Baker, University of  
17 Chicago Hospital speaking in favor. It's my  
18 understanding that we not only have consistency of  
19 what we agree on but our experience. I may be  
20 unusual that I have the privilege of coming under  
21 close scrutiny of the Chicago Fire Department and my  
22 FM engineers when they come around, but in the 20  
23 years at the University of Chicago Hospital the eight

1 pumps have worked very well and we have needed them  
2 in fire once.

3                   We have one pump we recently changed  
4 out, and it was the consistency among my inquires to  
5 those bidding on the work what would cause this to  
6 fail and why can't we keep this pump going. They  
7 looked at me and said, "Well, Claude, you're old, but  
8 you tested your pump to death."

9                   I think I'm very happy with my pumps,  
10 and I would put my life at stake. I put the life of  
11 in excess of 250 patients on a regular basis and  
12 adding the exposure, experience of this, my  
13 institution, the weekly testing is excessive. Thank  
14 you.

15                   MR. PAULEY: Thank you. Microphone  
16 No. 6, please.

17                   MR. KLEIN: David Klein, Department  
18 of Veteran Affairs. I would like to speak in favor  
19 of the motion. Some speakers have expressed concern  
20 at the number of failures. I would just like to say  
21 the number needs to be taken in context with the  
22 total number of situations examined, and  
23 Mr. Van Overmeiren has shown that the success rate is

1 over 99 percent.

2 While some committee members may have a  
3 concern of taking it to a monthly schedule, I think  
4 Mr. Van Overmeiren has shown through actual field  
5 data that it would be acceptable to do so.

6 MR. PAULEY: Thank you. Microphone  
7 No. 5, please.

8 MR. VAN OVERMEIREN: Frank Van  
9 Overmeiren, FP&C Consultants to solely address the  
10 comment regarding the past change in testing  
11 frequency.

12 I have gone back through the public  
13 record and tried to identify over the last three  
14 decades, 30 years of code cycles regarding this issue  
15 the change that occurred that changed the original  
16 requirement from monthly down to weekly. I have not  
17 been able to find any technical substantiation for  
18 the change. It appeared to just occur as part of the  
19 compilation of creating the NFPA 25 document.

20 There was no substantiation for that  
21 change that I can find in the public record. What I  
22 have been able to identify in talking to different  
23 committee members of the different committees that

1 were responsible for the requirements, prior to the  
2 change and right after the change that the change  
3 essentially occurred as a result of changes to NFPA  
4 1 10 regarding diesel-driven generators and that that  
5 standard changed its requirement from monthly down to  
6 weekly.

7                   As a following result this committee  
8 went and changed its requirements saying that fire  
9 pumps were essentially the same kind of driver on the  
10 diesel side as an emergency generator. So they  
11 followed suit and changed the requirement. Then  
12 parallel to that they said, "Well, a fire pump is a  
13 fire pump. So electricians we should test with the same  
14 frequency as diesel."

15                   As a result the committee went and  
16 changed the whole frequency for both types of fire  
17 pumps from a weekly -- I'm sorry -- from a monthly  
18 down to weekly. Two cycles later the 1 10 standard  
19 realized they essentially were finding that they were  
20 testing the generators too often and have since gone  
21 back and changed the requirement to test generators  
22 back to a monthly cycle.

23                   So we have a change that I cannot find

1 technical substantiation for. Now I am providing  
2 technical substantiation to change it back to what it  
3 originally was, and there is no record that I can  
4 identify for the original change. Thank you.

5 MR. PAULEY: Thank you. Microphone  
6 No. 3, please.

7 MR. WEBB: I'm Bill Webb. I call the  
8 question.

9 MR. PAULEY: A motion has been made to  
10 end debate, and I did hear a second on that motion.  
11 All those in favor of the motion to end debate,  
12 please raise your hand. All those opposed. The  
13 motions passes.

14 We will proceed directly to the motion  
15 that is on the floor which is to accept comment  
16 25-31. All those in favor of accepting this comment,  
17 please raise your hand. Thank you. All those  
18 opposed. The motion fails.

19 We will move on to NFPA 25 to certified  
20 amending motion No. 5 which I believe is microphone  
21 No. 5.

22 MR. DUBAIN: Jeffrey Dubain, U.S.  
23 General Service Administration.

1                   MR. PAULEY:    Lean into the microphone  
2 a little more if you would.  Thank you.

3                   MR. DUBAIN:   Jeffrey Dubain, U.S.  
4 General Service Administration speaking for Josh  
5 Elvove.

6                   MR. PAULEY:    Go ahead and state your  
7 motion please.

8                   MR. DUBAIN:    The motion is to accept  
9 comment 25-61.

10                  MR. PAULEY:    The motion is to accept  
11 comment 25-61.  Is there a second?  I see a second.  
12 Please proceed.

13                  MR. DUBAIN:    This comment is to include  
14 new text to section 12.7.1 that talked about  
15 identification of fire department connections, to  
16 identify them as what portion of the system they  
17 control or serve.

18                  Currently there is a section that  
19 specifies that each control valve should be  
20 identified and have a sign indicating the system or  
21 portion of the system that it controls.  We feel in  
22 12.7.1, subsection 5, it only references that  
23 identification signs are in place with no link back

1 to NFPA 13 or 14 regarding what the sign has to  
2 indicate.

3 We feel it's -- we would like the fire  
4 department connection to be treated similarly to  
5 control valves and have signs showing that they  
6 indicate the system, what portions they are on.  
7 Thank you.

8 MR. PAULEY: Thank you. Mr. Lender.

9 MR. LENDER: Thank you. The committee  
10 feels that this is adequately covered. Fire  
11 department connection signs are required by NFPA 13,  
12 section 817.2.4.5, and where a system only supplies a  
13 portion of the building, 13 requires that that be  
14 identified. NFPA 25 also requires that it's  
15 inspected. That is in Section 12.7.1 of NFPA 25. We  
16 think this is covered and 13 has the requirements and  
17 we inspect the signs they require.

18 MR. PAULEY: Thank you. Further  
19 discussion? Microphone No. 5, please.

20 MR. DUBAIN: Jeffrey Dubain, U.S.  
21 General Service Administration. In looking at NFPA  
22 25 the only thing, the only text that tells the  
23 enforcer what needs to go back if the sign is missing

1 is that the component must be repaired or replaced as  
2 necessary in accordance with the manufacturer's  
3 instructions. There is no reference back to NFPA 13  
4 or NFPA 14 with regard to the fire department  
5 connections whereas NFPA 25 does have text for  
6 control valves.

7 MR. PAULEY: Thank you. Microphone  
8 No. 6, please.

9 MR. KLEIN: David Klein, Department of  
10 Veterans Affairs speaking in favor of the motion. I  
11 think it's a valid point that was raised. There are  
12 numerous buildings that have multiple fire department  
13 connections, and they should be adequately labeled. I  
14 speak in favor of the motion. Thank you.

15 MR. PAULEY: Any further discussion?  
16 Seeing no one at the microphones, we will proceed to  
17 the vote. The motion on the floor is to accept  
18 comment 25-61. All those in favor of this motion,  
19 please raise your hand. Thank you. All those  
20 opposed.

21 I am going to do a hand count one more  
22 time and try to get a better look. All those in  
23 favor of the motion, please raise your hand. Thank

1 you. All those opposed, please raise your hand. The  
2 motion fails.

3 The next item is certified amending  
4 motion No. 6, and it looks like I am going to  
5 microphone No. 5.

6 MR. DUBAIN: Jeffrey Dubain, U.S.  
7 General Services Administration as designated  
8 representative for Josh Elvove here to speak in  
9 support of comment 25-62.

10 MR. PAULEY: The motion on the floor is  
11 to accept 25-64. Is there a second? I see a second.  
12 Please proceed.

13 MR. DUBAIN: This change will remove  
14 the automatic five-year investigation and also the  
15 methodology on what to do when doing this  
16 investigation of removing one branch line and  
17 removing one sprinkler. We feel that systems that  
18 have a low risk of obstruction such as plastic pipe  
19 systems, it's just not justifiable to do this  
20 automatic five-year investigation. That could be  
21 onerous.

22 In addition the methodology for  
23 removing one branch line, removing one sprinkler is

1 just very -- it's just too general. If the intent of  
2 the investigation is to determine if the system has  
3 one of the obstructions listed in 13.2.2, 2.3,  
4 removing one sprinkler and finding an obstruction is  
5 like winning the lottery.

6 So this change will instruct the owner  
7 or designated representative of the owner to perform  
8 an investigation when one of these obstructions is  
9 found instead of on an arbitrary five-year interval.  
10 Thank you.

11 MR. PAULEY: Mr. Lender.

12 MR. LENDER: The requirement in  
13 question for the five-year inspection, internal  
14 inspection of sprinkler systems was added last cycle.  
15 It was added on the floor of the committee at the  
16 request of the membership who felt strongly that we  
17 needed to look at internal piping to determine  
18 whether or not we had excessive corrosion, potential  
19 obstruction. It was mainly based on concerns with  
20 MIC or microbiologically-influenced corrosion.

21 The committee this cycle has cleaned  
22 the language up. There was some concern with the  
23 initial language versus the inspection versus a

1 full-blown obstruction investigation. The language  
2 has been changed to clarify that this five-year  
3 internal is an inspection and not a full-blown  
4 instruction investigation.

5                   The committee feels that is still a  
6 good idea and recommends that we keep it in place  
7 with the changes that we had made to clarify  
8 full-blown obstruction investigations and inspection.

9                   MR. PAULEY: Thank you. Microphone  
10 No. 1, please.

11                   MR. GARDNER: Tom Gardner of Schirmer  
12 Engineering. Again, I'm the chair of the healthcare  
13 section. Our section through the codes and standards  
14 review process has voted to support the motion on the  
15 floor. That is because we feel that there is no  
16 technical substantiation for an arbitrary five-year  
17 investigation and proposal 25-192 provides a list of  
18 triggers or symptoms that upon discovery of those  
19 triggers or symptoms would require further internal  
20 system obstruction investigation.

21                   The healthcare section stands in  
22 support of the motion on the floor.

23                   MR. PAULEY: Thank you. Microphone No.

1 2 please.

2 MR. VICTOR: Terry Victor with Simplex  
3 Granell. I am speaking in opposition to the motion.

4 The internal pipe inspection is a  
5 requirement that has a lot of need for our industry.  
6 The investigation that we conduct as Simplex Granell  
7 on these systems has determined that there is a need  
8 for this. Part of the problem with systems is the  
9 accumulation of sediment, rust and some scale. These  
10 inspections identify those problems early on before  
11 they become a big problem within the systems.

12 The inspection is not an onerous  
13 inspection. Every five years the systems are  
14 required to be drained down, the check valves  
15 inspected, internally inspected, the alarm valves  
16 internally inspected, the strainers, orifices, so  
17 forth, be internally inspected.

18 We specifically put this inspection on  
19 the same cycle as those activities. So all these  
20 inspections are occurring every five years. When the  
21 system is drained down, it's not a time-consuming  
22 activity to go to a flushing connection, open up the  
23 flushing connection, check the pipe, take out a

1 sprinkler and check that sprinkler location. It  
2 takes very little time.

3                   However, if a problem is uncovered  
4 during this inspection, remediation is very simple at  
5 this point in time. If you wait until an obstruction  
6 takes place somewhere down the road, you could have  
7 some pipe replacement that is required, so forth. If  
8 it's done every five years and you pick it up early,  
9 sometimes flushing can take care of the problem.  
10 Sometimes treatment of the water can take of the  
11 problem, and it's less cost in the long run.

12                   So I am in opposition to the motion on  
13 the floor.

14                   MR. PAULEY: Thank you. We are still  
15 at microphone No. 2.

16                   MR. CAMPBELL: I am Bruce Campbell  
17 with Hughes Associates, and I speak in opposition to  
18 the motion.

19                   I was a presenter of the paper,  
20 "Obstructed Sprinkler Piping, a Ticking Time Bomb," a  
21 couple of years ago at the NFPA meeting where I felt  
22 very strongly about the lack of attention to interior  
23 sprinkler inspections that are a result of a loss

1 that I investigated where one sprinkler failed  
2 because the piping was obstructed and resulted in a  
3 fairly large fire because of that.

4 In preparation of the paper many  
5 colleagues from my company gave me good examples of  
6 where they found obstructive piping; and some of  
7 those did result in loss, one in New England to a  
8 total destruction of a factory.

9 There are ways of predicting  
10 obstructions that are provided in NFPA 25 that would  
11 not necessarily lead to doing a five-year  
12 investigation. However, those are more predictive  
13 and provide some examples of when to look; but you  
14 still need to look at the pipe at least every five  
15 years. I don't believe it's burdensome to look at it  
16 because, again, you're doing it during other exams at  
17 the five-year interval.

18 Concerning the plastic pipe, the  
19 obstructive material does not necessarily always come  
20 from the sprinkler pipe. It can come from the water  
21 mains supplying the sprinkler system. So even if you  
22 do have plastic piping, you should still look into  
23 the rest of the system because you get debris coming

1 in from city water mains.

2                   Again, I speak in opposition. Thank  
3 you.

4                   MR. PAULEY: Thank you. Still at  
5 microphone No. 2 please.

6                   MR. LEAVITT: Good morning. My name  
7 is Russ Leavitt. I am with TVA Fire and Life Safety.  
8 I am a member of the Technical Committee, and I  
9 represent a user, the Home Depot.

10                   It would be unusual I suppose to have a  
11 user up here asking for additional inspection or  
12 against inspections, but my company involvement with  
13 these types of systems have found in the last five  
14 years doing some research that we have seen seven  
15 complete reinstalls at a cost of almost \$3 million.

16                   This is a very minimal inspection,  
17 minimal impact. The committee purposely aligned  
18 this, as was stated, with other inspection activity  
19 to keep the cost minimal. When these things are  
20 discovered early on, they are easily remedied.

21                   So I am speaking against this motion.

22                   MR. PAULEY: Thank you. Is there  
23 further discussion? Microphone No. 2.

1                   MR. FLEMING:   Russ Fleming, National  
2 Fire Sprinkler Association.  I am also speaking  
3 against the motion.

4                   I just want to make one point.  In the  
5 original motion on the floor the statement was made  
6 to remove a branch line and a sprinkler.  The  
7 inspection only involves removing a random sprinkler  
8 and opening an end cap on a cross main.

9                   What I wanted to point out to the group  
10 is that NFPA 13 has been requiring easily removable  
11 end caps since the late 1970s on systems.  That is  
12 what that end cap is for.  This is the only time we  
13 actually look into the sprinkler piping at all, once  
14 every five years; and usually it's in conjunction  
15 with some other work.

16                   I would urge you to vote against this  
17 motion.

18                   MR. PAULEY:   Is there further  
19 discussion?  Seeing no one at the microphones, we  
20 will proceed to the vote.  The motion on the floor is  
21 to accept comment 25-64.  All those in favor of the  
22 motion, please raise your hand.  All those opposed.  
23 The motion fails.

1                   That concludes motions on NFPA 25.

2 Thank you, Mr. Lender.

3                   MR. LENDER: Thank you, Mr. Chair.

4                   NFPA 780       MR. PAULEY: The next report this  
5 morning is that of the Committee on Lightning  
6 Protection. Here is John Tobias of the U.S.  
7 Department of the Army, Fort Monmouth, New Jersey.

8                   This can be found in the blue 2007  
9 annual ROP and ROC. The list of certified amending  
10 motions is contained in the Motions Committee report.  
11 We will proceed with the motions in that order.  
12 Doctor Tobias.

13                   DOCTOR TOBIAS: Thank you. Mr. Chair,  
14 ladies and gentlemen, the report of the Technical  
15 Committee on Lightning Protection can be found on  
16 Pages 780-1 through 780-39 of the report on proposals  
17 and on Pages 780-1 through 780-19 of the report on  
18 comments for the 2007 annual revision cycle.

19                   The committee proposed a partial  
20 revision to NFPA 780, standard for the installation  
21 of lightning protection systems. The committee  
22 ballot results on each proposal and comment can be  
23 found in the reports.

1                   I would like to thank the committee for  
2 the work that its done this cycle, and we are looking  
3 forward to a productive year or a productive cycle  
4 next time. Without any further comment, I will  
5 return the podium to the presiding officer to proceed  
6 with the certified amending motions on NFPA 780.

7                   MR. PAULEY: Thank you. We have one  
8 certified amending motion on 780. Microphone No. 6.

9                   THE FLOOR: I think I will defer to  
10 No. 5 for the author, I believe, of the NITMAM.

11                  MR. PAULEY: Microphone No. 5, please.

12                  MR. HEARY: William Heary, Heary  
13 Brothers Lightning Protection. I move to return to  
14 committee the proposed annex B of NFPA 780.

15                  MR. PAULEY: The motion as we have it  
16 stated would be to return a portion of the report in  
17 a form of identifiable parts of the proposal and  
18 related comments 780-38 and that identified part is  
19 the entire annex B, is that correct?

20                  MR. HEARY: Yes.

21                  MR. PAULEY: That is the motion. Is  
22 there a second? I see a second, please proceed.

23                  MR. HEARY: Annex B to NFPA 780

1 purports to summarize the technical and scientific  
2 basis for the placement of air terminals recommended  
3 under NFPA 780. Annex B must be returned to  
4 committee because its inclusion in NFPA 780 is  
5 misleading to the public and falsely claims that NFPA  
6 780 is based on scientifically proven theories on how  
7 lightning reacts with air terminals.

8                   Performance of NFPA (inaudible) have  
9 now acknowledged what we at Heary Brothers have been  
10 saying for years, that NFPA 780 lacks a technical  
11 justification based on the physics of lightning and  
12 the only justification for the standard is that  
13 systems which comply with NFPA 780 seem to work in  
14 practice.

15                   For more than a decade there have been  
16 questions raised regarding the scientific and  
17 technical justification for NFPA 780. In 1995 the  
18 National Institute of Science and Technology  
19 concluded that more research was needed to develop  
20 statistically meaningful models. In 1999 a panel  
21 chaired by Doctor John Brian concluded that there was  
22 insufficient technical justification for NFPA 780 and  
23 recommended the standard be downgraded to a

1 recommended practice.

2                   In 2000 the NFPA requested independent  
3 review to provide substantiation for the installation  
4 standard for NFPA 780. The primary -- in support of  
5 the standard was a report prepared by committee of  
6 American Geophysical Union chaired by Doctor Rakov of  
7 the University of Florida and authored by Doctor  
8 Rison of New Mexico Institute for Technology and  
9 endorsed by Doctor Ulman.

10                   The AGU report summarized various  
11 models and theories which according to proponents of  
12 NFPA provided that technical justification for  
13 returning NFPA 780 as a standard. Based on ATU the  
14 NFPA concluded that there was sufficient technical  
15 justification to continue NFPA 780 as a standard.

16                   Despite the central role played by  
17 Doctor Rakov in the preparation of the AGU report,  
18 two years later Doctor Rakov and Doctor Martin Ulman  
19 acknowledged in an article which appeared in the  
20 December 2002 edition of the American Meteorological  
21 Society that the theoretical justification of the  
22 conventional, that is, parity approach is fairly  
23 crude in part due to our incomplete understanding of

1 lightning attachment to ground-based objects.

2                   Because of this lack of understanding  
3 of how lightning interacts with ground-based objects,  
4 the conclusion of these scientists was that the prime  
5 justification for NFPA 780 was that the configuration  
6 of the air terminals have a history of success in  
7 preventing or minimizing damage to structures in this  
8 primary justification for their use.

9                   Doctor Rakov and Doctor Ulman  
10 reiterated this conclusion in a recent book stating  
11 that the process of lightning attachment to the  
12 ground or to a grounded object is one of the least  
13 understood and poorly documented processes of the  
14 cloud-to-ground lightning discharge.

15                   Doctor Rison who is a member of the  
16 NFPA 780 Technical Committee and contributor to the  
17 AGU report stated in voting to reject annex B that  
18 the models and theories contained in annex B is an  
19 oversimplified explanation of a process not well  
20 understood.

21                   Other members of the committee who  
22 voted against inclusion of annex B voted the models  
23 discussed have little to do with design --

1                   MR. PAULEY:  You have about 20 seconds  
2 remaining.

3                   MR. HEARY:  -- installation practices  
4 of NFPA 780.

5                   There can now be no question that the  
6 scientific consensus is that there is a lack of  
7 understanding as to how lightning protection systems  
8 would comply with NFPA 780 work.  Instead the only  
9 basis for NFPA 780 is a historical performance of  
10 these systems in the field.

11                  MR. PAULEY:  Your time has concluded.  
12 Thank you.  Doctor Tobias.

13                  DOCTOR TOBIAS:  Thank you,  
14 Mr. Chairman.  My rebuttal point to that is to point  
15 out that the person making the NITMAM in the  
16 organization represented has a seat and an alternate  
17 on the committee, neither of whom returned ballots on  
18 the balloting for the standard, and this motion for  
19 the inclusion of the extra material into annex B  
20 passed with over two-thirds at committee vote.

21                  To rebut this technically, the basis  
22 for which the presenter cites, and that is primarily  
23 Doctor Husan's contention that this is an over-

1 simplification, I might add is that because the  
2 explanatory material provided in the annex B is  
3 exactly that. It provides the rationale using the  
4 best available knowledge from the research community  
5 for lightning protection as to how the model that has  
6 been in our standard for 27 years now and has been  
7 used in a European environment much longer than that  
8 has been in the standard.

9                   We commissioned this project in the  
10 committee in response to inquiries from the field  
11 that wanted more explanatory material in the annex  
12 and realized that what the item in contention is in  
13 fact annex material, explanatory material, and not a  
14 code requirement.

15                   We feel -- the committee feels again by  
16 better than two-thirds of the vote, and I might add  
17 also that the other person commenting on this, Doctor  
18 Rakov, did not comment against the technical material  
19 of annex B. He just said it could be more concise in  
20 his voting, in his voting ballot.

21                   So all that said, I think that the work  
22 of the committee is sound. The work of the committee  
23 passed by better than a two-thirds vote in balloting,

1 and it provides a useful edition to the next edition  
2 of NFPA 780.

3 MR. PAULEY: Thank you. Microphone  
4 No. 5, please.

5 MR. SANDERS: I'm Melvin Sanders. I  
6 am an alternate on NFPA 780. I represent the  
7 Institute of Electrical and Electronic Engineers, and  
8 I speak in favor of the NITMAM.

9 There are some issues that I felt were  
10 of concern, and they are found in the ROC at Page 18,  
11 780-39. Basically part of it is a discussion of the  
12 models again has little to do with design and  
13 installation practices. The text proposed is  
14 speculative and does not draw clear-cut conclusions  
15 because of some lack of consensus within the  
16 scientific community.

17 Again, the lightning attachment process  
18 is one of the least understood aspects and, of  
19 course, is undergoing continual study. There is some  
20 disagreement on whether air terminals attract more  
21 lightning or merely gather what is already there.  
22 Again, that is lack of agreement on the current,  
23 whether the air moves one way or the other.

1                   With these conditions I felt there was  
2 a need for more discussion time. This will allow the  
3 materials to revert to the present text, and we can  
4 have a little more full discussion on another  
5 go-around. I believe it merits some inclusion, some  
6 consideration; but I think this is premature.

7                   I ask the chair's indulgence one more  
8 time for permission to ask the members to see me in  
9 the far corner. I would appreciate it.

10                   MR. PAULEY: Thank you. Microphone  
11 No. 2, please.

12                   MR. MORGAN: Mark Morgan from East  
13 Coast lighting Equipment. I'm opposed to the motion.  
14 I am a member of committee.

15                   I am one of the negative voters that  
16 the motion submitter referenced. My negative vote  
17 had nothing to do -- it was a little bit  
18 mischaracterized by the submitter. It had nothing to  
19 do with the technical validity of the model we were  
20 discussing. It was simply editorial in nature, and I  
21 support the consensus the committee reached.

22                   I think it was a good consensus and any  
23 editorial changes I believe that may be necessary

1 going down the road can definitely be accomplished in  
2 the next revision cycle. I am opposed to the motion  
3 on the floor.

4 MR. PAULEY: Thank you. Microphone  
5 No. 6, please.

6 MR. GUTHRIE: My name is Mitchell  
7 Guthrie and I'm an independent consulting engineer  
8 and I'm also a member of the committee as well as  
9 technical advisor to the IAC TCA 1 committee on  
10 lightning protection.

11 I speak in opposition to the NITMAM. I  
12 think the changes we made to the annex were good and  
13 they improved the annex. It's important to realize  
14 that this annex is discussing the fundamentals of  
15 lightning protection and is written to an audience --  
16 it's not intended to be a textbook. If we included  
17 too many of the scientific principles, then the point  
18 we were trying to make would be lost.

19 These models we are using in this  
20 standard are models that are accepted by the  
21 international community and they are used by  
22 scientists all over the world.

23 MR. PAULEY: Thank you. Microphone

1 No. 3, please.

2 MR. BLACK: Mr. Chair. Art Black,  
3 Carmel Fire Protection, Carmel, California. I call  
4 the question.

5 THE FLOOR: Second.

6 MR. PAULEY: A motion has been made to  
7 move the previous question to end debate. I did hear  
8 a second on that. All those in favor of the motion  
9 to end debate, please raise your hand. Those  
10 opposed. The motion passes.

11 We will proceed directly to the motion  
12 that is on the floor. That motion is to return a  
13 portion of the report in the form of identifiable  
14 parts of a proposal and related comments. That  
15 portion identifies the entire annex B. All those in  
16 favor of that motion, please raise your hand. Thank  
17 you. Those opposed. The motion fails. Thank you,  
18 Doctor Tobias.

19 DOCTOR TOBIAS: Thank you, and I thank  
20 the membership and the committee.

21 NFPA 58 MR. PAULEY: The next report this  
22 morning is that of the Committee on Liquefied  
23 Petroleum Gases. Here to present the committee

1 report is Chair Frank Mortimer of the EMC Insurance  
2 Company, Des Moines, Iowa. This report can be found  
3 in the yellow 2006 fall ROP and ROC. The list of  
4 certified amending motions is contained in the motion  
5 committee report, and we will proceed in that order.  
6 Mr. Mortimer.

7 MR. MORTIMER: Mr. Chair, ladies and  
8 gentlemen, the report of the Technical Committee on  
9 Liquefied Petroleum Gases can be found on Pages 58-1  
10 through 58-58 of the report on proposals, ROP, and on  
11 Pages 58-1 through 58-52 of the report on comments  
12 for the 2006 fall revision cycle.

13 The committee proposed a partial  
14 revision to NFPA 58, liquefied petroleum gas code.  
15 The committee ballot results on each proposal and  
16 comment can be found in the reports.

17 I want to thank the committee for their  
18 exemplary efforts, and I return the podium to the  
19 presiding officer to proceed with certified amending  
20 motions on NFPA 58.

21 MR. PAULEY: Thank you. Now, there are  
22 a couple of items with this report. We have an  
23 entire series of motions that you will see in your

1 handout. It is the understanding of the presiding  
2 officer that there were some meetings of the  
3 committee as late as yesterday, and there was some  
4 agreement to group some of these motions to make it  
5 more efficient for the body to be able to operate on  
6 this because a series of these motions are indeed  
7 related.

8                   What I am going to describe to you is  
9 how these motions will be grouped. So if you will  
10 follow along, I believe once we get the groupings  
11 done that we will be able to do essentially fewer  
12 motions with debate on those motions as it goes and  
13 hopefully be able to save the body some time in doing  
14 that.

15                   Let me try to go through with you how  
16 we will deal with the first group of motions that we  
17 have. The first item that I want to point out to you  
18 is that motions 1, certified amending motion 1, 3 and  
19 14 will not be pursued. Those are all motions that  
20 were contained in ones already grouped. So they are  
21 already covered by other motions anyway. 1, 3 and 14  
22 will not be pursued.

23                   It is my understanding that the first

1 group of motions that are going to be put together to  
2 ask the body to look at are motions 2, 4, 13 and 16.  
3 I will repeat that, motions 2, 4, 13 and 16.

4                   What will happen when the motion is  
5 made is that we will debate all of these as a single  
6 group, and we will vote on all of these as a single  
7 group. I am going to give the body just a few  
8 seconds to catch up to make sure that we are all  
9 together. Again, motions 2, 4, 13 and 16. They are  
10 on the outer screens as well. I am going to go to  
11 microphone No. 3.

12                   MR. WILSON: Thomas Wilson. I  
13 represent the International Fire Marshals  
14 Association, and I am a principal on the NFPA 58  
15 committee. I make a motion to accept as a group a  
16 couple of motions.

17                   MR. PAULEY: Motions 2, 4 and 13 and  
18 16, correct?

19                   MR. WILSON: Correct.

20                   MR. PAULEY: The motion on the floor  
21 -- for the body, he is the representative of these  
22 motions so he has the unique ability to have all of  
23 these in one group under his name. Motions 2, 4, 13

1 and 16 have been moved. Is there a second?

2 THE FLOOR: Second.

3 MR. PAULEY: There is a second.

4 Please proceed.

5 MR. WILSON: This comment has to do  
6 with cabinet heaters and composite cylinders. I will  
7 read it. This has to do with composite cylinders and  
8 cabinet heaters used in residences. The fire  
9 services has serious concerns about the use of these  
10 cabinet heaters in the residence. We are going from  
11 a 1 pound cylinder to a 16 pound cylinder inside a  
12 house. There are some other issues where we have  
13 concerns when they did some of the testing.

14 The composite cylinders -- during the  
15 testing they will burn, and after extinguishment they  
16 still have gas coming out of the cylinders. Some of  
17 the testing was not shown that they used nitrogen in  
18 the cylinders when they did the testing and not  
19 propane so we don't know what would happen after the  
20 hose stream test. They did the hose stream test.

21 The use of cabinet heaters is  
22 prohibited in areas such as a garage and bedroom. We  
23 are worried about these cabinet heaters being placed

1 in garages or bedrooms or other places that are  
2 prohibited. An increase in fires from portable  
3 heaters such as these, we are worried about that and  
4 an increase in carbon monoxide poisoning. There are  
5 some safeties on it, but we are worried about closed  
6 houses and that type of situation when they are put  
7 inside bedrooms.

8 MR. PAULEY: Mr. Mortimer.

9 MR. MORTIMER: Essentially the  
10 committee had some proponents for these heaters to be  
11 in the homes. The proponents have backed away from  
12 objection. I think we can hear from microphone No. 4  
13 for some of that.

14 MR. PAULEY: Microphone No. 4, please.

15 MR. SWIECICKI: My name is Bruce  
16 Swiecicki with the National Propane Gas Association.  
17 I am also a member of the NFPA Technical Committee on  
18 Liquefied Petroleum Gases. The NPGA is the original  
19 proponent of most of the proposals and comments that  
20 you will see that pertain to the use of cabinet  
21 heaters and composite cylinders indoors.

22 The National Propane Gas Association  
23 supports the motion to remove the provisions from

1 NFPA 58 that would permit the use of cabinet heaters  
2 indoors. At this point in time we recognize that to  
3 remain consistent with our goal of advancing the safe  
4 use of propane, the propane industry needs more time  
5 to address both the need of the general public and  
6 the concerns of fire service as it relates to the use  
7 of propane indoors.

8                   Along with our partners at the Propane  
9 Education and Research Council, the NPGA remains  
10 committed to developing new technologies such as  
11 cabinet heaters and composite cylinders that will  
12 promote the safe use of propane. We are pleased that  
13 several fire service organizations have provided us  
14 with an opportunity to share with them the findings  
15 from the testing and research that has been done as  
16 well as the unique safety features that cabinet  
17 heaters provide.

18                   In our quest to establish safety  
19 performance criteria and product listing standards  
20 for the safe use of propane indoors, we are grateful  
21 for the significant and important feedback that those  
22 fire service organizations have provided to us. We  
23 will continue our efforts to reach out to the fire

1 service industry and any other interested parties in  
2 order to reach our goal.

3                   The propane industry also remains  
4 committed to working with the NFPA Technical  
5 Committee on Liquefied Petroleum Gas to develop  
6 appropriate code language that will permit the use of  
7 cabinet heaters indoors. We believe that cabinet  
8 heaters can provide a safe alternative to the  
9 frequent misuse of other appliances by the general  
10 public which so often result in death due to carbon  
11 monoxide poisoning or fire.

12                   We urge all interested parties to stay  
13 abreast of our work by visiting the web site  
14 [WWW.cabinetheatersafety.com](http://WWW.cabinetheatersafety.com). We always appreciate  
15 any comments or suggestions that you can provide to  
16 us. Thank you.

17                   MR. PAULEY: Thank you. Microphone  
18 No. 5, please.

19                   MR. OWEN: Mr. Chairman, ladies and  
20 gentlemen, my name is Kirk Owen. I'm the chairman of  
21 the NFPA fire service section.

22                   On behalf of the fire service section  
23 executive board I am speaking in support of the

1 motion on the floor. We believe in allowing the use  
2 of portable LP gas fuel heaters along with associated  
3 storage and use of LP gas cylinders inside  
4 residential occupancies creates a tremendous hazard  
5 for both the public and for emergency response  
6 personnel. This would seem to be counter to all the  
7 great work this organization has done to actually  
8 reduce hazards to the public. Therefore, I ask this  
9 body to support the motion on the floor.

10 MR. PAULEY: Thank you. Microphone  
11 No. 3, please.

12 MR. HOPPER: Howard Hopper. On this  
13 item I am representing the International Association  
14 of Fire Chiefs, Fire and Life Safety Section. This  
15 section would like to go on record as supporting the  
16 motion on the floor to not allow the use of composite  
17 cylinders and cabinet heaters indoors. Thank you.

18 MR. PAULEY: Thank you. Microphone  
19 No. 1, please.

20 MR. PETERS: Jim Peters, a member of  
21 the healthcare section. The healthcare section  
22 through the codes and standards review committee  
23 and to the executive board has voted to support this

1 motion.

2 MR. PAULEY: Microphone No. 3, please.

3 MR. NISJA: My name is Jon Nisja, and  
4 I'm with the International Fire Marshals Association.  
5 Just for the record I want to state as a maker of  
6 several of the NITMAMs that I support the actions  
7 taking place right now to group these, and I would  
8 urge your support for this motion.

9 There are a couple of other issues that  
10 the fire service does have concerns about. Unvented  
11 heaters are not allowed by NFPA 58, another standard  
12 put together, and this would introduce an unvented  
13 heater concept into residential occupancies.

14 We also found that the fires were very  
15 high in temperature, higher temperature than what  
16 would normally be expected which could confuse some  
17 investigative actions also.

18 Another concern that we have is we  
19 really don't think that there was sufficient testing  
20 and listing done on these products yet. So we are  
21 very supportive and appreciate the National Propane  
22 Gas Association's interest to essentially back off on  
23 this for a cycle as they can do some further

1 investigation.

2 Thank you, and I would urge support of  
3 this motion.

4 MR. PAULEY: Thank you. Any further  
5 discussion? Seeing no one at the microphones, we will  
6 proceed to the vote. The vote is a grouped set of  
7 motions, certified amending motions 2, 4, 13 and 16.  
8 The motion is to accept that group of certified  
9 amending motions. All those in favor of that motion,  
10 please raise your hand. Thank you. All those  
11 opposed. The motion passes.

12 We will now move to certified amending  
13 motion No. 5. That will not be pursued. We will  
14 move on now -- please bear with me again because we  
15 are going to do another group. We have been informed  
16 that the makers of these motions have agreed to group  
17 motions 6, 8, 9, and 10. Motion 7 will not be  
18 pursued. Motion 7 will not be pursued. Group motion  
19 6, 8, 9, and 10. Microphone No. 5, please.

20 MR. MAHRE: Good morning. My name is  
21 Bill Mahre. I am presently employed by Propane  
22 Technical Services out of Maplewood, Minnesota. I  
23 have about 54 years of experience in the propane

1 industry and presently I am a principal member of the  
2 NFPA 58 Technical Committee and also of the National  
3 Propane Gas Association Technology and Standards  
4 Committee.

5 MR. PAULEY: Before you proceed, I need  
6 to get officially this motion on the floor. You  
7 would be one of the people that can do that. If you  
8 could make the motion to move that group that was  
9 described, and we will get a second and then be able  
10 to proceed.

11 MR. MAHRE: I was just ready to do  
12 that. Thank you. Actually can I have both of them  
13 at the same time? They actually are the same  
14 substantiation and follow the same format.

15 The motion that I would propose would  
16 be to delete the section of 742.3 and 743.3, and I  
17 move the motion to accept 743.3 and to reject 742.3.  
18 They are the same document.

19 MR. PAULEY: Let me try to clarify. If  
20 understand correctly what you're asking to do with  
21 the particular section involved, the motion in order  
22 to do that since we need to do it based on the  
23 proposals and comments and we need to do it based on

1 the certified amending motions that we have would be  
2 to move this group of motions 6, 8, 9 and 10 which  
3 would I believe accomplish the objective that you're  
4 after. I just have to stick within the confines of  
5 what we have in front of us on our certified amending  
6 motion list.

7 MR. MAHRE: That is correct.

8 MR. PAULEY: The motion from you would  
9 be a motion to move as a group motion 6, 8, 9 and 10,  
10 to accept those certified amending motions. Is there  
11 a second? I see a second. Now please proceed.

12 MR. MAHRE: The proposed addition to  
13 the sections really has changed from the time the  
14 committee actually started with it because of the  
15 just previous announcement of the deletion of the  
16 proposal for the cabinet heaters which included a  
17 composite cylinder which would be a part of that  
18 heater.

19 I will read the section and give you a  
20 little bit of a flavor as to what we are looking at.  
21 It says, "The maximum filling limit and the weight of  
22 propane in a composite cylinder in a non-engine fuel  
23 application shall be 39 1/2 of the water capacity."

1 What that really means in laymen's terms is that  
2 presently propane cylinders are filled to the 80th  
3 percentile and this would drop it down to the 75th  
4 percentile in composite cylinders.

5 This changes the composite cylinder  
6 size which is now normally known as a 20 pound  
7 cylinder that you use in your barbecue grill down to  
8 about an 18 1/2 pound cylinder. It does not have a  
9 whole lot of rationale behind it because for over 60  
10 or 70 years the propane industry has filled 20 pound  
11 cylinders and other propane cylinders by using the 80  
12 percent level.

13 I have not known of one incident in  
14 those many years that a properly filled cylinder has  
15 ever expanded the liquid inside there to cause the  
16 relief valve to open up, and just because you have a  
17 composite cylinder shouldn't change that.

18 So I am asking you to look at these two  
19 proposals, and I request the support of my motion to  
20 delete these from the new NFPA 58. Thank you.

21 MR. PAULEY: Thank you. Mr. Mortimer.

22 MR. MORTIMER: Again, the Technical  
23 Committee met yesterday and is in agreement with the

1 motion to accept. Again, I think we can move to  
2 microphone No. 4.

3 MR. PAULEY: Microphone No. 4, please.

4 MR. SWIECICKI: Thank you. Bruce  
5 Swiecicki with the National Propane Gas Association,  
6 also a member of the NFPA Technical Committee on  
7 Liquefied Petroleum Gases. The NPGA which is the  
8 proponent of these changes and comments is in support  
9 of the motion for the same reasons as described for  
10 motion No. 2.

11 MR. PAULEY: Thank you. Microphone  
12 No. 5, please.

13 MR. FREDENBURG: I'm Richard  
14 Fredenburg with the North Carolina Department of  
15 Agriculture and Consumer Services, the LP gas  
16 engineer. Speaking with both my hats of LP gas  
17 safety and weights and measures concerns, I support  
18 this motion.

19 MR. PAULEY: Further discussion?  
20 Seeing no one at the microphones, we will proceed to  
21 the vote on the floor. The motion is to move  
22 certified amending motion 6, 8, 9 and 10 as a group.  
23 All in favor of that group of motions, please raise

1 your hand. Those opposed. The motion passes.

2 Now, as we move on it is my  
3 understanding that certified amending motions 11 and  
4 12 are not being pursued. We already discussed items  
5 13 and 14. It is my understanding that certified  
6 amending motion 15 is not being pursued. We already  
7 included certified amending motion 16 in a previous  
8 group. That will bring us to certified amending  
9 motion 17. Microphone No. 4, please.

10 MR. RAJ: Mr. Chairman, my name is  
11 Phani Raj. I am with Technology and Managing Systems  
12 Consulting Company in Burlington, Massachusetts. I  
13 am a principal member of the LPG committee.

14 Mr. Chairman, I move to accept the  
15 comment 58-66.

16 MR. PAULEY: The motion is to accept  
17 comment 58-66. I did hear a second. Please proceed.

18 MR. RAJ: This comment pertains to the  
19 inclusion of a new table, 5.15.1.3, which the  
20 committee accepted during the ROC meeting but was  
21 rejected in the balloting process. Table 5.15.1.3  
22 simply puts the current code requirements that are in  
23 the detailed sentences into a succinct, easily

1 understandable and usable table. It does not -- I  
2 want to repeat the words it does not in any way  
3 change the code requirements or alter the meaning of  
4 the requirements. It just makes it readable and more  
5 simple.

6                   The proposal I am requesting the body  
7 to accept is in keeping with the adage, "A picture is  
8 worth a thousand words." The intent is to simplify  
9 the understanding of the requirements of the code  
10 through the use of a table.

11                   I move that you accept this table along  
12 with correcting a few minor grammatical errors and  
13 the inclusion of one item that was voted by the  
14 committee's ROP meeting but which got omitted from  
15 the table by an oversight. It is my intent to  
16 petition the Standards Council to accept the minor  
17 and grammatical corrections and the oversight  
18 omission in accepting the proposal.

19                   MR. PAULEY: Thank you. Mr. Mortimer.

20                   MR. MORTIMER: Again, we did meet  
21 yesterday on this item. The committee is on a  
22 consensus and in agreement with the motion.

23                   MR. PAULEY: Further discussion?

1 Microphone No. 4.

2 MR. SWIECICKI: Bruce Swiecicki of the  
3 National Propane Gas Association and a member of the  
4 Technical Committee. We were opposed to the table as  
5 printed in the ROC, but with the proponent's  
6 specification that he will, in fact, petition the  
7 Standards Council to correct some of the mistakes, we  
8 do support the motion.

9 MR. PAULEY: Further discussion? The  
10 motion on the floor is to accept comment 58-66. All  
11 those in favor of the motion, please raise your hand.  
12 Those opposed. The motion passes.

13 We will move on to certified amending  
14 motion No. 18. Microphone No. 4, please.

15 MR. SWIECICKI: Bruce Swiecicki of the  
16 National Propane Gas Association and a member of the  
17 Technical Committee on Liquefied Petroleum Gases.

18 My motion is to accept comment 58-39 as  
19 originally submitted.

20 MR. PAULEY: The motion on the floor is  
21 to accept comment 58-39. Is there a second? I see a  
22 second. Please proceed.

23 MR. SWIECICKI: Thank you. Approval of

1 this motion will remove the text that although it  
2 appears to be innocuous actually establishes  
3 performance criteria for LP gas hose that is both  
4 unreasonable and unattainable. Approval of this  
5 motion will result in LP gas hose that will continue  
6 to be evaluated according to UL standard 21 which is  
7 the national standard for LP gas hose.

8 MR. PAULEY: Thank you. Mr. Mortimer.

9 MR. MORTIMER: The Technical Committee  
10 met on this as well. They support this amendment.  
11 Basically the concern was that as currently written  
12 it may not quite be achievable in the current  
13 industry.

14 MR. PAULEY: Further discussion?  
15 Microphone No. 4, please.

16 MR. OSBORN: Rod Osborn for Patel in  
17 Columbus, Ohio. I'm speaking in favor of the motion.

18 The original proposal was to require  
19 the absolute statement of no contamination, no  
20 decomposition of the hose material in the presence of  
21 propane. There is no known material that could meet  
22 this absolute requirement. All materials will  
23 contaminate or decompose in the presence of propane

1 even at unmeasurable quantities. The proposal is not  
2 achievable. Therefore, as a researcher in the area I  
3 support the motion.

4 MR. PAULEY: Thank you. Further  
5 discussion? Seeing none we will proceed to the vote.  
6 The motion on the floor is to accept comment 58-39.  
7 Those in favor of the motion, please raise your  
8 hands. Thank you. Those opposed. The motion  
9 passes.

10 It is my understanding that certified  
11 amending motion 19 will not be pursued. That will  
12 take us to certified amending motion No. 20.  
13 Microphone No. 4, please.

14 MR. RAJ: Mr. Chairman, my name is  
15 Phani Raj. I move to accept the comment 58-51.

16 MR. PAULEY: The motion on the floor  
17 is to accept 58-51. I do see a second. Please  
18 proceed.

19 MR. RAJ: This comment proposes to move  
20 the currently situated table 57 62 in the code to the  
21 annex which in my view is where it belongs. The  
22 table stipulates the length of dip tubes and  
23 cylinders requalified after 9/30/1998. I should

1 point out that this table design is design  
2 restrictive in that it does not cover all possible  
3 future cylinder sizes and it cannot because it is so  
4 specific.

5                   As cylinder fabricators find new  
6 materials such as composites and because of the  
7 properties of these materials, cylinders are  
8 different in sizes and being proposed for new  
9 applications. This table as it reads today does not  
10 promote innovation or allow for new designs.

11                   Some have argued that the note under  
12 the table provides a means for the user in dealing  
13 with a non-specified cylinder. I do not need to  
14 point out to this body that under NFPA standards  
15 notes under tables are meant as explanatory material  
16 to clarify or define things and their contents are  
17 not mandatory.

18                   What does a requalifier do if he is  
19 dealing with a cylinder whose size is not specified  
20 in the table? He or she does not have any guidance.  
21 By moving the table to the annex, this will serve as  
22 a guide without compromising the requirements  
23 specified in comment 58-51.

1                   Mr. Chairman, let me point out that  
2 this table was located in the annex in all editions  
3 of the code prior to the 2004 edition. The presence  
4 of this restrictive table in the code violates the  
5 principle of providing performance specifications  
6 wherever possible rather than specifying designs.

7                   Mr. Chairman, I move that the comment  
8 be accepted. If there are any -- part of the  
9 recommendation that is misplaced in the comment which  
10 offers substantiation into oversight will be  
11 presented to the Standards Council for resolution.

12                   MR. PAULEY: Mr. Mortimer.

13                   MR. MORTIMER: Yes. In meeting on this  
14 amending motion the committee was in opposition; and  
15 while the presenter is correct that the table had  
16 existed in the annex in the past, the table was  
17 referenced in the text and was moved back to the body  
18 by a specific action of the committee.

19                   MR. PAULEY: Thank you. Microphone  
20 No. 3, please.

21                   MR. CZISCHKE: Ronald Czischke,  
22 Underwriters Laboratories, a member of the Technical  
23 Committee. I speak against the motion. The dip tube

1 table while imperfect does provide important safety  
2 aspects when valves are replaced in the field. The  
3 dip tube links allow for the proper filling of the  
4 cylinders.

5                   Moving this table to the annex makes it  
6 non-mandatory, and I believe it is a worse case. I  
7 know it's an imperfect table, but I believe it should  
8 be left in the text as mandatory language. Thank  
9 you. I speak against the motion.

10                   MR. PAULEY: Microphone No. 3, please.

11                   MR. SWIECICKI: Bruce Swiecicki, the  
12 National Propane Gas Association, a member of the  
13 Technical Committee on Liquefied Petroleum Gases  
14 speaking in opposition to the motion.

15                   The table that is in question here was  
16 introduced into the code in 1998 when the overfilling  
17 prevention device became mandatory for new cylinders  
18 constructed and used in the propane industry. The  
19 table is only intended to address cylinders which  
20 were manufactured prior to that date and includes the  
21 vast majority of cylinders which are in circulation  
22 today.

23                   The proponent seems to think that the

1 table is intended to guide the design of new  
2 cylinders, and that is simply not the case. With the  
3 retrofit of the overfilling prevention device  
4 guidance is provided and needed by the propane  
5 marketers that do read qualifications to ensure that  
6 proper dip tube length is installed and that  
7 cylinders do not become overfilled.

8 MR. PAULEY: Further discussion?  
9 Seeing no one at the microphones, we will proceed to  
10 the vote on certified amending motion No. 20 which is  
11 to accept 58-51. All those in favor of that motion,  
12 please raise your hand. All those opposed. The  
13 motion fails.

14 We will move on now to certified  
15 amending motion No. 21.

16 MR. RAJ: Mr. Chairman, my name is  
17 Phani Raj. I move to accept the comment 58-58 as  
18 modified by the Technical Committee.

19 MR. PAULEY: Thank you. The motion on  
20 the floor is to accept as modified by the Technical  
21 Committee comment 58-58. Is there a second? I see a  
22 second. Please proceed.

23 MR. RAJ: This comment pertains to

1 replacing existing table 5.7.1, 5.7.7.1 with a  
2 revised and more comprehensive table. I also wish to  
3 point out that the table that the comment refers to  
4 is located on Page 58-19 of the ROC document. There  
5 are a couple of other tables which are similar, but  
6 the table I am referring to which the comment refers  
7 to is the one on 58-19.

8                   The current table in the code was  
9 developed several years ago and was developed on the  
10 design of cylinders and containers available then  
11 which, by the way, continue to be available even now.  
12 This table has not been changed since then, and many  
13 new systems and designs are available or may become  
14 available.

15                   As it stands the current table in the  
16 code is really design restrictive and stipulates  
17 inflexibly how and where certain appurtenances are  
18 placed and bunched together. I have indicated in my  
19 substantiation how these design-restrictive  
20 requirements applied to specific cases lead to  
21 enforcing consequences or toward innovation or new  
22 design.

23                   For example, for cylinders there is a

1 requirement for integral shut-off valve and pressure-  
2 relief valve. There is no engineering reason for  
3 such a requirement. The pressure-relief valve can be  
4 anywhere or it can be a separate appurtenance without  
5 having to be integral with a shut-off valve. This is  
6 clearly a design-restrictive requirement.

7                   They, the dissenters, have not provided  
8 any serious substantiation nor any specific reason  
9 for faults with the revised table approved by the  
10 committee. The Technical Committee supported this  
11 revised table that appears on Page 58-19 both during  
12 the ROC meeting. The comment failed to get the  
13 support during the ballot. However, the committee  
14 during its meeting yesterday voted to support the  
15 motion.

16                   It is my intent to petition the  
17 Standards Council to resolve current discrepancies if  
18 any between the current table in the code and the  
19 revised table with is the subject of this comment.

20                   MR. PAULEY: Thank you, Mr. Mortimer.

21                   MR. MORTIMER: The Technical Committee  
22 is in agreement with the motion and met yesterday and  
23 affirmed the same.

1                   MR. PAULEY:    Additional discussion?  
2    Microphone No. 4, please.

3                   MR. GENTRY:    I'm Steve Gentry with  
4    Worthington Cylinder Corporation, Columbus, Ohio, and  
5    a member of the Technical Committee.  I want to speak  
6    in support of this motion.

7                   I also submitted tables as well.  The  
8    table as in 58 today as a cylinder manufacturer I can  
9    tell you is extremely design restrictive.  There are  
10   demands for cylinders which we cannot produce that  
11   are as safe or safer than what the table permits as  
12   long as, again, we get to supply the editorial  
13   comments to the standards group to the table.

14                  MR. PAULEY:    Further discussion?  Very  
15   well, we will proceed to the vote.  Certified  
16   amending motion No. 21, the motion is to accept  
17   comment 58-58 as modified by the Technical Committee.  
18   All those in favor of the motion, please raise your  
19   hand.  Thank you.  Those opposed.  The motion passes.

20                  We will move now to certified amending  
21   motion No. 22.  22 is not being pursued.  We will  
22   move to certified amending motion No. 23.  Microphone  
23   No. 4, please.

1                   MR. STANNARD:    My name is Jim  
2 Stannard, Stannard & Company of New Jersey. I move  
3 to accept proposal 58-140.

4                   MR. PAULEY:    I have on my sheet it's  
5 comment 58-140.

6                   MR. STANNARD:    Comment 58-140.

7                   MR. PAULEY:    The motion on the floor  
8 is to accept comment 58-140. Is there a second? I  
9 hear a second. Please proceed.

10                  MR. STANNARD:    58-140 would remove  
11 section 14.4 which was proposed in the latest edition  
12 of 58. I think the easiest thing to do is read the  
13 substantiation for the proposal when it was submitted  
14 in the ROP. The addition of this new section, NFPA  
15 58, would ensure the requirements currently in  
16 federal law which are frequently ignored by the  
17 operators of small LP gas systems.

18                  Now, as an aside they later referred to  
19 these small LP gas systems as SLGS. Under the  
20 present U.S. federal regulations the DOT, Department  
21 of Transportation, likewise and has the Material  
22 Safety Administration has jurisdiction over LP gas  
23 systems which serve ten or more consumers, consumer

1 locations connected to a single supply source and two  
2 or more consumer locations connected to a single  
3 supply source indicated in public areas.

4                   These regulations are contained in  
5 publication 49 CFR, parts 190 through 199. As an  
6 aside the publications are available on the internet  
7 at no cost. The proposal incorporates materials  
8 contained in 49 CFR, parts 191 and 192, into NFPA 58.

9                   The BHMSA regulations have been drafted  
10 and tailored to the natural gas utility. Many of the  
11 sections do not apply to LP gas smaller consumer pipe  
12 systems. The LPS publication does not address the LP  
13 gas supply systems. The provide for LP gas  
14 containers, liquid transfer piping and enclosures.

15                   At the present time the published rules  
16 refer to the NFPA code for 58 for code compliance  
17 where LPS rules are silent. The addition of this new  
18 section, NFPA 58, will become the regulations for  
19 operations, operators of SLGS. This new section will  
20 provide the necessary requirements to comply with the  
21 federal law that form that SLGS operators will find  
22 useful and understandable.

23                   Then they go on to say that SLGS

1 installation would meet or exceed the LPS -- develop  
2 -- the SLGS installation will exceed the LPS  
3 requirements for the operator following the NFPA 58  
4 publications.

5                   Now, I am fully in support of the  
6 intent of this document. There are a number of  
7 facilities that have not been following the DOT  
8 regulations, but unfortunately NFPA 58 and 59 are  
9 silent in areas that involve considerable risk to the  
10 public, namely, the protection of the pipelines  
11 through third-party damage, overpressure protection.  
12 They are minimal in their discussions of corrosion on  
13 metallic pipelines.

14                   The third-party's damage problem occurs  
15 because pipelines are not identified or buried deeply  
16 enough. DOT regulations require 2 feet of cover for  
17 mains, 12 inches of cover for services. They require  
18 tracer wires so that these pipes can be located. 58  
19 is silent on this.

20                   Adoption of this would in my mind  
21 create a serious problem to the public and to the  
22 users, consumers themselves.

23                   MR. PAULEY: Thank you. Mr. Mortimer.

1                   MR. MORTIMER: The committee discussed  
2 the concerns at length. Both sides were presented.  
3 The section itself actually was put together by a  
4 task force of the committee and references the code  
5 that Mr. Stannard is, 192. The committee is in  
6 opposition to this amendment.

7                   MR. PAULEY: Microphone No. 3, please.

8                   MR. SWIECICKI: Thank you. Bruce  
9 Swiecicki with the National Propane Gas Association  
10 and a member of the Technical Committee speaking in  
11 opposition to the motion.

12                   These new provisions that are proposed  
13 for NFPA 58 will assist installers of small LP gas  
14 pipeline systems in their efforts to comply with the  
15 federal requirements of 49 CFR, parts 190 through  
16 199. These federal regulations actually reference  
17 NFPA 58. So it is totally appropriate to include the  
18 provisions in NFPA 58. The provisions as proposed do  
19 not conflict with the regulations nor do they impose  
20 additional requirements on the operators of these  
21 systems.

22                   MR. PAULEY: Thank you. Microphone  
23 No. 5, please.

1                   MR. RITZMANN:    My name is John  
2 Ritzmann.  I am a consultant -- I am chairman of the  
3 NFPA 59 committee, LP gases and utility gas plants.  
4 I am speaking in support of the motion.

5                   We feel that or I feel that the section  
6 on small gas pipelines is outside of the scope of the  
7 59 document, the 58 document.  It does not provide  
8 for that, the committee's scope statement.  It is  
9 also outside of the scope of the LP gases utility gas  
10 plan code which only provides for the plants prior to  
11 introduction into pipeline systems.

12                  I also feel that although the intent is  
13 good that this will result in duplicating the rules,  
14 result in a divergence in how they are enforced and  
15 how they are interpreted as you have a different set  
16 of enforcers and different code authority, the NFPA  
17 answering questions from the traditional DOT  
18 community.

19                  I believe the same effect would be  
20 achieved by making this appendix material and still  
21 be helpful to small operators.  Thank you.

22                  MR. PAULEY:    Microphone No. 4, please.

23                  MR. YOUNG:    Bill Young, Superior

1 Energy, Cleveland, Ohio. I'm also a member of 58 and  
2 59. I am speaking in support of this.

3 I believe it is a worthwhile endeavor,  
4 and I think there are times when -- if this is  
5 finally done, I think it can be useful; but I am a  
6 little concerned that we don't have a good  
7 understanding of the separation between DOT and this  
8 document. It's important that everybody recognize  
9 that DOT is still the responsible party and anything  
10 we do has to be explanatory or enhance this, but I am  
11 not comfortable with 58 having this as part of its  
12 document.

13 MR. PAULEY: Microphone No. 3, please.

14 THE FLOOR: Mike Kalderera, National  
15 Propane Gas Association. I am speaking in opposition  
16 to the motion on the floor.

17 The proposed language does not remove  
18 DOT's authority to regulate these small  
19 jurisdictional pipeline systems. They always have  
20 the option when adopting NFPA 58 to exclude certain  
21 provisions or sections of the standard if they so  
22 choose.

23 What it does by including these

1 provisions in NFPA 58 is it brings to the attention  
2 to the small retail propane operator what the  
3 associated pipeline system requirements are. This is  
4 because they are far more familiar with the use and  
5 understanding of NFPA 58 than they are with DOT 49,  
6 CFR part 192, which is designed really for all  
7 intents and purposes for much larger natural gas  
8 pipeline systems. As such it creates more confusion  
9 for the smaller marketer.

10 I am speaking in opposition to the  
11 proposal.

12 MR. PAULEY: Microphone No. 4, please.

13 MR. WEBER: Thank you, Mr. Chairman.

14 Ray Weber of the great state of Wisconsin.  
15 Representing myself I call for the question.

16 MR. PAULEY: The motion has been made  
17 to move the previous question to end debate. I did  
18 have a second. All those in favor of the motion to  
19 end debate, please raise your hand. Those opposed.  
20 That motion passes which moves us directly to the  
21 motion that is on the floor which is certified  
22 amending motion No. 23 to accept comment 58-140. All  
23 those in favor of the motion, please raise your hand.

1 Thank you. Those opposed. The motion fails.

2 Now, that concludes our certified  
3 amending motions for NFPA 58. I understand there may  
4 be a follow-up motion to this document. Microphone  
5 No. 4, please.

6 MR. GENTRY: Thank you very much. I  
7 have a follow-up motion to make. My name is Steve  
8 Gentry of Worthington Cylinder Corporation, Columbus,  
9 Ohio, member of the Technical Committee. I make a  
10 motion to accept comment 58-32 76 as published in the  
11 ROC on Page 10.

12 MR. PAULEY: The motion is to accept  
13 comment 58-32 and since this is a follow-up motion I  
14 am assuming this is related to or it's due to some of  
15 the successful motions that were made earlier.

16 MR. GENTRY: Yes, sir, that would be in  
17 my substantiation and has to do with the actions  
18 taken today on group one.

19 MR. PAULEY: Very good. That is a  
20 valid follow-up motion. The motion is to accept  
21 comment 58-32. I need two seconds. I see multiple  
22 seconds. Please proceed.

23 MR. GENTRY: Thank you very much. The

1 motion that I am supporting is to accept 58-32 as it  
2 was submitted by me. This motion would strike  
3 5.2.1.C which states composite cylinders shall be  
4 listed.

5                   The substantiation for requesting this  
6 to be struck is, No. 1, the actions taken on the  
7 cabinet heater issues today and composite cylinders.  
8 No. 2, there is no standard available today to list a  
9 composite cylinder. Substantiation No. 3 is there is  
10 no requirement in NFPA 58 for any other type cylinder  
11 design whether it be made from aluminum, stainless  
12 steel or carbon steel to be UL listed.

13                   MR. PAULEY: Thank you. Mr. Mortimer.

14                   MR. MORTIMER: There has been a  
15 discussion item, and the reason it was put in there  
16 to begin with was the cylinders that would be  
17 indoors, they were trying to make them, the  
18 requirements for them more stringent. Since those  
19 portions of group one have been removed, it seems  
20 like an appropriate amendment.

21                   MR. PAULEY: Thank you. Further  
22 discussion? Microphone No. 4.

23                   MR. SWIECICKI: Bruce Swiecicki of

1 the National Propane Gas Association and member of  
2 the Technical Committee speaking in support of the  
3 motion.

4 Substantiation for comment 58-32  
5 clarifies the intent of listing composite cylinders  
6 was related solely to the use of composite cylinders  
7 indoors. Speaking in support.

8 MR. PAULEY: Any further discussion?  
9 It is a follow-up motion on the floor which is to  
10 accept comment 58-32. All those in favor of that  
11 motion, please raise your hand. Those opposed. The  
12 motion passes. Any further actions? Microphone  
13 No. 4, please.

14 MR. SWIECICKI: Bruce Swiecicki,  
15 National Propane Gas Association, member of the  
16 Technical Committee on Liquefied Petroleum Gases  
17 making a motion to reject proposals 126, 179 and  
18 comment 114.

19 MR. PAULEY: Give us a moment here.  
20 You're doing these as follow-up motions?

21 MR. SWIECICKI: These are follow-up  
22 motions to the actions taken previously on the  
23 filling density requirements for composite cylinders.

1 That was related to the second group that we brought  
2 fourth.

3 MR. PAULEY: For the group, as I  
4 recall, 6, 8, 9 and 10 I believe were the motions.

5 MR. SWIECICKI: That's correct.

6 MR. PAULEY: Give us one moment on the  
7 follow-up motion. I'm going to ask that you split  
8 these up just a little bit. For purposes of the  
9 body, any time we have a follow-up motion, it still  
10 has to be a motion that is a valid motion that can be  
11 made in order to do that. You have two proposals as  
12 I recall, proposal 126 and 179.

13 MR. SWIECICKI: That's correct.

14 MR. PAULEY: In order to reject those  
15 proposals, were there comments that modified those  
16 proposals that would make them available as a motion?

17 MR. SWIECICKI: I believe that was  
18 comment 114.

19 MR. PAULEY: The comment that you also  
20 gave us which was comment 114 modified the text  
21 represented by these two proposals.

22 MR. SWIECICKI: Correct.

23 MR. PAULEY: In looking at this it

1 appears comment 114 modified proposal 126.

2 MR. SWIECICKI: That is correct.

3 Proposal 179 is related because it contains annex  
4 material that follows up on proposal 126.

5 MR. PAULEY: I don't have a clear path  
6 to get to 179 is the problem you have. Certainly  
7 your motion to return comment 114 would be in order.  
8 That is your comment. To be able to do that was  
9 accepted, and that motion would be in order.

10 MR. SWIECICKI: I can return?

11 MR. PAULEY: To be able to return that  
12 comment and the associated proposals, if that is what  
13 you desire to do, that would take you back to  
14 previous edition text for that section. I can't tell  
15 if that accomplishes what you're after.

16 MR. SWIECICKI: I think it does. It  
17 takes it out of the standard which is what we are  
18 after at this point.

19 MR. PAULEY: If I can help a little  
20 bit, perhaps a valid motion that you could make as a  
21 follow-up as a result of the composite cylinder issue  
22 would be to return comment 114 and associated  
23 proposal and that would get you back to previous

1 edition text.

2 MR. SWIECICKI: Okay. Then I will  
3 make that motion.

4 MR. PAULEY: Very good.

5 MR. SWIECICKI: I can take a hint.

6 MR. PAULEY: The motion would be to  
7 return comment 114 and associated proposal which I  
8 believe was proposal 126. That would take it back to  
9 previous edition text. I need two seconds for that  
10 as a follow-up motion. I see two seconds. Please  
11 proceed.

12 MR. SWIECICKI: Thank you. The  
13 proposal and related comments are related to the  
14 filling densities of composite cylinders. Most of  
15 those sections have already been returned to the  
16 previous edition in terms of its substance. So this  
17 is just a little bit of a clean-up item here.

18 I request acceptance of this motion.

19 MR. PAULEY: Thank you. Mr. Mortimer.

20 MR. MORTIMER: I agree the filling  
21 density change would take it back to the previous  
22 text and was related to the composite cylinders.  
23 It's also something that could be done in committee

1 work.

2 MR. PAULEY: Further discussion?  
3 Seeing none the motion on the floor would be to  
4 return comment 114 and the associated proposal. All  
5 those in favor of the motion, please raise your hand.  
6 Those opposed. The motion passes.

7 Any further items on NFPA 58? Seeing  
8 none, Mr. Mortimer, thank you to you and your  
9 committee for an efficient job they did in looking at  
10 these. We appreciate it.

11 NFPA 301 The next report this morning is that of  
12 the Committee on Merchant Vessels. Here to present  
13 the committee report is Chair Michael Arnold of Marsh  
14 USA, Portland, Oregon.

15 The list of certified amending motions  
16 is contained in the motion's committee report, and  
17 you can see those on the screen. We will proceed  
18 with the motions in that order. Mr. Arnold.

19 MR. ARNOLD: Thank you. Mr. Chair,  
20 ladies and gentlemen, the report of the Technical  
21 Committee on Merchant Vessels can be found on Pages  
22 301-1 through 301-21 of the report on proposals, ROP,  
23 and Pages 301-1 through 301-5 of the report on

1 comments, ROC, for the 2007 annual revision cycle.

2                   The committee proposed a partial  
3 revision of NFPA 301, code for safety to life from  
4 fire on merchant vessels. NFPA 301 also has an  
5 errata that was handed out with the ROP to correct  
6 some omissions of legislative text in the ROP.  
7 Copies are also available with the ROP and ROC just  
8 outside the meeting room. The committee ballot  
9 results on each proposal and comment can be found in  
10 the reports. I will now return the podium to the  
11 presiding officer to proceed with certified amending  
12 motions on NFPA 301.

13                   MR. PAULEY: Thank you, Mr. Arnold.  
14 We will move to the list of amending motions.  
15 Certified amending motion No. 1. Microphone No. 4,  
16 please.

17                   MR. HIRSCHLER: Marcello Hirschler, GBH  
18 International speaking for myself and a member of the  
19 Technical Committee. I move 301 -- acceptance of  
20 comment 301-12.

21                   MR. PAULEY: The motion on the floor  
22 is to accept comment 301-12. Is there a second? I  
23 see a second. Thank you. Please proceed.

1                   MR. HIRSCHLER:    Thank you,  
2   Mr. Chairman.  I want to give a little bit of  
3   background to understand why back about 11, 12 years  
4   ago the U.s. Coast Guard came to NFPA and said we  
5   think it's important that a consensus standard  
6   document get produced that is an alternative to the  
7   U.S. Coast Guard regulations for ships that sail not  
8   in international waters.

9                   Ships that sail in international waters  
10   have to comply with the ISSO convention, safety of  
11   life at sea.  Ships that do not sail in international  
12   waters such as those that sail in coastal areas,  
13   lakes, rivers and ferries are regulated by the Coast  
14   Guard.  The objective of that, of course, is to  
15   provide an alternative so that the shipbuilder can  
16   get the things organized through a consensus process.

17                   The Coast Guard still allows you to do  
18   that.  However, no ship over ten years has ever been  
19   commissioned using 301.  The major reason for that is  
20   that if your shipbuilder wants to build a ship to 301  
21   they need to go and make a request to the Coast Guard  
22   which will be granted but it takes paperwork and  
23   time.

1                   Then they have to comply with  
2 requirements that are very similar to the Coast Guard  
3 plus additional requirements for sprinklers in every  
4 ship that has even minimal amount of overnight  
5 accommodation. That includes some of the very small  
6 ferries that have less than 150 passengers.

7                   We are talking about -- 301 has never  
8 been used because there is no advantage of any kind  
9 that a shipbuilder who wants to use this because  
10 they need to do whatever the Coast Guard tells them  
11 plus more. So if we -- the point of accepting this  
12 comment is to exclude the smaller ships, smaller  
13 passenger vessels from the requirement to have  
14 sprinklers. Thank you very much.

15                   MR. PAULEY:    Mr. Arnold.

16                   MR. ARNOLD:   What Marcello told you  
17 about the history of the committee is absolutely  
18 correct. We were asked by the Coast Guard to develop  
19 a supporting document for those vessels. He is not  
20 absolutely correct that people have not used 301 to  
21 develop -- the Coast Guard does tell us that people  
22 have used 301.

23                   It was the decision of the NFPA body

1 when this document was originally developed that fire  
2 sprinklers would be provided for passenger vessels  
3 with overnight accommodations and accepted by the  
4 body. The Technical Committee has elected to move  
5 forward with that requirement, and also in the 2007  
6 revision we have included a performance-based section  
7 that allows the designer, the architects and the boat  
8 builders to make performance-based evaluations that  
9 include passive and active fire protection systems;  
10 and it's up to them to prove they have a system that  
11 will meet those requirements. The AHJ in most  
12 matters will be the United States Coast Guard. They  
13 will be determining if it meets those  
14 performance-based requirements.

15 MR. PAULEY: Thank you. Microphone  
16 No. 4, please.

17 MR. HIRSCHLER: Marcello Hirschler,  
18 GBH International. Yes, it is correct that we have a  
19 performance-based section. That was there from the  
20 beginning. It's been amended at this cycle. Again,  
21 I am a member of the Technical Committee. However,  
22 that doesn't exclude from the need to add additional  
23 sprinklers.

1                   Furthermore, the Coast Guard -- I have  
2    been involved with one shipbuilder who wanted to  
3    build a ferry to 301, and the Coast Guard told the  
4    shipbuilder -- I am not representing that  
5    shipbuilder, I am just representing myself -- that  
6    they needed to comply with all the sprinkler  
7    requirements for 301. Otherwise, they would have to  
8    comply with the Coast Guard requirements and not use  
9    301.

10                   Basically there are two options. You  
11   really can use 301. We have it in the books, but  
12   don't use it or you go with the Coast Guard. That is  
13   why I recommend that we eliminate the excess  
14   sprinkler requirements. Thank you.

15                   MR. PAULEY:    Further discussion?  
16   Microphone No. 6.

17                   MR. STUBLEFIELD:  Robert Stublefield,  
18   Marioff USA. I am speaking in opposition to the  
19   motion on the floor. In principle what we are being  
20   asked to do is remove a requirement for what the  
21   committee deems to be critical to the safety of life  
22   on these vessels to somehow entice or negotiate  
23   acceptance of the document. I don't think it's the

1 position of this body that we make those concessions  
2 for that reason. Thank you.

3 MR. PAULEY: Thank you, microphone  
4 No. 3, please.

5 MR. SHAH: I'm Yogesh Shah from  
6 Honeywell. I am also an NFPA committee member. For  
7 the sake of wider acceptance of the standard I don't  
8 think we should remove the sprinkler system  
9 requirement. We should instead have incentives for  
10 the installers and the ship manufacturers to have  
11 less stringent requirements for the furniture and  
12 materials used inside the ships.

13 MR. PAULEY: Further discussion?  
14 Seeing none -- microphone No. 6, please.

15 MR. CUMMINGS: Mark Cummings, Fire  
16 Risk Management, also a member of NFPA 301 Technical  
17 Committee.

18 I want to reiterate a little bit of  
19 what Yoge was just talking about in that we actually  
20 have as a past iteration of NFPA 301. Because of the  
21 fact that NFPA 301 wasn't being used, where we felt  
22 we needed to add sprinklers we also went back through  
23 and tried to remove some of those very onerous

1 requirements in many cases for non-combustibility  
2 requirements associated with the furniture and  
3 furnishings because part of the problem was the fact  
4 that a lot of these smaller vessels were trying to  
5 commercially procure some of those items which in  
6 many cases don't meet the non-combustibility or  
7 non-flammability requirements that are within the CFR  
8 and basically in addition to adding sprinklers are  
9 allowing them to relax those requirements.

10 MR. PAULEY: Microphone No. 4, please.

11 MR. HIRSCHLER: Marcello Hirschler,  
12 GBH International speaking in support of the motion.

13 That is exactly where we are. You have  
14 to -- if you comply with this -- you can comply with  
15 this by putting sprinklers in there, and then there  
16 are other sections that say since you put sprinklers  
17 in there now you don't need to worry about anything  
18 in terms of furniture and furnishings. I will  
19 further eight months later on tell you that not only  
20 what they will say, what the section will say and I  
21 will discuss this when I get to those motions is that  
22 as long as you don't have sprinklers, just have a  
23 watering mist system you don't need to do anything,

1 no floor interior finish, no wall interior finish, no  
2 ceiling interior finish requirements, no furniture  
3 requirements just because you have a water mist  
4 system. We have a system built up and all based on  
5 the fact that we have these excess sprinkler  
6 requirements, and then we need to start accepting  
7 everything else from being able to do have fire  
8 performance.

9 I need to clarify something Mark  
10 Cummings just said. There are no requirements for  
11 furniture, furnishings, etcetera, non-combustible  
12 requirements in there in the present edition for them  
13 to meet certain fire safety tests which are the same  
14 ones that the Coast Guard requires. Thank you.

15 MR. PAULEY: Further discussion?  
16 Seeing none we will proceed to the motion on the  
17 floor which is to accept comment 301-12. All those  
18 in favor of the motion, please raise your hand.  
19 Those opposed. The motion fails.

20 We will move to certified amending  
21 motion 2. Microphone No. 4 please.

22 MR. HIRSCHLER: I'm sorry. I can't  
23 see. Is that 301-8?

1 MR. PAULEY: 301-5.

2 MR. HIRSCHLER: Thank you. Marcello  
3 Hirschler from GBH International speaking on my own  
4 behalf, and I move to accept comment 301-5.

5 MR. PAULEY: The motion on the floor  
6 is to accept comment 301-5. Is there a second? I  
7 see a second. Please proceed.

8 MR. HIRSCHLER: What this particular  
9 action is saying is that interior deck finishes and  
10 deck overlays, that means interior finish, does not  
11 have to be protected by any fire test as long as  
12 there is a water mist system. I think that is  
13 totally inappropriate. We absolutely need to make  
14 sure that interior finishes need to be protected by  
15 at least sprinklers, not just a water mist system.

16 If you look at Page 301-4 of the report  
17 on comments, you will find that what this does is  
18 strike out the words, "or water mist system," the  
19 four words, "or water mist systems." I don't believe  
20 the water mist systems are as adequate as the  
21 sprinkler systems. I think there has been sufficient  
22 evidence. A number of studies have been conducted  
23 that demonstrate that water mist systems are not as

1 effective as sprinkler systems in protection. Thank  
2 you.

3 MR. PAULEY: Mr. Arnold.

4 MR. ARNOLD: Yes, the Coast Guard Life  
5 Saving and Fire Safety Standards Division is  
6 responsible for developing and maintaining national  
7 and international life saving and fire safety  
8 standards for commercial ships and recreational  
9 boats. On its web site the following approval  
10 guidance information is provided concerning water  
11 mist extinguishing systems. "Water mist systems are  
12 approved for installation on U.S. flagships as the  
13 substitute for automatic sprinklers in accommodation  
14 and service areas and control stations and as a  
15 substitute for total flooding fixed gas systems in  
16 machinery spaces and cargo rooms."

17 The Coast Guard then requires water  
18 mist systems must be tested to the same international  
19 maritime organization test protocols as cited in NFPA  
20 750 at a Coast Guard accepted independent testing  
21 laboratory to receive type approval. The Coast Guard  
22 recognizes UL Laboratories, Factory Mutual and  
23 Underwriters Laboratories of Canada as the

1 independent testing laboratories.

2                   Per ISO resolution A or IMO resolution  
3 A 800, 19, water mist systems must perform similar to  
4 or better than traditional sprinkler installations in  
5 accommodation spaces aboard ships, spaces such as  
6 cabins, corridors, public areas and tax-free shopping  
7 areas.

8                   In 2002 the Norwegian Fire Research  
9 Laboratory reported at the International Water Mist  
10 Conference that many water mist systems are available  
11 for vessel applications and have demonstrated the  
12 ability to suppress and extinguish challenging fires  
13 within a reasonable time. This includes tests  
14 burning materials such as mattresses with non-fire  
15 rated retardant polyether quality covered with cotton  
16 fabric, upholstered furniture, cellulose items and  
17 plastic objects.

18                   Documented tests showed that they  
19 conducted a test in a typical marine cabin with bunks  
20 and furniture and in the disabled part of the water  
21 mist nozzle system and that the system -- a number of  
22 reports of tests conclude that the application was  
23 properly designed and tested for that marine vessel

1 application.

2 MR. PAULEY: Thank you. Microphone  
3 No. 6, please.

4 MR. STUBLEFIELD: My name is Robert  
5 Stublefield, Marioff USA. I am speaking in  
6 opposition to the motion.

7 The personal opinion in the  
8 substantiation as well as the negative explanation in  
9 the comment regarding water mist systems and their  
10 inability to perform or their inadequacies is not  
11 substantiated. In fact there was no direct data  
12 provided to support that statement, and it is in  
13 conflict with the information that the chair just  
14 provided.

15 The International Maritime  
16 Organization, the American Bureau of Shipping and the  
17 U.S. Coast Guard all recognize the use of water mist  
18 systems in various applications in the marine and  
19 off-shore industries. BDS and Factory Mutual have  
20 approved the use of these systems in land-based  
21 systems world wide. It is our opinion that the  
22 relevant substantiation for this change is incorrect.  
23 That is the substantiation to eliminate water mist

1 systems in Section 7345. Therefore, we are opposed  
2 to this motion.

3 MR. PAULEY: Thank you. Further  
4 discussion? Seeing none we will proceed to the vote.  
5 Microphone No. 4.

6 MR. HIRSCHLER: I will repeat what I  
7 said before. Marcello Hirschler, GBH International.  
8 No NFPA system ever outside of 301 will allow the  
9 replacement of water mist systems for sprinkler  
10 systems. They are not equivalent. It's also my  
11 understanding that a fire just occurred on a ship  
12 which had a water mist system. So water mist systems  
13 are not equivalent sprinkler systems. We never  
14 recognized them as equivalent sprinkler systems  
15 anywhere else. I urge you to support the motion.  
16 Thank you.

17 MR. PAULEY: Further discussion?  
18 Microphone No. 6, please.

19 MR. CUMMINGS: Mark Cummings, Fire Risk  
20 Management, also a member of the 301 Technical  
21 Committee. Again I oppose this motion. Again, what  
22 Marcello is saying is not accurate. I think as a  
23 member in a previous life of the Coast Guard's R & D

1 Center, when we were testing a lot of these systems  
2 they proved time and again that it's proper  
3 applications, proper design. They are very effective  
4 which is why the Coast Guard accepted and allowed  
5 their use on shipboard applications.

6 Obviously I am not a manufacturer. I  
7 have no vested interest in that. I just wanted to  
8 reiterate the fact that these systems are appropriate  
9 for this application and should be allowed. Thank  
10 you.

11 MR. PAULEY: Any further discussion?  
12 Seeing none we will proceed to the vote. The motion  
13 on the floor is to accept comment 301-5. All those  
14 in favor of that motion, please raise your hand.  
15 Those opposed. The motion fails.

16 We will move to certified amending  
17 motion No. 3. Microphone No. 4, please.

18 THE FLOOR: Mr. Chairman, instead of  
19 doing certified amending motion No. 3, I prefer to do  
20 No. 4. I am the designated representative for Carl  
21 Ogburn. It has the same effect.

22 MR. PAULEY: You do not want to move  
23 item No. 3?

1                   THE FLOOR:    If I may, let's switch the  
2 order.  Let's start with four because four has the  
3 same effect.  I am the designated representative for  
4 Carl Ogburn.

5                   MR. PAULEY:  Very well.  I will allow  
6 you to reorder those.  Proceed with certified  
7 amending motion No. 4.

8                   MR. HIRSCHLER:  I am Marcello  
9 Hirschler, GBH International.  I move acceptance of  
10 comment 301-8.

11                  MR. PAULEY:  The motion is to accept  
12 comment 301-8.  I did see a second.  Please proceed.

13                  MR. HIRSCHLER:  Thank you very much.  
14 The reason I move this instead of other one is that  
15 this is simpler.  All the other things that were done  
16 in 301 have already been taken care of.  This is the  
17 important part.  It has not been taken care of.

18                  Furnishings, that means upholstered  
19 furniture, mattresses, wall linings, everything that  
20 is within spaces (inaudible) are not required to meet  
21 any requirements for fire safety provided there is a  
22 sprinkler or water mist system.

23                  Since we just said there has to be a

1   sprinkler or water mist system in all passenger  
2   vessels, that means in all passenger vessels  
3   basically you can have all furniture, upholstered  
4   furniture, mattresses, wall coverings, everything  
5   with no fire safety requirements. Thank you.

6                   MR. PAULEY:    Mr. Arnold.

7                   MR. ARNOLD:  Yes, the committee met and  
8   discussed this issue. To get further use -- like  
9   Marcello pointed out, to get further use of the  
10  document instead of having prescriptive that we would  
11  have sprinklers and non-combustible materials on  
12  coverings and furniture -- that was too prescriptive.

13                   So consequently we inserted the  
14  performance-based fire protection portion of the code  
15  and then added that if you protect with sprinkler  
16  systems or water mist systems that the requirements  
17  could be to relax those furnishings and coverings.

18                   MR. PAULEY:    Further discussion?  
19  Microphone No. 4, please.

20                   MR. HIRSCHLER:  Marcello Hirschler,  
21  GBH International. It's not a question of relaxing.  
22  They are gone. There is nothing there. The concept  
23  in marine protection whether it's the Coast Guard or

1 IMO or the U.S. Navy, all of them, is that you have a  
2 maximum amount of combustible material per space, and  
3 the material has to have some certain degree of fire  
4 performance.

5                   With this section 741 stays in there,  
6 everything is gone. They don't need to meet any  
7 requirements. You can put any kind of furniture in  
8 there. You can put any kind of wall coverings in  
9 there. You can put anything you want. If you felt  
10 like that, not that anyone would presumably do that,  
11 you could line the walls with nitroglycerine and it  
12 would be fine because there are no requirements.

13                   MR. PAULEY: Further discussion? The  
14 motion we have is certified amending motion No. 4  
15 which is to accept comment 301-8. All those in favor  
16 of that motion, please raise your hand. Thank you.  
17 Those opposed. The motion fails.

18                   Are you going to go back to certified  
19 amending motion No. 3?

20                   MR. HIRSCHLER: No, I won't.

21                   MR. PAULEY: You're not going to  
22 pursue certified amending motion No. 3?

23                   MR. HIRSCHLER: I will not.

1                   MR. PAULEY:    Certified amending motion  
2 No. 5.   That one is return of the report.

3                   MR. HIRSCHLER:   Marcello Hirschler,  
4 GBH International speaking for myself.  I move to  
5 return the report of 301 to the committee.

6                   MR. PAULEY:    The motion has been made  
7 to return the entire report of NFPA 301.  I see a  
8 second to the motion.  Please proceed.

9                   MR. HIRSCHLER:   Thank you.  I want to  
10 point out that in order to move forward with this  
11 report after the initial -- after I made the initial  
12 proposal to delete the excess sprinklers, there was  
13 concern that clearly there was an issue because no  
14 one uses this document for its major use which is  
15 passenger vessels.  The committee said, yes, we  
16 actually do need to do something.

17                   If you look at the report on proposals  
18 on Page 301-21, the committee did something.  It  
19 added chapter 21 for commercial fishing vessels.  So  
20 we can expand the scope of the document to other  
21 types of vessels.  If you look again at what it says,  
22 the entire chapter says commercial fishing vessels  
23 require preparation.  There is nothing there.

1                   The committee recognized that there is  
2 a need to expand the scope of the document so that  
3 the document gets used by someone, tried to do it but  
4 didn't have time to get this complete.

5                   I urge you to return the report to  
6 committee so that chapter 21 can be prepared and a  
7 new complete document issued. Thank you.

8                   MR. PAULEY: Mr. Arnold.

9                   MR. ARNOLD: That was the first  
10 substantiation we had received from Mr. Hirschler on  
11 that NITMAM. However, the previous NITMAMs have been  
12 rejected so we fail to see where we need to return  
13 the document for revision.

14                   The entire document underwent  
15 substantial change in 2007. We added a new chapter  
16 to allow vessel designers and users the ability to  
17 incorporate equivalencies and alternate design  
18 consideration for vessel construction to satisfy the  
19 fundamentals of fire prevention, fire protection and  
20 means of egress.

21                   Also an entire chapter on towing  
22 vessels was revised to update requirements for new  
23 construction on towing vessels regardless of the

1 length and horsepower in accordance with the current  
2 Coast Guard regulation and industry best practice.

3 It's the opinion of the committee that  
4 the 2007 edition of 301 satisfactorily provides  
5 minimum requirements for the protection of human  
6 life, property in the marine environment for fires  
7 aboard merchant vessels.

8 MR. PAULEY: Thank you. Is there  
9 further discussion on the motion? We will proceed.  
10 The motion on the floor is to return the entire  
11 report of NFPA 301. All those in favor, please raise  
12 your hand. Those opposed. The motion fails.

13 Is there any further business on NFPA  
14 301? Seeing none, thank you, Mr. Arnold.

15 NFPA 96 The next report this morning is that of  
16 the committee on venting systems for cooking  
17 appliances. Here to present the committee's report  
18 is Chair R.T. Leicht of the Delaware State Fire  
19 Marshals office in Wilmington, Delaware. This report  
20 can be found in the blue 2007 annual ROP and ROC.  
21 The list of certified amending motions is contained  
22 in the motion's committee report. Mr. Leicht.

23 MR. LEICHT: Good morning, Mr. Chair

1 and ladies and gentlemen. The report of the  
2 Technical Committee on Venting Systems For Cooking  
3 Appliances can be found on Page 96-1 through 96-15 of  
4 the report on proposals and Pages 96-1 through 96-5  
5 of the report of comments for the 2007 annual  
6 revision cycle.

7                   The committee proposed a partial  
8 revision of the NFPA 96 standard for ventilation  
9 control and fire protection of commercial cooking  
10 operations. The committee ballot results on each  
11 proposal and comment can be found in the reports.

12                   I will now return the podium to the  
13 presiding officer to proceed with the certified  
14 amending motion.

15                   MR. PAULEY: Thank you. We have one  
16 certified amending motion on NFPA 96. Microphone  
17 No. 5, please.

18                   MR. CONROY: Good morning. My name is  
19 Mark Conroy. I am with Brooks Equipment Company. My  
20 motion is to return a portion of the report in the  
21 form of a proposal and related comments. The  
22 proposal is 96-7 in the ROP, and the proposal is  
23 modified by comment 96-2 in the ROC, and the screen

1 appears to be wrong.

2 MR. PAULEY: Well, I can't really see  
3 the screen. I'm assuming the proposal number of what  
4 I see is correct but the comment number is not.

5 MR. CONROY: Yes, sir.

6 MR. PAULEY: The motion on the floor is  
7 to return a portion of the report in the form of  
8 proposal 96-7 and comment 96-2. Is there a second to  
9 that motion? I see a second. Please proceed.

10 MR. CONROY: I am moving the return of  
11 this proposal and this related comment to the  
12 previous edition text which reads as follows, and  
13 this is a definition. The term is certified, and the  
14 definition is a formally stated recognition and  
15 approval of an acceptable level of competency  
16 acceptable to the AHJ.

17 I would like to start by stating that I  
18 am not opposed to the development of programs for  
19 certification of individuals that perform tasks  
20 related to the maintenance and reliability of  
21 restaurant extinguishing systems and proper cleaning  
22 of hood and duct systems. I simply have a problem  
23 with the text proposed for the next edition of the

1 standard.

2                   The text is contained in comment 96-2  
3 of the ROC and it reads as follows: "Certified  
4 person, one who is trained and holds a current  
5 certificate from the equipment manufacturer or a  
6 recognized organization verifying that the holder has  
7 completed a formal certification program and has  
8 demonstrated a satisfactory level of competency that  
9 is acceptable to the authority having jurisdiction."

10                   I emphasized those words intentionally.  
11 This proposed change to NFPA 96 is problematic in  
12 that it places requirements in a definition. It also  
13 has a term recognized organization, but it does not  
14 elaborate on what a recognized organization is or  
15 where to go for a list of recognized organizations.

16                   In this new proposed definition it  
17 would also require that the person demonstrates a  
18 satisfactory level of competency. There are several  
19 current programs out there that do not require  
20 applicants to demonstrate anything. They simply  
21 offer a multiple-choice test. If you pass the test,  
22 you get a document that says you passed the test.  
23 Also, that word satisfactory is in the list of

1 possible unenforceable and vague terms in the manual  
2 of style.

3                   These are my reasons for returning the  
4 text to the previous edition of the standard.  
5 Returning to the previous edition will reinstate the  
6 current definition of certified to the standard and  
7 allow the committee time to study the issue and to  
8 develop requirements, minimum requirements.

9                   In closing I would like to summarize by  
10 stating that I am not opposed to certification  
11 programs. I'm opposed to requirements being placed  
12 in the definition, and I have identified problems  
13 with some of the terms being used, recognized,  
14 demonstrated and satisfactory.

15                   For the record I fully endorse  
16 qualification programs that set an achievable  
17 benchmark and challenge an individual's knowledge of  
18 the subject matter.

19                   MR. PAULEY: Thank you. Mr. Leicht.

20                   MR. LEICHT: Could I defer to the other  
21 speaker first?

22                   MR. PAULEY: Absolutely. Microphone  
23 No. 1, please.

1                   MR. GARDNER: Tom Gardner, chairman of  
2 the healthcare section. The healthcare section has  
3 again voted to support this motion. We have voted  
4 that way because we feel the current wording in the  
5 document is sufficient. Again, the healthcare  
6 section stands in support of the motion on the floor.

7                   MR. PAULEY: Thank you. Mr. Leicht,  
8 would you like to comment now?

9                   MR. LEICHT: Yes, I spoke with a few of  
10 the members of the committee that were here during  
11 this week, and we realized what we were trying to do  
12 and what we actually did do were not necessarily the  
13 same.

14                   We feel comfortable knowing that if  
15 this motion is successful that we go back to a  
16 requirement that is already existing in the standard  
17 and that this motion is looking to eradicate a  
18 problem with the text, and so for that reason we  
19 don't -- we also do not object to this motion  
20 succeeding.

21                   MR. PAULEY: Further discussion?  
22 Seeing none we will proceed to a vote on the motion  
23 which is to return a portion of the report in the

1 form of proposal 96-7 and related comment 96-2. All  
2 those in favor of that motion, please raise your  
3 hand. Those opposed. The motion passes. Thank you,  
4 Mr. Leicht.

5                   We are now at the point where we have  
6 completed all of our documents with the exception of  
7 the NEC. I am getting ready to turn the podium back  
8 to Phil DiNenno, chairman of the Standards Council.  
9 I want to thank everyone. This completes my morning  
10 as your presiding officer. I really appreciate the  
11 group's cooperation in getting through these  
12 documents. Phil, I will turn the podium back to you.

13                   MR. DINENNO: Thank you, Jim. I think  
14 our intention here is to do some awards for NEC  
15 committee members and begin our work on the NEC  
16 report, with any luck at least get through panel one  
17 within the noon hour; and we will then likely have a  
18 lunch break sometime between 12:00 and 1:00 of about  
19 30 minutes in duration. Psychologically it's  
20 probably important to get started. I would like to  
21 echo Jim Pauley's remarks and thank you for your  
22 attention and cooperation in moving the agenda  
23 forward to this point.

1 (Special achievement awards presented.)

2 MR. DINENNO: This concludes the NEC  
3 award presentations, and now I will introduce Pete  
4 Willse who will continue as presiding officer for the  
5 certified amending motions on the National Electrical  
6 Code.

7 MR. WILLSE: Thank you, Phil. Good  
8 afternoon. I'm Pete Willse. I have the distinct  
9 pleasure and privilege of being a member of your  
10 Standards Council. We will now proceed with the  
11 discussion of the certified amending motions for the  
12 National Electrical Code.

13 Here to present the committee's report  
14 is Technical Correlating Committee Chair James  
15 Carpenter of the International Association of  
16 Electrical Inspectors of Richardson, Texas. This  
17 report can be found in the tan 2007 NEC annual ROP  
18 and ROC. The list of certified amending motions is  
19 contained in the motion's committee report on the  
20 screens on either side of me. We will proceed in  
21 that order. Mr. Carpenter.

22 MR. CARPENTER: Thank you, and now it's  
23 good evening. Since there are hardly any certified

1 amending motions for this edition of the National  
2 Electrical Code, we should complete this adoption  
3 process in about ten minutes.

4                   There has been much hard work and  
5 deliberations that have gone into this process, and I  
6 would like to take just a few moments to recognize  
7 some of those people that have had a part in this  
8 process.

9                   First, Mark Earley and his dedicated  
10 staff have made this process progress in a smooth and  
11 efficient manner. I am not going to try to name each  
12 individually because I am sure I would leave someone  
13 out, but I must recognize the driving force behind it  
14 all, Jean O'Connor.

15                   Next the many code panel members, the  
16 panel processed 3,688 proposals and 2,349 comments.  
17 Many of the panel members are here today, and most of  
18 the panel chair are also here. These chairs will be  
19 called upon if needed to respond to questions that  
20 require their knowledge and expertise in explaining  
21 the panel's position on proposals and comments that  
22 have been processed.

23                   The many members of the panel, both

1 participants and alternates, are to be commended for  
2 an outstanding job. Would the members of the  
3 National Electric Code Committee rise and be  
4 recognized.

5                   Lastly but by no means the least I wish  
6 to recognize the principal and alternate members of  
7 the Technical Correlating Committee. They have given  
8 of their time and expertise to try to assure  
9 correlation of the many actions taken by the  
10 code-making panel. Would the members of the  
11 Technical Correlating Committee please stand and be  
12 recognized.

13 NFPA 70 Mr. Chair, ladies and gentlemen, the  
14 report of the National Electrical Code Technical  
15 Committee can be found in the 2007 annual revision  
16 cycle National Electrical Code Committee report on  
17 proposals, ROP, and the 2007 annual revision cycle  
18 National Electrical Code Committee report on  
19 comments, ROC.

20                   The committee proposed a partial  
21 revision to NFPA 70, National Electric Code. NFPA 70  
22 was submitted to a letter ballot of the Technical  
23 Correlating Committee that consists of 11 voting

1 members. The ballots can be found in the ROP and  
2 ROC. The ballot results on each proposal and comment  
3 can also be found within the ROP and ROC.

4 I will now return the podium to the  
5 presiding officer to proceed with the certified  
6 amending motions on NFPA 70.

7 MR. WILLSE: Thank you, Mr. Carpenter.  
8 We will start with No. 1, NFPA 70-1. Microphone  
9 No. 1.

10 MR. CROUSHORE: Thank you, Mr.  
11 Chairman. My name is Timothy Croushore, and I am  
12 representing Allegheny Power. I am the chairman of  
13 code making panel 12 and the submitter of the NITMAM.

14 I move to reject comment 70-1-1, log  
15 No. 832 found on the report on comments, ROC, Page  
16 70-1 on the bottom left-hand side.

17 MR. WILLSE: Do I have a second? I  
18 have a second, thank you. Proceed.

19 MR. CROUSHORE: It should be noted  
20 that should this motion be successful comment 1-2 on  
21 the same page dealing with the same subject matter  
22 and panel action would be rejected. Code making  
23 panel 1 reversed the decision on this issue between

1 the proposal and the comment state, therefore,  
2 allowing anyone to submit a NITMAM on this issue.

3           The action to reject comment 1-1 on  
4 page 70-1 would keep the fine-print note that is  
5 found after 90.2 A 2 but would be editorially updated  
6 to show the most current edition of the National  
7 Electric Safety Code. Unfortunately, the  
8 substantiation supporting comment 1-1 has two  
9 incorrect assumptions.

10           The first assumption is that the  
11 existing fine-print note adds confusion rather than  
12 clarity of the issue, and the second assumption is  
13 the fine-print note places the AHJ in a very  
14 difficult position related to the different  
15 requirements between the two standards.

16           I will first address the first issue on  
17 confusion and clarity. Both the National Electrical  
18 Code and the National Electrical Safety Code are  
19 American national standards and are both codes. Both  
20 documents contain a similar purpose dealing with the  
21 practical safeguarding of persons and property from  
22 the hazards arising from the use of electricity, but  
23 the difference between the two documents is outlined

1 in the scope portion of each document.

2                   Generally the NESC covers utility  
3 facilities and functions up to the service point, and  
4 the NEC covers premises wiring after the service  
5 point. However, the main issue as identified by the  
6 fine-print note is that there are a few electrical  
7 installations that could be covered by either  
8 document. Some of these installations were mentioned  
9 by Mr. Anthony in his negative ballot statement on  
10 comment 1 1. Others include ones that are associated  
11 with an industrial complex or a utility interactive  
12 system where these entities exercise the function as  
13 a utility.

14                   This issue has been known for quite  
15 some time. The solution was implemented by a task  
16 force charged with harmonizing similar requirements  
17 in both documents. This is the reason why there is a  
18 fine-print note in the National Electrical Code and a  
19 similar note in the National Electrical Safety Code.  
20 Both codes cover similar notes referencing the other  
21 code.

22                   The NESC fine-print note has been in  
23 the NEC -- the NESC fine-print note has been in the

1 National Electrical Code since the 1987 edition, and  
2 the rule 0 1 1 note has been in the National  
3 Electrical Safety Code since the 1993 edition.

4           The fine-print note and the note are  
5 designed to provide information to the user of one  
6 document to know about the other. Deleting the NEC  
7 fine-print note does not eliminate the NESC or the  
8 fact that either document could cover a few certain  
9 electrical installations. Rather it just eliminates  
10 information necessary for proper application of code.

11           Let me address the issue on this  
12 substantiation about placing the AHJ in a difficult  
13 position. First of all, fine-print notes in the NEC  
14 and notes in the NESC are not enforceable. The  
15 existing fine-print note does not place the AHJ in a  
16 difficult position at all. Rather the last paragraph  
17 of C of 90 dot 2 C, the scope of the National  
18 Electrical Code which is enforceable clearly defines  
19 the position or maybe the options of the AHJ with  
20 regard to which code covers a particular electrical  
21 installation. 90 dot 2 C is the section that  
22 requires special permission which is written  
23 documentation of the AHJ to -- and they may grant

1 exception for certain installations that are beyond  
2 the service point of the serving utility.

3           So clearly according to this section in  
4 the NEC the AHJ has the call. They are the ones  
5 responsible, 90 dot 2 C. One purpose of the  
6 fine-print note is to provide the AHJ with  
7 information about details of the installation  
8 documents where a suitable exception may be granted.

9           Voting in favor of this motion rejects  
10 comment 1 1 and also 1 2 and keeps the well thought  
11 out scope of both documents and interpretation  
12 consistent and clear. Thank you for your attention.

13           MR. WILLSE: Mr. Carpenter.

14           MR. CARPENTER: I would like to defer  
15 to code making panel one chairman John Minick.  
16 Microphone No. 4.

17           MR. MINICK: In this particular issue  
18 which was our comment in 1-1 the panel took great  
19 note of the substantiation that was submitted for  
20 this and especially where it says that the submitter  
21 here, Mr. Pauley, agreed with the submitter. That  
22 confused him. He thought that the fine-print note  
23 added confusion.

1                   One, we reference a document that is  
2 not a part of the installation of NEC. The next thing  
3 we do is we reference a document that we do not take  
4 excerpts from and that is not part of this family of  
5 codes. So they felt like what we were doing is we  
6 were referencing standards that are outside generally  
7 the purview of electrical inspectors. So to be  
8 confusing right there was exactly the way the panel  
9 saw this and the reason that they removed the note.

10                   MR. WILLSE:     Microphone No. 5.

11                   MR. LABRAKE:    My name is Neil LaBrake  
12 representing Edison Electric Institute. I support  
13 Mr. Croushore's motion to reject comment 1-1. I am  
14 also a principal member of panel 1.

15                   It is Edison Electrical Institution's  
16 position that is referenced in panel one's statement  
17 to reject proposal 1-4 in the ROP found on Page 70-3  
18 and if you refer to my explanation of negative to  
19 accept comment 1-1 in the ROC.

20                   We fully support Mr. Croushore's motion  
21 statement, and on behalf the electric utility  
22 industry that I am representing through Edison  
23 Electric Institute, I respectfully request the

1 general assembly and NFPA to reconsider the proposal  
2 action and reject comment 1-3 to maintain that  
3 fine-print note in 90 dot 2 A 2. That is to provide  
4 information and let the user of the NEC know about  
5 the National Electrical Safety Code which adds  
6 clarity to the National Electric Code.

7 MR. WILLSE: Microphone No. 2.

8 MR. COOK: My name is Don Cook. I am  
9 the submitter of the original proposal and submitter  
10 of comment 1-2. The fine-print note which is, as  
11 Mr. Croushore mentioned, a non-enforceable  
12 information piece of the NEC has been used in debate  
13 with jurisdictions over the scope of the code, which  
14 code applied in these applications where we have  
15 primary measuring points.

16 I certainly don't want to debate about  
17 which code works best for primary installations, but  
18 I do not want to be caught in the middle of a  
19 situation where we have two documents that have  
20 conflicting requirements, and that happens more often  
21 than we might realize in the real world.

22 MR. WILLSE: Thank you. Microphone  
23 No. 4.

1                   MR. STRANIERO: George Straniero, AFC  
2 Cable Systems. I am speaking on behalf of NEMA, the  
3 National Electrical Manufacturers Association. NEMA  
4 supports the panel action and recommends rejection of  
5 the motion on the floor. Thank you.

6                   MR. WILLSE: Thank you. Microphone  
7 No. 4 again.

8                   MR. MINICK: Let me add one last thing.

9                   MR. WILLSE: May I have your name and  
10 affiliation, please.

11                   MR. MINICK: John Minick. I'm  
12 chairman of the code making panel one representing  
13 NEMA. Again, when you reference the National  
14 Electrical Code and if you go and you're trying to  
15 look for alternate means especially to install  
16 certain things and you don't find that in NEC, one of  
17 the things we do have is 90-4 which says that you may  
18 go and use alternate means where they provide equal  
19 means of protection much.

20                   One of the things that the panel --  
21 kind of an underlying issue right here was how  
22 familiar that everyone is, like an electrical  
23 inspector's jurisdiction with that particular

1 document because that's a document that does operate  
2 under a lot of different rules. So when you try to  
3 apply the rules of the NESC in an NEC environment,  
4 then we are not sure that that equals safety would be  
5 there.

6 MR. WILLSE: Thank you. Microphone  
7 No. 3.

8 MR. SHANNON: John Shannon. I work  
9 for KCI Technologies. I just want to --

10 MR WILLSE: Are you a supporter or  
11 against the motion, please?

12 MR. SHANNON: I am sort of standing on  
13 both sides. I would like to point out the confusion  
14 that does occur within NESC. I recently did a job  
15 that was a couple of lights underneath a bridge for  
16 what I would call a footpath where this body is, and  
17 these lights are going to be serviced by a park  
18 department. The utility is going to supply them on  
19 meters because they are going to treat them like  
20 another couple of street lights.

21 I'm standing there and I want to  
22 protect these things with a circuit breaker and a  
23 ground rod and all the things that you do under the

1 National Electric Code, but I can just see the  
2 utility coming back someday and asking me why I have  
3 a circuit breaker on this 15 1/2 circuit because this  
4 is really sort of utility.

5 MR. WILLSE: Thank you. Microphone  
6 No. 4.

7 MR. WILLIAMS: My name Noel Williams.  
8 I am speaking on behalf of myself. My background is  
9 construction contracting, and over the years I've had  
10 many projects that involved overhead line  
11 construction owned by not the utility but the  
12 industrial customer. In all of those cases there is  
13 absolutely nothing in the National Electrical Code to  
14 tell me how to do that.

15 The National Electrical Code  
16 although -- because these installations were on the  
17 load side of the service point, they are within the  
18 scope of the National Electrical Code. They are not  
19 covered by the National Electrical Code. The  
20 National Electrical Code does not tell me how to do  
21 anything about sag, spacing, climbing space, anything  
22 about erection of poles. None of that material is in  
23 the National Electrical Code.

1                   I do not see this as being confusing at  
2 all. What it does provide is a reference to another  
3 standard that deals with the other things that are  
4 not covered, and I've frequently found myself having  
5 to use a different standard and this fine-print note  
6 just gives me direction on where to go for that  
7 additional information.

8                   MR. WILLSE: For the record, are you  
9 for or against?

10                  MR. WILLIAMS: Speaking in favor of  
11 the motion.

12                  MR. WILLSE: Microphone No. 1.

13                  MR. CROUSHORE: Timothy Croushore  
14 representing Allegheny Power, the maker of the  
15 NITMAM. I want to clarify to everybody that the code  
16 permits by 90 dot 2 C the AHJ to give special  
17 permission. It is one of the very few places that  
18 the word "may" appears in the National Electrical  
19 Code.

20                         Let me read you 90 dot 2 C. "Special  
21 permission which by definition means written consent  
22 of the authority having jurisdiction. The authority  
23 having jurisdiction for enforcing this code," using

1 that word, "may grant exception for the installation  
2 of conductors and equipment that are not under the  
3 exclusive control of electric utilities and are used  
4 to connect the electric supply system to the service  
5 entrance conductors of the premises served providing  
6 such installations are outside of the building and  
7 terminate immediately inside the wall."

8                   The issue that comes in is where would  
9 you look for appropriate standards. The object of  
10 the fine-print note provides that information not  
11 only to the AHJ who has the call by 90 dot 2 C  
12 whether or not they may grant that permission. So it  
13 is clearly up to the AHJ and clearly already in the  
14 code. The fine-print note just provides information  
15 on where to find information for these installations.  
16 Thank you.

17                   MR. WILLSE: Thank you. Microphone  
18 No. 4.

19                   MR. LOYD: Dick Loyd speaking for  
20 myself. As a former AHJ we adopt --

21                   MR. WILLSE: In option or in favor?

22                   MR. LOYD: I am in opposition. As an  
23 AHJ we are entrusted with the laws, and we adopt the

1 National Electrical Code. I agree with Mr. Williams  
2 in his comments. There are times when you end up  
3 doing line work and you have to go to another source.  
4 It is not always the NESC because some utilities have  
5 their own rules and regulations other than the NESC;  
6 but for you to allow somebody to go outside the NEC  
7 when it's an adopted law, that has to be done in  
8 another venue.

9                   So I don't think this reference to the  
10 NESC does anything at all for us except maybe, as  
11 Mr. Croushore said, tried to use the NESC which is  
12 not adopted by law without that special permission.  
13 Let's take that -- let's vote with the committee and  
14 support the committee action.

15                   MR. WILLSE: Thank you. Microphone  
16 No. 4 again.

17                   MR. MINICK: John Minick, chairman of  
18 panel one. I'm just going to say one last thing.  
19 This particular issue took away the fine-print note.  
20 The panel voted for that. It does not prohibit any  
21 AHJ from using whatever means that he personally  
22 feels that he needs to use to get a job done. If an  
23 AHJ decides he needs to go to the NESC for rules

1 there to do this, then that would still be his  
2 prerogative.

3                   So this really takes away nothing from  
4 the NESC and the ability of an AHJ to use that  
5 document if he so chooses. The committee just did  
6 not feel it was proper to have this in the purpose of  
7 the NEC.

8                   MR. WILLSE: Thank you. Are there any  
9 further questions? Seeing none we will then go to  
10 vote on the rejection of comment 70-1.1. All in  
11 favor, please raise your hands. All opposed. The  
12 motion fails.

13                   We will move to item 2. Microphone  
14 No. 5.

15                   MR. LABRAKE: My name is Neil LaBrake  
16 representing Edison Electric Institution. I am the  
17 submitter of NITMAM log No. 348. I am also the  
18 principal member of code making panel No. 1.

19                   MR. WILLSE: As a note we have two  
20 NITMAMs submitted as a result of this. They will  
21 both be taken together. Do I have a second? I have  
22 a second. Please continue.

23                   MR. LABRAKE: My motion to the

1 assembly is to reject comment 1-3 on 90 dot 2 B 5 B  
2 in the ROC. Presently comment 1-3 is accepted by  
3 panel one with a bare majority vote. This action to  
4 accept the comment accepts proposal 1-5 in the ROP  
5 which was originally rejected by panel one, and the  
6 text or by other agreement is removed from the not  
7 covered items in the scope of the proposed 2008 NEC.

8 My motion represents that of the  
9 electric utility industry's position to reject  
10 comment 1-3, to return to the present 2005 NEC text  
11 of 90 dot 2 B 5 B. This will maintain the text or by  
12 other agreements in the not covered items in the  
13 scope of the proposed 2008 NEC.

14 For reference I am going to point you  
15 to refer to my comments on the affirmative, to reject  
16 proposal 1-5 in the ROP on Page 70-3 and also my  
17 explanation of negative to accept comment 1-3 in the  
18 ROC.

19 This represents Edison Electric  
20 Institute's position. The reasons for this motion  
21 are first 90 dot 2 B 5 B describes the location of  
22 utility facilities on private property where the  
23 installation and public safety are adequately covered

1 by the National Electrical Safety Code including  
2 those locations covered by other agreements in lieu  
3 of easements or rights of way. In other words these  
4 are other agreements as to location.

5                   Second, there are utilities that  
6 provide their tariff regulated private area lightning  
7 service under a service agreement at customer  
8 property. This service agreement establishes the  
9 utility's right to locate exclusively controlled  
10 utility facilities on the customer's private  
11 property. In addition some utilities place their  
12 equipment under the terms of their public recognized  
13 franchises.

14                   Third, the impact of removing the text,  
15 "or by other agreements," in the not covered status  
16 will result in exclusively controlled by the utility  
17 equipment placed on private property to be installed  
18 according to the NEC or that easements will always be  
19 required for the installation covered by the NESC.  
20 This presents disadvantages to the end user where  
21 cost to serve are ultimately increased or delays  
22 cause to provide a requested service.

23                   The delay to provide service is

1 characterized by the customer needing to provide  
2 required easements that must be recorded in their  
3 local jurisdiction prior to the utility's facilities  
4 being installed which burdens the consumer of this  
5 additional bureaucracy.

6                   On behalf of the electric utility  
7 industry I am representing through Edison Electric  
8 Institute, I respectfully request the general  
9 assembly and NFPA to reconsider the proposed action  
10 in revising the text in 90 dot 2 B 5 B for the  
11 unintended consequences and reject comment 1-3.  
12 Thank you for your attention.

13                   MR. WILLSE: Thank you.  
14 Mr. Carpenter.

15                   MR. CARPENTER: I will defer to John  
16 Minick, chairman of code making panel one.

17                   MR. WILLSE: Microphone No. 4.

18                   MR. MINICK: John Minick representing  
19 NEMA, chairman of code making panel one. I think if  
20 we look back at the comment that came in, the very  
21 first sentence is probably what struck the panel the  
22 most. It says the use of the term, "or by other  
23 agreements," is in essence a total exemption of the

1 NEC for utilities.

2                   When we said exemption, we have to go  
3 back and look at where we are at in the code; and  
4 this is under not covered by the NEC. They felt like  
5 this was too broad a term to just say by other means  
6 and that it should be better spelled out such as the  
7 easement agreement or something like that.

8                   Also it boiled down to the fact that  
9 they point out in here the point about service  
10 points. When you look at the service point, the  
11 service point is a moving target. The service point  
12 is up to where the utility serves, and then on the  
13 other side of that point is where the site wiring  
14 takes place.

15                   So when you say service point, utility  
16 could come by other means, whatever that is, and  
17 install up to the service point which would be where  
18 the site wiring. There doesn't necessarily have to  
19 be site wiring. The utility can come in and as long  
20 as they are installing that could be an undefined  
21 service point because you'd never get to a service  
22 point because everything would be owned and  
23 controlled by the utility.

1                   So the panel looked at this and felt  
2 like this was too broad a term to be put into that  
3 area and so they did not accept and did reverse  
4 themselves and go with a reject, I'm sorry, an  
5 acceptance of this comment.

6                   MR. WILLSE: Thank you. Microphone  
7 No. 5, please.

8                   MR. ROSENSTOCK: My name is Steve  
9 Rosenstock. I'm with the Edison Electric Institute  
10 speaking in support of this motion. I would like to  
11 read a letter for the record.

12                   "Dear NFPA Standards Council Secretary:  
13 It has come to our attention that during the upcoming  
14 NFPA annual meeting a proposal to modify NFPA 70,  
15 Section 90.2 B 5 B, specifically addressed a 2007 NEC  
16 ROC comment 103."

17                   "The proposal will essentially modify a  
18 not covered item" -- quote, unquote -- "and the scope  
19 of NFPA 70 by removing the text," quote, "by other  
20 agreements," unquote. "The National Electric Safety  
21 Code, NESC, executive subcommittee supports rejection  
22 of the comment identified as ROC 70-1-3."

23                   "We also understand that a NITMAM has

1    been submitted by the Edison Electric Institute and  
2    will be presented at the 6 June 2007 NFPA annual  
3    meeting calling for rejection of the comment noted  
4    before and to maintain the existing text," quote, "by  
5    other agreements," unquote, "in the 2008 edition of  
6    NFPA 70, the National Electrical Code."

7                   "Since its inception in 1913 the NESC  
8    is a governing code that is adequate for the industry  
9    it serves and gives utilities flexibility to work on  
10   installations governed," quote, "by other  
11   agreements," unquote.

12                   "We urge rejection of this comment by  
13   the delegates present at the NFPA annual meeting and  
14   ask that industries relevant to the NESC also support  
15   rejection of the proposed modification to NFPA 70,  
16   article 90.2 B 5 B."

17                   "We thank you for your attention to  
18   this important matter. Sincerely, Michael Hyland,  
19   NESC chair, American Public Power Association; James  
20   Tomaseski, NESC vice chair, International Brotherhood  
21   of Electrical Workers; O.C. Amrhyn, past NESC chair;  
22   Frank Denbrock, IEEE; Leon Kempner, Bonneville Power  
23   Institute and Lawrence Slavin, Association for

1 Telecommunications Industry Solutions." Thank you  
2 very much.

3 MR. WILLSE: Thank you. Microphone  
4 No. 6, please.

5 MR. ROBINSON: I'm Wayne Robinson.  
6 I'm against this submittal here, the original  
7 proposal of 90 dot 2 B 5 B, and the issue of -- if it  
8 was an established easement, it would not be too much  
9 of an issue. Right now with utility in my area, the  
10 Maryland area, they have carte blanche to go in and  
11 do what they want. There is no oversight by the NEC  
12 at all on these installations. I am in support of  
13 chair one. Thank you.

14 MR. WILLSE: Microphone No. 1, please.

15 MR. HARTWELL: Fred Hartwell, Hartwell  
16 Electrical Services speaking in support of the  
17 motion. I think we have to track the context here  
18 very carefully. We are talking about utility  
19 activities, for example, parking lot lighting. The  
20 luminaire that will be mounted will be mounted by  
21 utility line crews. The wiring supporting and  
22 energizing the luminaires will be by utility line  
23 crews just the same as lighting on a public highway.

1                   The utilities have been doing this for  
2 over a hundred years. To my knowledge every single  
3 state in the United States has tariff regulatory  
4 processes in place to review this and to allow the  
5 utilities to collect a charge for this. Why? Because  
6 any of this work of distributing electric power on a  
7 public way is inherently a natural monopoly. By that  
8 I mean it is something that simply by its very nature  
9 you cannot have competition. You cannot have two  
10 sets of utility wires from two different utilities  
11 running down a public way. That is why they are  
12 regulated. They have to be because that end of the  
13 business as opposed to the generation end of the  
14 business, that end cannot be competitive.

15                   If you have utilities getting out of  
16 this and getting onto the other side of a service  
17 point, then you have a public commission that is not  
18 doing their oversight responsibility; and that is  
19 something that should be brought to the attention of  
20 the governing authorities in that particular state.

21                   What I'm very concerned about is that  
22 this provision in article 90 will make the 2008  
23 edition of the National Electrical Code unadoptable

1 in any jurisdiction in this country. I know that it  
2 will be unadoptable in The Commonwealth of  
3 Massachusetts. The Massachusetts Electrical Code  
4 Committee has already voted to put this back to 2005  
5 because we take great pride in Massachusetts in being  
6 adopted and on the street on January 1 of a named  
7 code year, and we have done so for the last ten  
8 editions of the code.

9                   It is an absolute certainty that the  
10 utility interest in Massachusetts would delay  
11 successfully the adoption of the Massachusetts 2008  
12 edition indefinitely with this provision in it.

13                   I am also aware that -- I have spoken  
14 with the authorities in New Jersey. It contravenes  
15 the rules in New Jersey and it contravenes the rules  
16 in New Hampshire, and I believe it contravenes rules  
17 in all 50 states.

18                   The Standards Council I believe will be  
19 forced, forced to basically accept this comment,  
20 accept this motion and reject the comment because the  
21 Standards Council is not going to want to be put in  
22 the position of putting a code on the street that  
23 cannot be adopted in any of the 50 states.

1                   Now, all of that said, and I am a  
2 veteran of the --

3                   MR. WILLSE:     One minute, please.

4                   MR. HARTWELL: I am a veteran of the  
5 Duke Power business in the 1990s when we went through  
6 this all back then, and periodically there are issues  
7 on the line side of what should be a service point.  
8 I think that in the 2011 cycle that could be  
9 addressed in this wording and not throw the baby out  
10 with the bath water.

11                   I would ask you to accept the motion,  
12 to vote in favor of it and work in 2011 to try and  
13 bring this in, but the present wording is over-  
14 reaching.

15                   MR. WILLSE:     Microphone No. 4.

16                   MR. STRANIERO:    George Straniero, AFC  
17 Cable Systems. I'm speaking on behalf of NEMA. NEMA  
18 supports the committee action and recommends  
19 rejection of the motion on the floor.

20                   MR. WILLSE:     Microphone No. 5.

21                   THE FLOOR:    Thank you, Chairman. I am  
22 Lesley Sayer Mercado representing San Diego Gas and  
23 Electric. I am speaking in support of the motion on

1 the floor.

2                   The removal of the words, "or by other  
3 agreement," causes SDG&E serious concern because the  
4 federal government and certain local agencies in our  
5 service territory such as the San Diego Unified Port  
6 District and the San Diego Regional Port Authority do  
7 not grant easements or rights of ways in perpetuity  
8 to utilities. We must enter into agreements to place  
9 our facilities on these properties for the purpose of  
10 supplying electric energy.

11                   For example, we are currently working  
12 with the U.S. Department of Forestry on a master  
13 permit to be used for all future electric line  
14 extensions on forestry land. Additionally, we have  
15 12 indian reservations in our service territory.  
16 Indian reservations are sovereign nations. The  
17 Bureau of Indian Affairs, U.S. Department of Interior  
18 manages all land rights conveyances for indian  
19 reservations. For many years we have entered into  
20 service line agreements for our overhead line  
21 extensions to an individual service on indian  
22 reservations.

23                   SDG&E and other electric utilities

1 serving federal lands such as military bases,  
2 national parks, national forests, national  
3 battlefields, Bureau of Land Management Property,  
4 local agencies such as port districts and airport  
5 authorities and indian reservations need the current  
6 provision, "or by other agreements," to remain in 90  
7 dot 2 B 5 B to supply electric energy when easements,  
8 rights of ways or leases as provided in  
9 90 dot 2 B 5 C cannot be obtained.

10 I respectfully request members of NFPA  
11 to consider my comment and vote in support of the  
12 motion to reject comment 70-1-3. Thank you for your  
13 attention.

14 MR. WILLSE: Microphone No. 5.

15 MR. ROSENSTOCK: I'm Steve Rosenstock  
16 with the Edison Electric Institution speaking in  
17 support of the motion. I would like to read you  
18 another letter for the record.

19 "June 1, 2007. Re: NFPA 70, National  
20 Electric code 2008. The American Public Power  
21 Association, APPA, is a national service organization  
22 for the nation's more than 2,000 community-owned and  
23 community-operated electric utilities. These

1 utilities serve more than 43 million Americans in 49  
2 states or approximately 14 percent of the nation's  
3 electricity customers. APPA and its members are very  
4 active in the safety delivery of electricity to the  
5 end consumer including the development of safe work  
6 practices for the benefit of their employees and the  
7 public."

8 "APPA's staff and its members are  
9 active in a variety of safety-focused committees  
10 including the National Electric Safety Code  
11 NESC C 2-2007 and the affiliated subcommittees. I  
12 currently serve as chair of the NESC. It is our  
13 understanding that NFPA motion's to committee has  
14 granted the NITMAM, log NO. 00 348 proposed by Edison  
15 Electric Institute, which will be presented by Neil  
16 LaBrake at the NFPA event in Boston."

17 "APPA fulfill supports the EEI motion  
18 to reject comment 70-1-3 on 90.2 B 5 B in the A 2007  
19 NEC report on comments. The proposal to change the  
20 2005 NEC text was originally rejected by the NEC code  
21 managing panel one. APPA urges you to return to that  
22 decision and ensure that the issue of NEC versus NESC  
23 jurisdiction does not hinder the progress made by all

1 who work safely in the delivery of electric."

2 "Thank you in advance for the  
3 opportunity to support EEI's motion. Sincerely,  
4 Michael Hyland, professional engineer, vice president  
5 engineering services, American Public Power  
6 Association." Thank you.

7 MR. WILLSE: Microphone No. 4, please.

8 MR. MINICK: John Minick representing  
9 NEMA, chairman of panel one. I am a little bit  
10 concerned that this conversation over this debate as  
11 headed toward panel one is creating a national  
12 crisis. I am also concerned that we have experts in  
13 the room that know whatever PUC is going to do in the  
14 United States. Our PUC in Texas is not governed by  
15 the Texas Department of Regulation and Licensing  
16 which controls the NEC adoption there.

17 What our PUC does with our utilities is  
18 direct them with the rules and regulations that they  
19 have, not the Texas Department of Licenses and  
20 Regulation. So to say that all states -- I know that  
21 one here, that is just not true.

22 I am also concerned here over the fact  
23 that this seems to be a prohibition that we are

1 looking at here. Panel one has not prohibited  
2 anything. Panel one does not tell any state they  
3 cannot do this or that. All they are saying here is  
4 they took out a very broad statement.

5 They concede that right of way is  
6 definable, they concede that easements are definable;  
7 but when you say, "by other means," that is not  
8 definable. That is what the issue here was. So  
9 panel one simply thought this was way too broad a  
10 statement to leave in the code, and they decided that  
11 they would remove it for that reason. Thank you.

12 MR. WILLSE: Thank you. Any further  
13 discussion? Seeing none we will move to the vote of  
14 the rejection of comment 70-1-3. All those in favor,  
15 please raise your hands. All those opposed. The  
16 motion fails.

17 THE FLOOR: Division.

18 MR. WILLSE: A call for division.  
19 That means we will have to go to a standing count. I  
20 will not rule on the hand vote. There was a request  
21 for division. I will now call for the standing vote  
22 of the individual members. You must have a badge  
23 with the word voting on the top in the black strip to

1 be counted.

2                   Those voting members please stand. I  
3 will ask all those in favor of the rejection to  
4 please stand. Those with the gold ribbon, would you  
5 please fill out your letter ballot while standing if  
6 possible. You may have a seat. Thank you. All  
7 those opposed, please stand. Please be seated.

8                   Those in favor 82. Those against 117.  
9 The motion fails.

10                   We will continue on to 70-3. I believe  
11 it's microphone No. 1.

12                   MR. HARTWELL: Fred Hartwell, Hartwell  
13 Electric Services Incorporated acting in this case as  
14 a member of code making panel nine moving an  
15 identifiable part of a comment submitted by code  
16 making panel nine. The identifiable part is the  
17 portion of the comment that relocates the text of the  
18 panel action.

19                   MR. WILLSE: I have a motion. Do I  
20 have a second? I have a second. As matter of record  
21 for the members of the audience the identifiable part  
22 is accept the first phrase of the third  
23 recommendation of the comment which reads, "Relocate

1 the requirements as 110-28." Is that correct?

2 MR. HARTWELL: That is correct.

3 MR. WILLSE: Thank you, please  
4 continue.

5 MR. HARTWELL: This has actually been  
6 in front of panel one I believe on three occasions  
7 because it was a panel nine comment in the 2005 cycle  
8 which introduced new material and was thereafter  
9 held. It was a panel nine therefore proposal  
10 because a comment that is held is automatically a  
11 proposal, and then panel nine commented on its  
12 proposal. We wanted to do a number of things  
13 including relocate the table into Chapter 9 of the  
14 code and so forth, and the panel one elected not to  
15 do that. That is fine. That is their call.

16 What this does is correct an error  
17 because the enclosure table is a table that was never  
18 intended to apply to medium voltage applications. It  
19 was only intended to apply to 600 volts and below.  
20 On three occasions panel nine has brought this to  
21 panel one's attention in the context of doing other  
22 things. It was on a list, and panel one has never  
23 responded to this particular aspect of panel nine's

1 concern.

2                   So if this material is relocated  
3 indicated as suggested in this motion, it will be in  
4 the zero to 600 volt portion of article 110 instead  
5 of the general part of article 110 where it would  
6 apply at all voltages, and that is not appropriate.

7                   Something very similar happened in the  
8 late '90s in 110 26 where that material was moved out  
9 of the old 110 16 and over into 110 26. It was  
10 relocated at the Correlating Committee's suggestion  
11 because of the same concern. 110 26 is a 600 volt  
12 and below requirement, not a general requirement.  
13 This is the same issue here. It's simply correcting  
14 an error because that enclosure table is not supposed  
15 to apply to medium voltage.

16                   MR. WILLSE: Mr. Carpenter.

17                   MR. CARPENTER: I would like defer to  
18 code making panel one's chairman John Minick.

19                   MR. WILLSE: Microphone No. 4.

20                   MR. MINICK: John Minick representing  
21 NEMA, chairman of code making panel one. If I  
22 understood correctly the speaker that just spoke, he  
23 said that this will be located in the over 600 volt

1 category, and I don't see that by 110 20 by the  
2 present numbering system that this will be in the  
3 over 600 volt category. Do I have the floor?

4 MR. WILLSE: Yes, you do.

5 MR. MINICK: I had thought I heard an  
6 echo. Anyway, I don't see that this would apply to  
7 over 600 volts.

8 Now, the panel -- when this was first  
9 submitted, this came out of 430 91, motor control,  
10 and this was a table that was in there at the time.  
11 When it was submitted to panel one, panel one  
12 actually accepted it, but then we came back in the  
13 comment stage and got several comments. One of them  
14 was we had some problems there that had not been  
15 cleaned up in the original proposal, and it seemed  
16 like we were -- if we accepted that back in the 2005  
17 cycle, what we would have ended up with is applying  
18 this to all kinds of boxes, outlet boxes and stuff  
19 like that.

20 This was a concern and the panel did  
21 not realize that at the time because of the wording.  
22 So it was held by the panel, and it did come back --  
23 all this came back as proposals, and the panel looked

1 at it and reworked the work again and then we got a  
2 comment on this that reworked it even again in the  
3 2008 cycle here.

4                   In the 2008 cycle when this was  
5 reworked, parts of it -- you also have to go to  
6 another proposal right here which is 1-64. What is  
7 being moved is 1-63. It is the intent of the panel  
8 that this shall be used for selecting the above  
9 enclosures, and there is a laundry list of enclosures  
10 that it would apply to for use in specific areas  
11 other than hazardous location areas.

12                   So the panel felt like this was a  
13 needed reference. This originally had said that this  
14 would give basis for a reference in the code, and  
15 then this was changed by the panel to say these shall  
16 be the references we will have.

17                   Also panel one added some other  
18 material in other proposals that also added a type  
19 one mandatory type language to where we now have a  
20 type one which is generally a dry location. If it's  
21 been a dry location, generally that has not -- that  
22 has been understood. Even that was added in here.

23                   So all types are being identified, and

1 this is clearly in the 600 volts and less type  
2 equipment with the laundry list of equipment there  
3 being the only equipment that this applies to.

4 MR. WILLSE: Thank you. Any further  
5 discussion? Seeing none we will go to the vote on  
6 accepting identifiable part of comment 70-1-63. All  
7 those in favor, please raise your hands. Thank you.  
8 All opposed. Thank you. The motion fails.

9 A word from our sponsors. It is now  
10 about 1:00 o'clock. I was told the food court closes  
11 at 2:00. We will be taking a half hour break. We  
12 will resume at 1:30 with item No. 70-4.

13 (Recess taken at this time.)

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# National Electrical Code NFPA 70

1

National Fire Protection Association

World Safety Conference Exposition  
2007

Afternoon Session

1:45 p.m.

NFPA Association Technical Meeting  
Certified Amending Motions

Table II B (NFPA 70)

2

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1 AFTERNOON SESSION (1:45 p.m.)  
2 Panel 1 Cont. MR. WILLSE: Shall we continue, please.  
3 We are up on Panel No. 1 we're up to 1-4. Will the  
4 maker of the motion at Microphone No. 5.  
5 MR. LaBRAKE: Thank you. My name is  
6 Neil LaBrake, representing Edison Electric  
7 Institute, the submitter of the net ma'am. I hereby  
8 withdraw my motion to the assembly and let the

9 record stand in the ROC and ROP. Thank you.

10 MR. WILLSE: Thank you. We're up to  
11 then 70-5. Mr. LaBrake.

12 MR. LaBRAKE: Again, Neil LaBrake  
13 representing Edison Electric Institute. Again I  
14 hereby withdraw my motion to the assembly and let  
15 the record stand in the ROC and ROP. Thank you.

16 Panel 2 MR. WILLSE: Thank you. We're now  
17 finished with Panel No. 1. We'll go on to Panel  
18 No. 2. I'm sorry. Microphone No. 4.

19 VOICE: I would like to, if possible,  
20 reconsider action taken on Mr. Hartwell Item No. 3  
21 here. If I might. I know that requires a vote for  
22 reconsideration, am I correct? After talking with  
23 you all during the break. Am I in order?

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1 MR. WILLSE: The only question is were  
2 you voting in the majority?

3 VOICE: I voted on the winning side.

4 MR. WILLSE: You voted in the majority.

5 MR. CARPENTER: I have been since been  
6 advise the basis of why I voted on the winning side  
7 was in error. And that's why I'm asking for  
8 reconsideration.

9 MR. WILLSE: To reconsider, as we just  
10 looked up, requires a majority vote. Will all of

11 those willing to reconsider please raise your hands.  
12 All those opposed.

13 Sorry, judging by the vote it looks  
14 like it failed.

15 VOICE: Thank you for your  
16 consideration.

17 MR. WILLSE: We're on Panel No. 2, and  
18 motions number 70-6, 70-7, and 70-8 which deal with  
19 logs 356, 375 and 385. While different in the means  
20 they employ, all seek to achieve the same action.  
21 Specifically, any one of these three motions, if  
22 successful, will maintain exception number 2 to  
23 Section 210.821 and exception number 2 to section

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1 210.8(a)(5). All three motions have been certified  
2 as proper. So as to eliminate multiple debates on  
3 the same proposed action, the following procedures  
4 regarding the orderly and efficient consideration of  
5 these subjects presented by related motions will be  
6 in effect at this technical session. Once any one  
7 of the three motions made in seconded, the two  
8 others will no longer be in order, and the single  
9 motion on the floor will serve as the representative  
10 motion for the purposes of debate and the vote or  
11 proposed action. All persons wishing to participate  
12 in the debate on the proposed action should

13 therefore do so during the presentation or the  
14 representative motion.

15 So we have Motion No. 6, 7, or 8.  
16 Microphone No. 5.

17 MR. LaBRAKE: Yes, Neil LaBrake  
18 representing Edison Electric Institute and submitter  
19 of NITMAM Log No. 356.

20 MR. WILLSE: Which is number 6.

21 MR. LaBRAKE: Number 6.

22 MR. WILLSE: I have a motion. Do I  
23 have a second? I have a second.

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1 Please continue.

2 MR. LaBRAKE: Thank you. My motion to  
3 the assembly is to accept comment 2-22, 210.8 A in  
4 the 2007 NEC ROC on Page 70-41 which would reject  
5 proposal 2-40 in its entirety. Comment 2-22 was  
6 submitted to reject proposal 2-40 in its entirety  
7 which was accepted in principle by Panel 2 in the  
8 A2007 NEC ROP on Page 70-67 by vote of 10 to 2.  
9 Panel 2 rejected comment 2-22 because product  
10 standards were refrigerators and freezers UL 250  
11 limit the leakage current to .75 milliamps, further  
12 stating that if there is a problem the product  
13 standard should be changed. Also, they stated that  
14 the tags to not put refrigerators and freezers on  
Page 5

15 GFCIs only related to historical issues.  
16                   Accepting proposal 2-40 to revise  
17 210.8A means that the existing exceptions for  
18 refrigerators, freezers, garage door openers, sump  
19 pumps, et cetera, in garages and basements will no  
20 longer apply. This decision completely ignored  
21 several practical issues. Sometimes there is more  
22 one GFCI on the circuit, and the combined leakage,  
23 particularly from an outside GFCI could trip the

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1 refrigerator or freezer GFCI receptacle or breaker.  
2 Both older and newer refrigerators will be used in  
3 homes wired according to the proposed 2008 NEC. The  
4 same principle applies for the garage door opener  
5 and the sump pump, for example.

6                   Another cause of nuisance trips is  
7 reported to be due to lightning. Also there are  
8 health, safety, and property damage issues that the  
9 GFCI trips. Sometimes these trips might not be  
10 known for an extended period of time when someone is  
11 away from home. Not only could there be a loss of  
12 food but spoiled food could be a health issue.  
13 Shutdown of the sump pump could cause extensive  
14 damage to the home. Shutdown of the garage door  
15 opener could be a safety hazard for certain older or  
16 disabled individuals. There has been experience

17 that many electrical contractors are very opposed to  
18 eliminating the exceptions as they now appear in the  
19 code. Thus, there is a real possibility of removal  
20 of the GFCI after the original electrical inspection  
21 because the homeowner and/or electrician is not  
22 willing to take the risks mentioned above. It is  
23 unlikely that warning devices could or would be

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1 installed in place of removing the GFCI devices. In  
2 addition to these reasons to maintain the  
3 exceptions, there was no valid evidence presented to  
4 or by Panel 2 to remove the exceptions.

5 On behalf of the electric utility  
6 industry, I'm representing through Edison Electric  
7 Institute, I respectfully request the general  
8 assembly and NFPA to reconsidered the proposed  
9 action in maintaining the existing GFCI exceptions  
10 for refrigerators, freezers, garage door openers,  
11 sump pumps, et cetera, in the garages and basements  
12 for the unintended consequences and accept Comment  
13 2-22. Thank you for your attention.

14 MR. WILLSE: Thank you Mr. Carpenter.

15 MR. CARPENTER: Thank you. I would  
16 like to defer to Code-Making Panel 2 Chairman Ray  
17 Webber.

18 MR. WEBER: Thank you, Mr. Chairman.  
Page 7

19 Ray Weber Code-Panel 2 chairman.

20 In deference to our friend,  
21 Mr. LaBrake, and whom I have great admiration for  
22 him, he did say that the GFCI could trip. He didn't  
23 say that it will trip. And we also had at the panel

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1 lengthy discussion on this issue, and people talked  
2 about sump pumps and older style units, perhaps  
3 problematic years ago not tripping out GFCIs that  
4 are installed now.

5 The crux of the issues lies with a  
6 second owner to a property or something that when,  
7 if and fact this exception stays in, the first owner  
8 may perhaps have a freezer or wash dryer there or  
9 something else that would meet the criteria and not  
10 require the GFCI. They move out and there is  
11 nothing that the new owner would require. We all  
12 perceive well, they're going to religiously go back  
13 and change those receptacles and put in GFCI  
14 protection in there, which clearly doesn't happen.

15 So our position is we did receive data  
16 and substantiation that the allowable leakage  
17 current is indicated from NEMA of the .5 to  
18 .75 milliamperes is well below the threshold of the  
19 4 to 6 milliamperes actuation of the GFCI. And even  
20 though there may be older units out there, if in

21 fact they are tripping a GFCI, chances are there may  
22 be some other problems with those, and the aspect of  
23 electrical safety really is more enhanced by

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1 eliminating these exceptions and doing the GFCI  
2 requirement.

3 So I urge the body to vote against the  
4 amendment and this motion.

5 MR. WILLSE: Thank you. Further  
6 discussion? Microphone No. 4.

7 MR. MORRIS: Thank you, Mr. Chairman.  
8 I rise to speak in favor of the motion that  
9 Mr. LaBrake has made. My name is Wayne Morris from  
10 the Association of Home Alliance Manufacturers. We  
11 respectfully request that the language of the 2005  
12 code be returned and ask that both Code-Making Panel  
13 2 and Code-Making Panel 17 on appliances work this  
14 issue out. Respectfully, the correlating committee  
15 should have allowed Code-Making Panel 17 to discuss  
16 and debate the issue.

17 In deference to Mr. Weber, I certainly  
18 appreciate the fact that they received information  
19 from NEMA about refrigerators, but NEMA doesn't  
20 represent refrigerators manufacturers, and there is  
21 information that suggests that that information is  
22 inaccurate.

I stood before the Electrical Section

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1 yesterday and asked this issue, it was valid. The  
2 Electrical Section did not support the issue. But I  
3 have brought today new information that I ask that  
4 you adhere from one of my colleagues. The original  
5 code proposal would require refrigerators, freezers,  
6 sump pumps and garages and unfinished basements to  
7 be located on GFCI circuits, and while the extension  
8 of GFCI is important, we support GFCI use, we have  
9 seen reports of GFCIs tripping out with new  
10 refrigeration units. There are often long runs to  
11 garages where tripping still does occur even with  
12 new GFCIs. Yes, there have been improvements with  
13 GFCIs to reduce tripping, but it still does happen.  
14 These are unattended areas. People do not visit  
15 them often and may not know that the refrigerator or  
16 freezer is off. In my house, the outside receptacle  
17 is connected to the garage circuit and moisture does  
18 trip the outside receptacle and GFCI breaker. I  
19 have worked with certified electricians. It still  
20 happens. There have been no electric shock or  
21 electrocution reports with refrigerators to CPSC.  
22 We cannot belittle that by saying people don't  
23 report electric shocks. Yes, they do. They report

1 it to the refrigerator manufacturer. And if they  
2 don't report it maybe God is telling them they  
3 should get something fixed.

4 There is no technical substantiation  
5 for this motion. This is a technical document and  
6 we should have technical substantiation for a change  
7 that we make.

8 I ask you how would you feel to come  
9 home after a vacation or weekend and find your  
10 refrigerator or freezer full of food thawed, or  
11 worse, a flooded basement. I wish everyone could  
12 buy a new refrigerator when they purchase a new  
13 home, but that doesn't happen. We would be happy to  
14 let anyone here stand up and give testimony to that  
15 situation, and believe me, our industry would be  
16 very happy with that, but it's not true. Older  
17 refrigerators may have slightly higher leakage  
18 current at certain points in their cycle, and people  
19 do move into new construction with old  
20 refrigerators, especially the ones they put into  
21 basements and garages.

22 If you vote against the motion, you  
23 allow another reason for local jurisdictions not to

1 adopt the code or for electricians to ignore the  
2 code. We respectfully ask that you accept the  
3 motion Mr. LaBrake. Thank you.

4 MR. WILLSE: Thank you. Microphone No.  
5 6.

6 MR. CRIPPS: Michael Cripps with  
7 Association of Home Appliance Manufacturers. I also  
8 spoke in support of the motion. One consideration  
9 of GFCIs which may have been not probably looked  
10 into is the question of the need for accessibility.  
11 GFCIs are required to be tested at regular  
12 intervals, and it is also necessary to be able to  
13 find out whether they have tripped or not by  
14 checking the position of the test button.

15 The exceptions currently in the code  
16 refer to locations which are not readily accessible,  
17 and they refer to locations dedicated to appliances  
18 which are not regularly moved. In both of these  
19 cases, it would appear that the GFCI itself would  
20 not be easily accessed to carry out those tasks. In  
21 the second case because you could anticipate a large  
22 appliance which meets the definition of not being  
23 easily moved being located in front of the

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1 receptacle.

2                   So if these exceptions are taken out,  
3 you would be causing considerable problems for  
4 users, as I say, not tested GFCI and you could not  
5 check his GFCI if he found the appliance had tripped  
6 out to see if that was the reason. And I think  
7 those are reasonably important considerations,  
8 therefore I urge the members to support this motion.  
9 Thank you.

10                   MR. WILLSE: Thank you. Microphone  
11 No. 4.

12                   MR. WATERMAN: Jeff Waterman, with  
13 Liberty Pumps but I'm representing the Sump and  
14 Sewage Pump Manufacturer Association.

15                   MR. WILLSE: Excuse me. Are you for or  
16 against the motion.

17                   MR. WATERMAN: For the motion.

18                   MR. WILLSE: Thank you.

19                   MR. WATERMAN: It's possible for the  
20 power to A GFCI outlet, which a sump pump, sewage or  
21 effluent pump is connected be inadvertently  
22 interrupted due to current leakage elsewhere in the  
23 circuit especially if the circuit includes any

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1 outdoor outlet. Undetected loss of power could  
2 result in significant property damage due to  
3 basement flooding and/or loss of vital services such  
4 as heat.

5 The sump and sewage manufacturers  
6 respectfully request that this proposal be returned  
7 to the code panel for further review and input from  
8 the industry to determine if the current exception  
9 should be retained.

10 Also speaking from personal experience  
11 in the lab at Liberty Pumps, we do use, have tested  
12 GFCIs on ordinary third horse power sump pumps to  
13 which UL requires the maximum leakage current of .5  
14 milliamps. It seem these divisions have somewhat of  
15 a finite life and even a good pump that is well  
16 below the .5 milliamp limit will blow an old GFCI.  
17 Once a new outlet is put in its place, the pump  
18 works normally. Thank you.

19 MR. WILLSE: Thank you. Microphone No.  
20 3.

21 MR. PAULEY: Jim Pauley, Square D  
22 Company, also a member of Code Panel 2.

23 MR. WILLSE: For or against the motion?

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1 MR. PAULEY: Speaking against the  
2 motion.

3 MR. WILLSE: Thank you, for the record.

4 MR. PAULEY: You got me started, Pete.

5 In taking a look at this issue on Panel 2, although  
6 this occurred in the 2008 cycle, this is not the  
7 first time this discussion has happened. It's gone  
8 on frequently and there are a number of dynamics  
9 that have went on with this.

10 First thing is Panel 2 continually  
11 would get for every GFCI requirement wanting to add  
12 more exceptions. We put the one in for utility  
13 sinks. Well you need to add these exceptions that  
14 you have got for unfinished basements and garage to  
15 the utility sinks. And finally the panel after  
16 looking at this over a lengthy period of time said  
17 you know what, we have got some 25-year old  
18 exceptions in the code that do not serve a purpose  
19 any longer today. People want to expand those  
20 exceptions somewhere else, which makes no sense to  
21 be able to do. So the best thing we can do is let  
22 the code catch up with what it did from 25 years ago  
23 and actually take out the exceptions.

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1 The product standards are compatible  
2 with GFCIs. If you go back 25 years ago when the  
3 problems that everybody wants to continue to take  
4 about occurred, GFCIs had trip levels down to the 2

5 1/2, 2 or even some down to the 1 milliamp level.  
6 Appliance leakage currents weren't controlled at  
7 that time either. So sure you had issues that in  
8 the appliance at that could trip GFCI.

9 Another thing you have to remember is  
10 that also resolved some conflicts in the code as  
11 well. Give you an example. You now are required to  
12 have GFCI for any receptacle within 6 feet of a sink  
13 in a dwelling unit. If the sink is in the garage  
14 and you try to apply the exception for the appliance  
15 in the garage and it's within 6 feet of the sink,  
16 which rule do you comply with?

17 So if you put these exceptions back in  
18 you actually create a set of conflicts out of this  
19 that the panel resolved by deleting the exceptions  
20 out of it.

21 So we're dealing with an issue. I  
22 heard some comments about really long runs can make  
23 these trip. I have to tell you, 250 feet one way is

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1 typically the outer end of a run that you can do  
2 from a GFCI circuit breaker to the outlet. 250 one  
3 way is a pretty good size run when you take a look  
4 at it. If that's a problem, you can use a GFCI  
5 receptacle at the outlet then you don't have a  
6 capacitance issue on the circuit at all to be able

7 to deal with.

8 People talked about what if another  
9 outlet is installed on it. If you're truly  
10 concerned about those issues, they can all be  
11 resolved by circuit arrangement and circuit wiring.  
12 You don't have to put the outdoor outlets on with  
13 the garage outlets. Do it a different way. The  
14 code gives you that designs flexibility to be able  
15 to do so it.

16 We heard a lot of issues. This did not  
17 come simply for Panel 2. It's been discussed over  
18 multiple code cycles to be able to get there, and I  
19 will urge you to support the panel's action.

20 MR. WILLSE: Thank you. Microphone No.  
21 4.

22 MR. WEXLER: Thank you, Mr. Chairman.  
23 Dave Wexler speaking on behalf of Dave Wexler

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1 homeowner, just a common person, not a technical  
2 person, not beyond any code panel, but just somebody  
3 who is going to give you an enlightenment of a  
4 retail experience. I was down in a temporary --

5 MR. WILLSE: For or against the motion?

6 MR. WEXLER: Sorry. Green 4. For the  
7 record I was following the direction earlier.

8 I was down in a Puerto Rico facility

9 being down there for a couple of weeks and the  
10 refrigerator was plugged into a GFCI. For some  
11 reason something fell. We lost all the groceries.  
12 The house had to be fumigated. We couldn't enter it  
13 without Scott air packs because everything had  
14 totally been destroyed by the lack of power on the  
15 refrigerator. We don't know what caused it because  
16 the refrigerator was condemned.

17 This was not an old refrigerator. This  
18 was a fairly modern refrigerator. So again, I  
19 should have known better. I should have gone down  
20 with all my electric knowledge and capabilities to  
21 verify the circuit, but forgive me, I don't expect  
22 the refrigerator to trip on a fault current from a  
23 GFCI. I expect it to keep stuff in the refrigerator

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1 frozen or cool. That's what we're talking about  
2 here. Let's not make it anymore complex than it  
3 needs to be. There is no substantiation that  
4 anybody has been electrocuted from a refrigerator  
5 that I'm aware of.

6 And so I suggest that we need to move  
7 on with this and support this. Thank you.

8 MR. WILLSE: Thank you.

9 Microphone No. 2.

10 MR. COOK: Donny Cook, Shelby County,

11 Alabama. I speak in opposition to the motion on the  
12 floor. One of the comments earlier was the GFCI can  
13 be behind the refrigerator of a washer machine and  
14 people wouldn't be able to reset the ground fault or  
15 test the ground fault. Because the outlets are  
16 required to have, would be required to have GFCI  
17 protection wouldn't require the GFCI to be installed  
18 behind them. They could be installed in other  
19 places.

20 I think the panel looked at the issue  
21 and I think they made the right decision, and I  
22 would urge you to support the panel action.

23 MR. WILLSE: Thank you.

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1 Microphone No. 3.

2 MR. SHANNON: I'm John Shannon. I work  
3 for KCI Technology. I'm against the motion for this  
4 reason: What is a dedicated space in a garage? You  
5 have got a 20 by 20 rectangular garage. What is the  
6 dedicated space? The next thing is what happens in  
7 a garage? Every once in a while I clean out my  
8 garage and go in there with a hose and hose it down.  
9 Now what we're talking about, GFCI on refrigerators,  
10 every convenient store has a sink with a food prep  
11 area and they have refrigeration and they're plugged  
12 in, and guess what, they all have to be GFCIs

13 because kitchen areas and commercial and industrial  
14 establishments have to have all GFCIs.

15 We asked the question because of a job  
16 we were doing for a church, and the reply that came  
17 back from NFPA was yes, the refrigerator was the one  
18 they were thinking of because of people hosing  
19 things down, and actually they supposedly have  
20 records of electrocutions that have occurred because  
21 of that in commercial spaces. If a huge commercial  
22 refrigerator can work of a GFCI, surely a small home  
23 refrigerator can.

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1 How many of these so-called dedicated  
2 receptacles are actually duplex receptacles where  
3 the homeowner can plug in a cord and run out to  
4 anything else within the garage? We don't know what  
5 is going to happen to that receptacle. I'm in favor  
6 of deleting this exception.

7 MR. WILLSE: Thank you. Microphone No.  
8 4.

9 MR. HOLEN: Richard Holen. Speaking on  
10 behalf of myself and speaking in favor of this  
11 motion. I would ask Panel 2 if they believe so  
12 strong that GFCIs should we used for sump pumps and  
13 refrigerators to go that next step and require  
14 dedicated circuits for said installations. One of

15 the biggest problems I see with nuisance trips on  
16 GFCIs is when you have load fed receptacles such as  
17 the outdoor receptacle fed from the same GFCI  
18 circuit.

19 So if we're going to take this step and  
20 say that GFCIs should be applied, then I believe we  
21 should take the next step and say they should be  
22 dedicated circuits and that way we can track how  
23 many of these are truly working and how many are

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23

1 not. Thank you.

2 MR. WILLSE: Thank you. Microphone No.  
3 5.

4 MR. GROVE: Thank you, Mr. Chairman.  
5 My name is Don Grove. I work for Whirlpool  
6 Corporation in corporate product safety. I worked  
7 for Underwriter Laboratories for 31 years and I have  
8 conducted personally thousands of leakage current  
9 tests and witnessed many more.

10 The Whirlpool and Underwriters  
11 Laboratories, we want to make sure that all safety  
12 requirements are based on facts, based on the  
13 correct information, based on knowledge, and address  
14 all of the concerns that are brought together for  
15 everybody. And we think that the best product  
16 safety is what is based on facts and not opinions.

17 GFCIs are great products. They, I  
18 believe, have saved a lot of lives. When I look at  
19 the CPSC data and I see the shock deaths in homes  
20 going down, I think that GFCIs probably made a huge  
21 contribution to that.

22 We also have to understand when we  
23 apply a safety device in a house that there are

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1 human factors that apply. There are other things  
2 that we have learned throughout the years, and we  
3 need to do that in a reasonable and planned fashion.  
4 I would probably support the concepts of dedicating  
5 the receptacles and identifying them as a good idea.

6 In some of the facts that we really  
7 want to consider in these is number 1, when the  
8 requirements were put in I think there was a great  
9 deal of wisdom on the committee, the people that put  
10 those in place had information. They knew what they  
11 were doing and they put very good requirements in  
12 place, and I think they have served us very well,  
13 because we don't have shock hazard incidents from  
14 nonGFCI protected receptacles where refrigerators  
15 sump pumps and other dedicated equipment are used.  
16 When it came to leakage current, it's true that the  
17 requirement for refrigerators is .75 milliamps, but  
18 it's very typical in a refrigerator to have a calrod

19 heating element which is dedicated for defrost. In  
20 conducting a typical leakage current test, the  
21 leakage current is measured in the first five  
22 seconds and then measured after 10 minutes, and  
23 during that time the leakage current is specified.

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1 During the 10 minutes interval, electric currents  
2 can go up to 5 milliamps permit for a period not  
3 longer than 5 minutes. So it's not unreasonable to  
4 anticipate that a refrigerator meeting the UL  
5 requirements could have a leakage current that would  
6 trip a breaker which was set between 4 and 6  
7 milliamps.

8 We also do know very clearly that there  
9 are nuisance trippings. I personally installed 6  
10 GFCIs in an older home that I currently live in. 3  
11 in the kitchen and 3 in the garage, and sorry, 7  
12 because I installed one down in the basement. I  
13 have had one trip already in the last year, nuisance  
14 trip. I went out to use it and it had tripped. And  
15 the one in the basement has tripped about 50 percent  
16 of the time when I go down there to use it. These  
17 are brand new and I won't say who manufactured them,  
18 but I'm sure they're here.

19 So we do know that nuisance trips do  
20 occur. They occur partly because of the product.

21 They occur partly because of line transients and  
22 other things that occur that are outside of the  
23 parameter that are tested for which we know happen,

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1 and they occur because of environmental conditions  
2 that may be transient. Moisture, or some dust  
3 particles or whatever that can cause different  
4 current flow between what is going down the line and  
5 what is going back, the line that aren't related to  
6 the products. So we do know that that happens.

7           When that happens, we do not want to  
8 create additional hazard. And there are hazards  
9 related to property damage and other hazards because  
10 of floods, if the sump pump doesn't work, and  
11 because of spoiled food. At Whirlpool of course we  
12 do get complaints and get people telling us that the  
13 refrigerator didn't work and they lost hundreds of  
14 dollars worth of meat and food. Sometimes we get  
15 those refrigerators back, and the gentleman that  
16 said you needed a gas mask, he is absolutely  
17 correct. It's a bad scene.

18           So we do know that that happens. And  
19 we put into our manuals the statement do not connect  
20 to a GFCI circuit because we are concerned --

21           MR. WILLSE: 30 seconds.

22           MR. GROVE: -- about the customers who

23 will be upset with the refrigerator that trips, and

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1 they haven't received proper information about their  
2 food.

3 And so in summary I really don't want  
4 safety to get a bad wrap. For me it's very  
5 important that the safety requirements are  
6 reasonable, and I don't put something in place that  
7 irritates my consumers or my people that own the  
8 product, and then that creates the possibility that  
9 they will defeat the system, and I may lose a lot of  
10 other GFCI receptacles down the line. I do not  
11 support.

12 MR. WILLSE: Thank you.

13 Microphone No. 2.

14 MR. DOWLING: Thank you, Mr. Chair, my  
15 name is Jim Dollard from IBEW Local 98 in  
16 Philadelphia. And I rise in opposition to the  
17 motion on the floor. We've heard many discussions  
18 this morning about refrigerators. This is much more  
19 than refrigerators. As Mr. Pauley pointed out  
20 earlier, this is absolutely necessary for proper  
21 correlation in 210.8. I urge you to support -- to  
22 not support this and support the panel action.  
23 Support code-making panel 2 and vote in opposition

1 to the motion on the floor. I don't think anyone in  
2 the room would argue that it is better to lose a  
3 refrigerator full of perishables than to perish  
4 while using your refrigerator. There is no data  
5 submitted to CMP 2 to say there were nuisance trips.  
6 The product standard limits the leakage current to  
7 .75 milliamps. The Electrical Section did not  
8 support this NITMAM.

9 I urge you to oppose the motion on the  
10 floor. Thank you, Mr. Chairman.

11 MR. WILLSE: Thank you. Again  
12 Microphone No. 2.

13 MR. JOHNSTON: Thank you, Mr. Chairman.  
14 Mike Johnston, I A E I. I move to call the question  
15 and the debate.

16 MR. WILLSE: Thank you. The question  
17 has been called. All those in favor signify by  
18 saying aye. Sorry. Raise your hands. Thank you.

19 All opposed to closing debate raise  
20 your hands.

21 We'll now move on the vote of 70-6, 7,  
22 8 which deal with log number 356, 375, and 385. All  
23 those in favor place raise your hands. All opposed.

1                   Motion fails. And that completes Panel  
2 No. 2. We are up to Panel No. 3 and document  
3 NITMAM No. 70-9.

4                   Microphone No. 4.  
5 Panel 3

6                   MR. ROBERTS: Thank you, Mr. Chairman.  
7 My name is Larry Roberts. I represent WireGuard.  
8 And what I'm asking for is to accept the motion to  
9 accept as modified by the technical committee on  
10 that comment.

11                   MR. WILLSE: I have a motion made. Do  
12 I have a second? I do have a second?

13                   Please continue.

14                   MR. ROBERTS: This is a very simple  
15 point and what it is talking about is a problem that  
16 occurs in the construction process. An electrician  
17 runs his wires, he runs it into an outlet box. At  
18 that point he leaves. Then comes a drywaller. He  
19 comes in, he throws up drywall, then sticks a router  
20 in there and cuts that drywall out. In an  
21 overwhelming number of times he will actually  
22 damage, nicks, splice or cut that wire.

23                   Then what happens, the house gets  
finished, it gets mudded, painted. Then he comes

1 back, the electrician comes back. His walls are all  
2 painted and he reaches in and finds those wires cut  
3 or nicked, all the way back in many cases.

4 Now he has a solution. He either pulls  
5 a new wire tearing up that drywall or splices it or  
6 tapes it. And that's what is going on.

7 We've done surveys with electricians  
8 over the last couple of years, and we surveyed a  
9 couple of thousand of them across the United States.  
10 This is an overwhelming problem that occurs in  
11 nearly every single construction job based on their  
12 information. 80 percent of those electricians who  
13 tell us they run into this wire issue, they say they  
14 tape or they splice the wires. They'll even shove  
15 it back up the wall. Some, they have help. They  
16 have a union that can stand behind them and say  
17 we're rerunning a wire which tears out a drywall.  
18 20 percent wouldn't even answer the question of what  
19 they actually do.

20 The NFPA did an analysis of fire stats.  
21 They published it in July of 2006. What it stated  
22 was that home fires still account for about 3,300  
23 fire deaths a year. 45 percent of all household

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2 and receptacles. And that the material first  
3 ignited is wire insulation and the framing members.

4           There are many arguments against, that  
5 I've heard against why wouldn't you demand that you  
6 use like a plate or a cover to keep that router bit  
7 out of there. And most of them say you don't want  
8 to burden the electrician in having to do this.

9           But truly, I'm not an electrician. I'm  
10 home owner. The burden is carried by the homeowner.  
11 He is the one that smells that electric burn inside  
12 a wall and wonders why or he is the one that can't  
13 run a vacuum cleaner because it keeps blowing a  
14 circuit or not enough power pull or there is a power  
15 degradation, on he is the one that gets fire up the  
16 wall.

17           So, protecting practical safeguarding  
18 of persons and property, this would definitely do  
19 that. This is an act that would actually stop  
20 router bits from going in there. If you put a plate  
21 or some kind of cover in front of that outlet, when  
22 the electrician comes back he simply removes it.  
23 His wires are fine. If an electrical inspector

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1 wants to remove it to make sure the wires are fine  
2 it's totally okay to do that.

3           So there is definitely a situation with  
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4 it. And when we talk to electricians, even here,  
5 they tell you repeatedly, I shove them all the way  
6 back in the back of the box. Somehow they manage to  
7 cut these wires.

8 Now even if you have GFCI in there, you  
9 can literally get the fire burning while that still  
10 hasn't tripped that circuit. So what I'm saying is  
11 this is to require the use of some kind of  
12 protection that keeps router bit outside of those  
13 wires, and I'm asking for your support on adopting  
14 that.

15 MR. WILLSE: Thank you. Mr. Carpenter.

16 MR. CARPENTER: Thank you. Whereas  
17 this concerns action by the technical correlating  
18 committee, I will call on Mike Toman, a member of  
19 the Technical Correlating Committee to address.

20 MR. TOMAN: Thank you, Mr. Chairman.  
21 I'm Mike Tolman, a member of the Technical  
22 Correlating Committee. TCC speaks in opposition to  
23 the motion. This comment is related to other

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1 proposals and comments pertaining to this concept  
2 which is resulted in a correlation issue. As  
3 referenced in the TCC action on this comment 3-8.  
4 The related proposals are 3-32, 3-35, and 3-36 along  
5 with comments 3-8 and 3-13 through 3-17.

6 Code-Making Panel 3 acted on these  
7 related comments and referenced proposals by  
8 accepting in principle comment 3-8 and referring the  
9 other related comments back to the action taken on  
10 comment 3-8. These related comments were also  
11 accepted in principal and subsequently through the  
12 panel's statement referred back to the comment on  
13 3-8. With it being apparent that there was a  
14 correlation issue regarding this concept, the  
15 Technical Correlating Committee had its ROC meeting  
16 took the following action with this TTC note.

17 On comment 3-8 the TTC note reads as  
18 follows: The TTC directs that this comment and  
19 proposal 3-32 be reported as whole. The TTC will  
20 appoint a task group including members from  
21 code-making panels 1, 3, and 9 to review and  
22 correlate this issue during the 2011 code cycle.  
23 The TTC notes that code-making panel 9 rejected the

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1 concept in proposal 9-38. In addition, the concept  
2 proposed applies beyond Chapter 3 related  
3 requirements. In summary, the Technical Correlating  
4 Committee continues to maintain this position that  
5 the concept should be held for further review and  
6 correlation during the 2011 code cycle, and requests  
7 that this motion be opposed. Thank you.

8 MR. WILLSE: Thank you. Any further  
9 discussion?

10 Microphone No. 4, again, please.

11 MR. ROBERTS: Larry Roberts, again from  
12 WireGuard. The one thing I want to point out, there  
13 is about 1.5 million houses a year being built and  
14 these statistics from the NFPA only talk about  
15 houses, not commercial properties, hotels,  
16 restaurants, et cetera. That's another 4 years  
17 before the problem gets addressed. This problem is  
18 well known by electricians, well known by electrical  
19 inspectors. They see it and they're aware of it.  
20 It's showed up in one form or another for 4 code  
21 cycles already, and we're looking at taking it even  
22 farther.

23 MR. WILLSE: Thank you. Microphone

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1 No. 1.

2 MR. CASPARRO: Paul Casparro, principle  
3 member of Code-Making Panel 3. 300.4 has been in  
4 the code for years now, and this is a way to protect  
5 the conductors. This NITMAM was in favor of the  
6 comments. It wasn't against it. For years and only  
7 installers sitting in this room can justify this,  
8 that cables and conductor have been damaged from  
9 router bits, keyhole saws, sheet rock screws,

10 spackling that has been packed into the boxes,  
11 paint, and it is a problem, and this is a way that  
12 we can justify fixing this problem. We stand in  
13 support of the motion on the floor. Thank you.

14 MR. WILLSE: Thank you. Microphone No.  
15 4, please.

16 MR. HIRSCHLER: Marcelo Hirschler, GBH  
17 International speaking for myself. I am in support  
18 of the motion on the floor. I want to point out  
19 that the technical committee did approve the motion  
20 accepted in principle vote of 9 to 4, and I think  
21 this is a safety issue particularly safety to the  
22 electrical workers involved. I think it would be a  
23 very good idea to have something in the code and

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1 then we can always fix it, the code is not cast in  
2 stone. We can always fix it next time. Thank you.

3 MR. WILLSE: Thank you. Microphone  
4 No. 3.

5 MR. SHANNON: John Shannon,  
6 professional engineer speaking for myself. I have a  
7 new home built in --

8 MR. WILLSE: For or against?

9 MR. SHANNON: I'm for the motion. I  
10 had a new home built in 1989. Every home in the  
11 development had the same thing I did. The painter

12 came in and painted all the conductors. How in the  
13 world do you tell the black from white conductor  
14 after it's painted with a room color I don't know.  
15 The drywallers used a knife. Fortunately they  
16 sliced some of them and some of them -- this has  
17 been you can see a problem for at least 10 years and  
18 it's not going away. That same builder is still  
19 building, still probably doing the same thing.  
20 Unfortunately, this will probably be ignored.

21 MR. WILLSE: Thank you.

22 MR. SHANNON: It gets into the building  
23 cycle.

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1 MR. WILLSE: Microphone No. 4.

2 MR. MILATOVI CH: My name is Bob  
3 Milatovich. I'm inspector in Clark County, Nevada,  
4 Las Vegas area.

5 MR. WILLSE: For or against.

6 MR. MILATOVI CH: Against the motion.  
7 We keep hearing that they are going to damage the  
8 wires. We make approximately 2,000 inspections a  
9 day on new homes and commercial buildings. We've  
10 told the builders that we don't care if they use  
11 routers or any other device to cut around the boxes.  
12 But if they nick one even, if it's on the end, they  
13 will be required to replace the whole run, and

14 believe me, that gets their attention in a real  
15 hurry. Thank you.

16 MR. WILLSE: Thank you. Microphone  
17 No. 1.

18 MR. RIESBERG: Marty Riesberg speaking  
19 on behalf of being a member of Panel 3, and I urge  
20 you to support the action of the panel and support  
21 this NITMAM.

22 MR. WILLSE: Thank you.  
23 Microphone No. 3.

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1 MR. PAULEY: Jim Pauley, Square D  
2 Company, speaking against the motion. I think we  
3 are making it more complicated. The Correlating  
4 Committee said Look, Panel 3 got this, Panel 9 had  
5 gotten a proposal on it. Panel 9 rejected it.  
6 Panel 3 accepted it, and quite frankly, at the TCC  
7 it is not really clear whose jurisdiction it belongs  
8 to, and that's really what the TCC has said. We  
9 need to take a step back and straighten it out.  
10 People are talking about outlet boxes in this, but  
11 you put it in Article 300 if you are going to apply  
12 it to cabinets and cut out boxes which are in  
13 Article 312 as well. And that hasn't been discussed  
14 at all yet. You did pick up on those and that was  
15 one of the issues under the purview of Panel 9.

16                   So the jurisdiction is not clear to be  
17     able to do it. I'm not arguing about whether or not  
18     it's a good idea or a bad idea. It's simply that  
19     you have got two different code panels that took two  
20     different actions. The TCC did exactly what they  
21     were supposed. They said take a step back, make  
22     sure it's where it needs to be, correlate it, and as  
23     the note said, put together a task group to try to

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1     work it out for the next code cycle.

2                   MR. WILLSE: Thank you. Microphone No.  
3     4.

4                   MR. BURNS: Julian Burns representing  
5     LaSalle. Call the question.

6                   MR. WILLSE: The question has been  
7     called. All in favor of calling the question,  
8     please raise your hands. Thank you. All opposed.  
9     Motion carries.

10                  Now we go to vote on 70-9 which is Log  
11     358. All those in favor please raise your hands.  
12     Thank you. All opposed.

13                  Motion fails.

14                  THE FLOOR: Standing count please.

15                  MR. WILLSE: Request for a standing  
16     count. I'll now call for a standing vote of the  
17     individual members. You must have a badge with the

18 word voting on the top with a black stripe to be  
19 counted. Those voting for the motion please stand  
20 and remain standing.

21 (Affirmative vote counted.)

22 You may be seated. Those opposed  
23 please stand.

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1 (Negative vote counted.)

2 Those organization reps with the gold  
3 badge please fill out your organizational ballot and  
4 send it in. Remain standing if you're standing.

5 You may be seated.

6 The motion is defeated 86 for, 157  
7 against. So we continue.

8 We're up to Item No. 70-10. Will the  
9 maker of the motion if present please let us know.  
10 Seeing nobody at the mike we are going on to 70-11.

11 70-11. Seeing nobody going to the  
12 mike, we are up to 70-12.

13 Are you from 70-12?

14 MR. LaBRAKE: Yes, sir.

15 MR. WILLSE: Thank you.

16 MR. LaBRAKE: My name is Neil LaBrake  
17 with the Edison Electric Institution, maker of  
18 NITMAM and I hereby withdraw my motion and let the  
19 record stand in the ROC and ROP. Thank you.

20 MR. WILLSE: Thank you. 70-13.

21 MR. FRASER: Bruce Fraser and I'm the  
22 designated representative for Tom Hammerberg of the  
23 Automatic Fire Alarm Association, and I move to

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1 accept comment number 3-133 on Page 487.

2 MR. WILLSE: We have a motion made to  
3 accept comment 70-3-133. Do I have a second?

4 THE FLOOR: Second.

5 MR. WILLSE: I have a second. Please  
6 continue.

7

8 MR. FRASER: The Automatic Fire Alarm  
9 Association is an industry organization dedicated to  
10 improving the quality and reliability of fire and  
11 life safety system installations. Actually the next  
12 few NITMAMs we're trying to address a series of  
13 issues that would be helpful in providing additional  
14 information especially to installers of these  
15 systems.

16 We realize that the NITMAMs may result  
17 in some duplication of text but feel under the  
18 circumstances it's worthwhile and will provide help  
19 to both designers and installers of these life  
20 safety systems. And we also want to avoid having to  
21 place wiring requirements in NFPA 72. We wanted to

22 try to avoid that at all costs.

23 The temperature rating relative to

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1 comment 3-133, the temperature rating marking on  
2 cable is important in that some installations  
3 require wiring to be installed in high temperature  
4 environments such as under roof decks and to rooftop  
5 units. The panel statement indicates that UL  
6 standard already does what is requested in the  
7 comment. However, UL is not the only listing  
8 organization and in addition designers and  
9 installers don't necessarily have ready access to  
10 the UL test standard.

11 Therefore, we request that comment  
12 3-133 be accepted.

13 MR. WILLSE: Thank you. Mr. Carpenter.

14 MR. CARPENTER: Thank you. I'll  
15 defer to panel chair of Code-Making Panel 3 Dick  
16 Owen.

17 MR. OWEN: Mr. Chairman, Richard Owen,  
18 chairman of Panel 3. I'm speaking in opposition to  
19 the NITMAM. As was mentioned by the previous  
20 person, the requirement for the temperature rating  
21 is already in the UL standard, and UL standard is  
22 enforced by all testing laboratories not just  
23 Underwriters Laboratories. Therefore the panel

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1 voted 12 to 1 that this was not necessary to be  
2 repeated in the NEC.

3 MR. WILLSE: Thank you. Microphone No.  
4 3.

5  
6 MR. HIRSCHLER: Marcelo Hirschler, GBH  
7 International speaking for the American Fire Safe  
8 Council in opposition to the motion on the floor.  
9 There is absolutely no need to start incorporating  
10 more and more information in the code. This is a  
11 typical example and we're going to have more and  
12 more of those coming up later this afternoon of  
13 things that should go in the standard and not go in  
14 the code. This is unnecessary information and it is  
15 much more appropriate included in the standard.  
16 Thank you.

17 MR. WILLSE: Thank you. Further  
18 discussion. Seeing none we'll now go to the vote of  
19 NITMAM No. 70-13, Log No. 362. All those in favor  
20 please raise your hands. Thank you.

21 All opposed. Motion fails. Thank you.  
22 NITMAM No. 70-14. Microphone No. 3.

23 MR. FRASER: Bruce Fraser, again I'm

1 the designated representative for Tom Hammerberg of  
2 the Automatic Fire Alarm Association. This next one  
3 is very similar to the one that just previously  
4 failed. I will withdraw it assuming that the  
5 outcome would be the same.

6 MR. WILLSE: Okay. Thank you. Are you  
7 looking at Number 15 too?

8 MR. FRASER: I am.

9 MR. WILLSE: Number 15.

10 MR. FRASER: Again, my name is Bruce  
11 Fraser. I am the designated representative for Tom  
12 Hammerberg of the Automatic Fire Alarm Association  
13 and I move acceptance of Comment 3-148.

14 MR. WILLSE: A motion made for  
15 acceptance of 70-3-148. Do I have a second?

16 THE FLOOR: Second.

17 MR. WILLSE: I have a second. Please  
18 continue.

19 MR. FRASER: Accepting Comment 3-148  
20 would be helpful to ensure installers are directed  
21 to the appropriate sections of Article 250 on  
22 grounding. It is important for installers to be  
23 aware of the unique grounding requirements for fire

1 alarm systems, that is, the fire alarm control unit  
2 must be grounded however the fire alarm sensing and  
3 control circuits are not typically grounded. The  
4 sensing and control circuits typically include  
5 ground sensing circuits making it important to  
6 ground the control unit for reference in compliance  
7 with Article 250.

8 MR. WILLSE: Thank you. Mr. Carpenter.

9 MR. CARPENTER: I'll defer to  
10 Code-Making Panel chair 3 Richard Owen.

11 MR. WILLSE: Thank you. Microphone  
12 No. 3.

13 MR. OWEN: Richard Owen chairman of  
14 Panel 3. The panel voted 12 to 1 against this  
15 speaking in opposition obviously and we note that  
16 section 250-12 already states that fire alarm  
17 circuits must comply with parts 2 and 8 of Article  
18 250 therefore putting a reverse reference in Article  
19 760 was not necessary, and as I said, the panel  
20 voted against it.

21 MR. WILLSE: Thank you. Microphone No.  
22 3 again.

23 MR. HIRSCHLER: Marcel o Hirschler, GBH

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1 International speaking for the American Firearm  
2 Safety Council. As you heard from Dick Owen, there  
3 is no need for this. This is already covered, but I  
4 want to point out something else. This is the start  
5 of a campaign to try to get Article 760 out  
6 including the Chapter 8 so that it does not require  
7 to be covered by the first six articles, and that's  
8 the rationale for doing this.

9 So I think it's very, very important  
10 that you deny this motion. Thank you.

11 MR. WILLSE: Thank you. Further  
12 discussion? Microphone No. 4.

13 MR. FRASER: I don't know where that  
14 came from. That is totally false. But what --

15 MR. WILLSE: For or against the motion?

16 MR. FRASER: I'm speaking for the  
17 motion.

18 MR. WILLSE: Thank you.

19 MR. FRASER: What we're trying to do is  
20 be helpful for the installers. They don't always  
21 look and go to directly one section or the other. I  
22 think references are very helpful to the installer.

23 MR. WILLSE: Thank you. Further

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1 discussion? Seeing none, we'll go to vote on NITMAM

2 70-15, Log No. 364. All those in favor please raise  
3 your hands. Thank you.

4 All opposed. Motion fails.

5 We're up to 70-16. Microphone No. 3.

6 MR. FRASER: My name is Bruce Fraser,  
7 and I am the designated representative for Tom  
8 Hammerberg of the Automatic Fire Alarm Association.  
9 I move to accept comment 3-151.

10 MR. WILLSE: Thank you. I have a  
11 motion to accept comment 70-3-151. Do I have a  
12 second? I have a second.

13 Please continue.

14 MR. FRASER: The physical separation of  
15 Class A outbound and return circuits is very  
16 important for system functionality, in the event of  
17 a fault. Far too often Class A circuits installed  
18 with outbound and return conductors in the same  
19 cable or raceway. The fire alarm system wiring  
20 requirements were removed actually from NFPA 72, the  
21 National Fire Alarm Code, and placed in Article 760  
22 over 20 years ago. Since then NFPA 72 National Fire  
23 Alarm code has introduced new system design and

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1 installation requirements and technologically  
2 advanced functionality. So we believe the reference  
3 should be there.

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4 MR. WILLSE: Thank you. Mr. Carpenter.

5 MR. CARPENTER: I'll defer to  
6 Code-Making Panel No. 3, Chairman Richard Owen.

7 MR. OWEN: Mr. Richard Owen, Chairman  
8 Panel 3 speaking in opposition. The comment was to  
9 add a third fine print note to Article 760. There  
10 are two other references to NFPA 72 including one in  
11 the scope referring people to go back there.

12 So again the panel voted 12 to 1 to  
13 reject the idea of adding a third fine print note  
14 referring to the same document again.

15 MR. WILLSE: Thank you. Further  
16 discussion? Seeing no one at the microphones we'll  
17 go to vote on NITMAM 70-16, Log No. 361. All in  
18 favor please raise your hands. Thank you.

19 All opposed.

20 Motion failed.

21 We're now up to Number 70-17.

22 Microphone 3.

23 MR. FRASER: My name is Bruce Fraser

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1 and I'm the designated representative for Tom  
2 Hammerberg of the Automatic Fire Alarm Association,  
3 and I move to accept comment 3-156 found on Page  
4 493.

5 MR. WILLSE: I have a motion made to

6 accept comment 70-3-156. Do I have a second? I  
7 have a second.

8 Please continue.

9 MR. FRASER: It's important for the  
10 functionality of circuit integrity cable that  
11 manufacturers' instructions be followed. This cable  
12 may be listed for installation, exposed, or in  
13 conduit, and bearing in mind that a circuit  
14 integrity cable is capable of withstanding 1800  
15 degrees or greater and not short out. The reaction  
16 to heat by insulation surrounding the conductor is  
17 dependent on the method of installation. While  
18 manufacturers' instructions are shipped with cable,  
19 large spools are often put on a number of smaller  
20 spools by the reseller and never really transferred  
21 to those smaller spools, so the installer doesn't  
22 get the instructions. As a result, cable  
23 installations instructions don't get to the

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1 installer.

2 The suggested fine print note is based  
3 on real life experience of observing this critical  
4 cable which has not been installed in compliance  
5 with the product listing and therefore could  
6 compromise liability and survivability of system  
7 operation. I think the fine print note is

8 desi rable.

9 MR. WILLSE: Thank you. Mr. Carpenter.

10 MR. CARPENTER: I'll defer to  
11 Code-Making Panel No. 3 chair, Richard Owen.

12 MR. OWEN: Mr. Chairman, Richard Owen,  
13 chairman of Panel 3 speaking in opposition to the  
14 motion. This motion actually suggests adding four  
15 fine print notes to Article 760 all saying basically  
16 the same thing. To paraphrase, to follow the  
17 directions. The panel again voted 12 to 1 against  
18 adding these four fine print notes since  
19 manufacturers' installation requirements are already  
20 covered in 110.

21 MR. WILLSE: All right. Thank you.  
22 Any further discussion? Seeing no one coming to the  
23 mikes, we'll now vote on NITMAM No. 70-17, Log No.

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1 363. All those in favor of accepting Comment  
2 70-3-156 please raise your hand. Thank you.

3 All opposed. Motion failed.

4 Panel 4 Since there are no NITMAM on Panel 4,  
5 we're up to Panel 5. NITMAM No. 70-18.

6 Panel 5 Microphone No. 5.

7 MR. ROBINSON: Mr. Chairman, Wayne  
8 Robi nson. I'm withdrawing my NITMAM and I accept  
9 the language in the ROP and ROC.

10 MR. WILLSE: Thank you. 70-19

11 Microphone No. 6.

12 MR. GUIDRY: Paul Guirdy with Fluor  
13 Enterprises in Houston. I represent associate  
14 owners and contractors. I move to accept Comment  
15 577.

16 MR. WILLSE: I have a motion made to  
17 accept Comment 70-5-77. Do I have a second? I have  
18 a second.

19 Please continue.

20 MR. GUIDRY: There is a corrosion  
21 problem or an issue with bonding copper grounding  
22 grids to steel rebar in some installations. It's  
23 not with buildings or structures with buildings on

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1 them. It has to do with structures with vessels and  
2 motors and petrochemical installations. This issue  
3 really needs to be addressed during this code cycle  
4 because of corrosion issues involved with rebar.  
5 Acceptance of Comment 577 will address this issue.

6 Previous to the 2005 NEC this really  
7 wasn't an issue because the words if available at  
8 the beginning of the paragraph seemed to allow some  
9 latitude for the design engineer to either bond the  
10 concrete encase electrodes or not. Whether this was  
11 right or wrong this is what was being done. The

12 change to the 2005 NEC has effectively closed this  
13 option.

14                   To give you a little bit of background  
15 about what is happening, in large petro chemical  
16 facilities and refineries, we typically use a lot of  
17 copper in the ground. Our larger cable buried with  
18 the use of copper fired ground rods and then we  
19 typically shoot for less than 5 ohms resistance.

20                   So there is really no electrical reason  
21 to bond every pump and motor foundation to this  
22 copper as far as getting more lower resistance.  
23 What it does when you do this, when you put that

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1 much copper in the ground and you bond it to the  
2 rebar you create a battery, and the steel rebar will  
3 disintegrate over time. How much time, it could be  
4 5 years. It could be 10 years. But it will go back  
5 to its refined energy levels and create spalling and  
6 ruin the concrete.

7                   In the panel statements to proposal 153  
8 in 577 the panel keeps referring to the need to bond  
9 to steel rebar and building foundations and I  
10 absolutely agree with that. However the comment 577  
11 does not address building or dwelling units. It  
12 only addresses engineer industrial installations.

13                   This issue about bonding large amounts

14 of copper to pump and vessel foundations needs to be  
15 resolved because if we don't there is going to be  
16 foundations that fail out there in 5 or 10 years.  
17 There is going to be a paper documenting this in our  
18 IEEE P C I C in Calgary this year, and this problem  
19 is also documented in the IEEE green book as well as  
20 NACE's documents which is the National Association  
21 of Corrosion Engineers. So I'm asking for support  
22 here today to accept this comment.

23 MR. WILLSE: Thank you. Mr. Carpenter.

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1 MR. CARPENTER: Yes. I would like to  
2 defer to Code-Making Panel No. 5, Chairman Ronnie  
3 Toomer.

4 MR. WILLSE: Microphone No. 2.

5 MR. TOOMER: Ronald Toomer, chairman of  
6 Panel CMP 5. My comment on this proposal I'm  
7 speaking against this motion here, and the panel  
8 considered this, and the panel believes that  
9 concrete encased reinforcing rod should be part of  
10 the grounding electrode system. And the panel voted  
11 15 to 0 in favor of rejecting this motion.

12 MR. WILLSE: Thank you. Microphone No.  
13 6.

14 MR. GUIDRY: Again I just want to  
15 clarify --

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MR. WILLSE: Your name.

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MR. GUIDRY: I'm sorry. Paul Guidry, Fluor Enterprises. Again, I'm speaking in favor of accepting this comment, and I want to clarify that this is not about buildings in the rebar. The panel's statements, I think there is some confusion with the panel because they keep saying in the statements that in buildings and structures that you

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ought to bond this copper to the, or the grounding electrode to the rebar, and I absolutely agree with that. I don't have a problem with that.

But I want to clarify to the audience today that what we're talking about here are highly engineered installations out in petro chemical facilities where you have isolated vessels and motors on standalone foundations and we don't want those structures disintegrating due to all the copper in the ground. This is not about buildings and structures as was pointed out in the panel statements.

MR. WILLSE: Thank you. Microphone No. 2.

MR. HARTWELL: Fred Hartwell, Hartwell Electrical Services speaking against the motion. I would like to call the group's attention to the

18 panel action on Comment 5-86 which is going to add a  
19 sentence that reads as follows: Where multiple  
20 concrete-encased electrodes are present at a  
21 building or structure it shall be permissible to  
22 bond only one into the grounding electrode system.  
23 I think a good part of the motivation

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1 for this motion has to do with the very large  
2 complicated industrial type of installation where  
3 there are reinforcing steel at great lengths, and I  
4 think that the submitter of the motion is concerned  
5 about what is involved in connecting all of that is  
6 that they are discontinuous. And I think Panel 5  
7 has adequately addressed that. I know this was a  
8 concern in Massachusetts, and we have looked at  
9 this, and we looked at the panel action in this  
10 cycle with approval.

11 So that does not address the corrosion  
12 issue, granted, but remember because there is two  
13 kinds of concrete encased electrodes out there.  
14 There is the ones made out of steel reinforcing  
15 metal and then there is the number 4 bare in the  
16 footing, and if that's an issue, you think that's an  
17 issue, then run a piece of bare copper in the  
18 footing and yes you may have steel electrodes in the  
19 footing and you may have your piece of copper that

20 you just put there.

21 But again this language says and it's  
22 coming in 2008, not under challenge, if you connect  
23 to, pick one and obviously you pick the one that you

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1 just added, as soon as you pick that one you're  
2 done, and you can leave the steel alone. So that's  
3 becomes a matter of design whether you bond the  
4 steel into that system or not.

5 MR. WILLSE: Thank you. Microphone No.  
6 3.

7 MR. SHANNON: John Shannon speaking for  
8 myself. I work for KCI Technologies. I'm a  
9 professional engineer. I have worked on pulp and  
10 paper mills and some oil and gas, and I have also  
11 worked on cathodic protection systems, both active  
12 and passive, and have run into this kind of cathodic  
13 protection problem.

14 And I think the code panel has to be  
15 aware of this, that it is a definite problem. There  
16 are several engineers who won't let us connect to  
17 the building rebar because of this problem. A lot  
18 of the bridges now have, and the code is starting to  
19 recognize this, have this plastic encased rebar, but  
20 if you put copper and steel in the ground, the steel  
21 won't be there after a while and the copper will be.

22 And when you get into cathodic protection systems  
23 yes you connect steel to copper, but then you have

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1 an active system where you have other steel laying  
2 sometimes, sometimes some aluminum where you  
3 definitely coat the steel.

4 So while I'm in favor of UFER grounds  
5 and I have used them on light poles and everything  
6 else, we have to start being aware of some of these  
7 cathodic protection problems that are out there.  
8 And to say that this -- we said this isn't a  
9 building issue but it can be a building issue.

10 Another thing that occurs oftentimes is  
11 a big maintenance facility like a rapid transit  
12 system where you have to tie all the rebar together  
13 and hook it back into the electrical system  
14 deliberately so that the currents that are flowing  
15 in the negative thing have a way of getting back  
16 there instead of going from each piece of steel to  
17 each piece of steel.

18 I'm in favor of grounding and bonding.  
19 I'm in favor of UFER grounds, but this guy has a  
20 real concern and I think it's applicable. So I'm in  
21 favor of his motion.

22 MR. WILLSE: Thank you. Microphone No.  
23 6, please.

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1                   MR. GUIDRY: Eddie Guidry, Fluor  
2                   Enterprises speaking in favor of the motion. I just  
3                   want to go on record as saying that I have had  
4                   several discussions with Panel 5 members and at the  
5                   time this was discussed, according to these fellows,  
6                   the corrosion issue was never discussed. During the  
7                   2005 cycle when this decision was made to have the  
8                   words if available removed, corrosion was not  
9                   discussed at all. It wasn't a factor in their  
10                  decision, and apparently during this proposal and  
11                  comment stage that we've just gone through, it has  
12                  never been discussed at length either.

13                  MR. WILLSE: Thank you. Microphone No.  
14                  4.

15                  MR. WEBBER: Ray Webber, Wisconsin,  
16                  representing myself. I called the question.

17                  MR. WILLSE: Thank you. The question  
18                  has been called. All in favor of calling the  
19                  question please raise your hands. Thank you.

20                  All opposed. Motion carries. We'll  
21                  now go to the vote of NITMAM No. 70-19, Log 336.  
22                  All in favor of accepting comment 70-5-77 please  
23                  raise your hands. Thank you.

1 All opposed. Motion fails. Thank you.

2 We're up to Item No. 70-20.

3 Microphone No. 5.

4 MR. ROBINSON: Wayne Robinson speaking  
5 on behalf of Danish Verma professional engineer from  
6 Montgomery County, Maryland. Mr. Verma has  
7 submitted a 250.66D requirement and I'm supporting  
8 him for NITMAM to accept that proposal.

9 MR. WILLSE: That's Comment No.  
10 70-5-17?

11 MR. ROBINSON: 117.

12 MR. WILLSE: I'm sorry. I misspoke.

13 MR. ROBINSON: That's correct.

14 MR. WILLSE: I have a motion made. Do  
15 I have a second? We do have a second.

16 Please continue.

17 MR. ROBINSON: Thank you. Well, I just  
18 saw this new proposed 250.14 which --

19 MR. WILLSE: Are you Wayne Robinson?

20 MR. ROBINSON: Yes, I am. I'm Wayne  
21 Robinson, correct. I just saw this new proposal  
22 250.14 and 250.14 is telling you you should not use  
23 direct electrical connections for continuity of

1 grounded conductors, and this is just in line with  
2 250.66D requirements which would require a listed  
3 fitting bonding the enclosure remote from the  
4 grounded conductor connection. So it is actually in  
5 compliance with 250.14.

6           Furthermore, there is additional  
7 information that Mr. Verma submitted. This also was  
8 submitted in the 2005 session. Mr. Verma provided  
9 additional documentation on the standards and the  
10 testing that these listed fittings go through. One  
11 thing is that the UL 67 standard for panel boards  
12 only requires a 30 amp resistant test for bonding  
13 screws and lugs. Now that's under 10,000 A I C. So  
14 you can have a 200 amp panel board with a 30 amp  
15 bonding screw in it and its limitations are tested  
16 at 30 amperes.

17           Where the fitting in call that  
18 Mr. Verma submitted tested for 9,000 amperes so it's  
19 much more superior than a 30 amp bonding screw or  
20 jumper. So with the UL 467 standards for grounding  
21 and bonding and the UL 486A standards for  
22 connectors, both being tested on this fitting it is  
23 superior to a 30 ampere bonding screw.

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1                   Also in 250.106 for grounding, make  
2 recommend to adhere to 780 requirements for  
3 lightning protection. Well, with this fitting  
4 installed, this actually adheres to those  
5 requirements. This has not been addressed. It  
6 should be addressed. And I think that the panel  
7 should take another look at this especially with the  
8 new requirements.

9                   MR. WILLSE: Thank you. Mr. Carpenter.

10                  MR. CARPENTER: I would like to defer  
11 to chairman of Code-Making Panel No. 5 Ron Toomer.

12                  MR. WILLSE: Microphone No. 2.

13                  MR. TOOMER: My name is Ronald Toomer  
14 chairman of CMP 5. The panel concludes that  
15 specific listed fittings are not required where  
16 grounding electrode conductors entering cabinets or  
17 other enclosures, and the vote was 15 to 0. Thank  
18 you.

19                  MR. WILLSE: Thank you. Microphone No.  
20 3.

21                  MR. MANCHE: Alan Manche, Square D  
22 Company speaking in opposition to the motion on the  
23 floor. I would just like to offer to the floor that

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1 I'm really confused about what is being proposed  
2 here because it is requiring listed terminations,  
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3 and the termination is where I land the wire. The  
4 substantiation in here talks about closures and  
5 clamps and fittings to tie it to the box. So we  
6 seem to be missing steps passing in the night with  
7 regard to terminating the conductor of the grounding  
8 conductor and actually conducting it to the box.

9           Furthermore, we've built panel boards  
10 listed panel boards compliant panel boards UL 67 for  
11 the last 40 years with the permits the grounding  
12 electro conductor to come up through a knock out if  
13 the contractor so chooses to do that. Not had any  
14 issues with that. There has been no documented  
15 issues here that would support the need for this  
16 change. Thank you.

17           MR. WILLSE: Thank you. Microphone No.  
18 5.

19           MR. ROBINSON: Well, we do have some  
20 document --

21           MR. WILLSE: Name.

22           MR. ROBINSON: Wayne Robinson. There  
23 is some documented evidence. For one thing 250. 8

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1 of NEC requires listed fittings to be used for  
2 terminating grounding conductors. So 258 is  
3 applicable to this installation. The use of weep  
4 holes is not or little knock out holes in panel

5 boards is not permitted by UL 67 standard. Not  
6 connecting grounding electrodes to enclosures  
7 violates the standard.

8 Furthermore, with 250.14 is giving you  
9 an alternate method of attaching the grounding  
10 electrode to the grounded bar. Thank you.

11 MR. WILLSE: Thank you. Further  
12 discussion? Microphone No. 2.

13 MR. HARTWELL: Fred Hartwell, Hartwell  
14 Electrical Services. This type of connection came  
15 before Panel 9 because of course we have  
16 jurisdiction over panel boards and whatnot. It came  
17 before us earlier than this. I think it was the  
18 previous cycle. And we also rejected it. And a  
19 point of reference was exactly what Alan Manche was  
20 just describing. There are a number of panel boards  
21 out there that have a hole on it, a hole, small  
22 knock out hole in them that is clearly designed to  
23 carry a grounding electrode conductor into the

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1 equipment. And the proposal that Panel 9 got talked  
2 about, and I remember the Panel 9 response also  
3 addressed this, there was a question about well,  
4 don't you have to make a bonding connection between  
5 the panel board and the grounding electrode  
6 conductor at the point where it enters the panel.

7 And the answer is no, you don't. That is not a  
8 requirement.

9 The panel board is going to be bonded  
10 to that conductor through the equipment grounding  
11 bar or if it's service equipment through a main  
12 bonding jumper there is going to be a connection,  
13 and so there is going to be a solid bonding  
14 connection within that enclosure to that conductor  
15 and it's not necessary, never been necessary to have  
16 a particular clamp.

17 The maker of this motion I'm familiar  
18 with his product, and it's a very elegant product,  
19 and if you choose to use it you can certainly use  
20 it, but it's not a requirement that you use it.  
21 Never been.

22 And I think the other thing we want to  
23 keep in mind here is that keep in mind the

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1 distinction between the equipment grounding function  
2 and the grounding electrode conductor function, UL  
3 has different tests in 467 based on fault currents  
4 that are expected. And the expected fault current  
5 in an equipment grounding function is clearly orders  
6 of magnitude greater than what is expected on the  
7 grounding electrode conductor.

8 For all these reasons, the current  
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9 requirements are correct.

10 MR. WILLSE: For the record are you for  
11 or against the motion.

12 MR. HARTWELL: Speaking against the  
13 motion.

14 MR. WILLSE: Thank you.

15 Microphone No. 4.

16 MR. MINICK: John Minick speaking for  
17 myself.

18 MR. WILLSE: Or or against?

19 MR. MINICK: Against the motion. I  
20 have to go back to when I carried tools, and that is  
21 quite a few years ago. But these quarter-inch holes  
22 have been provided in these panel boards for years,  
23 and they were clearly for grounding electrode

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1 conductors entrance out of the box or entryway out  
2 of the box and it's not a weep hole. And this has  
3 been made very clear by the manufacturer for a  
4 number of years.

5 So I want to make that plain that we're  
6 not talking about closing up a weep hole here. In  
7 fact a quarter-inch hole I don't think is a weep  
8 hole. That's kind of like a plug hole.

9 MR. WILLSE: Thank you. Microphone No.  
10 5.

11 MR. ROBINSON: Just one more issue.  
12 Wayne Robinson. Actually the standard UL 67 that  
13 the Code-Making Panel 9 evidently has control over  
14 does not, UL 67 requirement does not allow you to  
15 enter those holes without a listed fitting. Without  
16 a fitting. 250.8 calls for it to be a listed  
17 fitting.

18 MR. WILLSE: Thank you. Microphone No.  
19 4.

20 MR. BURNS: Julian Burns representing  
21 myself. Call the question.

22 MR. WILLSE: Thank you. The question  
23 has been called. All those in favor of calling the

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1 question please raise your hands. Thank you.

2 All opposed. Motion carries.

3 We'll now go to vote on NITMAM 70-20  
4 Log No. 335. All those in favor of accepting  
5 70-5-117 please raise your hands. Thank you.

6 All opposed. Motion fails. Thank you.

7 One interruption if I may, a question  
8 from the NFPA want to make a sense of the body since  
9 we have to extend the bus times, how long do you  
10 want to stay tonight? Till we finish? If they want  
11 to finish tonight.

12 How many would like to finish tonight?

13 All opposed? Motion carries. We have to finish by  
14 10:00 tonight.  
15 We're up to Item 70-21. 70-21. Nobody  
16 to the mike.  
17 We are going to go to 70-22. 70-22.  
18 MR. WILLIAMS: Right here.  
19 MR. WILLSE: Microphone No. 4, please.  
20 MR. WILLIAMS: Noel Williams. I'm here  
21 speaking on behalf of myself.  
22 MR. WILLSE: Are you up to 22?  
23 Mr. Wayne Robinson. Microphone No. 5.

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1 MR. ROBINSON: Thank you for  
2 identifying me. I appreciate it.  
3 Wayne Robinson. I am here to ask for  
4 this to be returned to committee. There is some  
5 reasons that 250.94 1, 2, 3 I feel that they're  
6 requiring its metering closures requiring  
7 specific --  
8 MR. WILLSE: You wish to return portion  
9 of the report for the proposal or related comments  
10 on 70-5-122.  
11 MR. ROBINSON: That's correct.  
12 MR. WILLSE: I have a motion made. Do  
13 I have a second? I have a second.  
14 Please continue.

15 MR. ROBINSON: Wayne Robinson against.  
16 I just want to make sure that we're aware of what is  
17 going on here. You have metering closures now and  
18 they've got prescriptive language for metering  
19 closures to use terminal bars for 250.94  
20 requirements. I mean we have been requiring that  
21 you leave a wire outside for interconnection of  
22 other systems under 250.94.  
23 A couple of issues. It's kind of going

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1 to cause problems. One is that they are talking  
2 about a number 6 for this interconnection bonding.  
3 Then they go on to say to other buildings or  
4 structures that you can feed. So I am not quite  
5 sure, it says minimum 6, which means it could be  
6 larger but again, it's got some language in there  
7 what I would have to question.  
8 Furthermore 250, to use the specific  
9 terminal bar and not a listed fitting just to say  
10 you have got to use terminal bars or busses. Again  
11 we're being prescriptive and you're not allowing  
12 other listed fittings to make this connection, and I  
13 think it's wrong for us to prescriptive just to have  
14 one method in the book for these types of  
15 installations.  
16 MR. WILLSE: Thank you. Mr. Carpenter.

17 MR. CARPENTER: I refer to Code-Making  
18 Panel 5's chairman Ron Toomer.

19 MR. WILLSE: Microphone No. 2.

20 MR. TOOMER: Ronald Toomer, chairperson  
21 of CMP 5. We looked at all the items that we  
22 discussed in that thing and we accepted it in  
23 principle and the vote on this item was 15 to 0.

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1 And I'm against returning it. I'm against the  
2 motion.

3 MR. WILLSE: Thank you. Further  
4 discussion. Microphone No. 5.

5 MR. WHITE: Doug White, principal  
6 member of Code Panel 5 representing the EL&P Group.  
7 And I'm speaking in opposition to the motion.  
8 Clarification, first point of order is returning a  
9 portion of the report would have what result?

10 MR. WILLSE: Goes back to previous  
11 edition text.

12 MR. WHITE: Thank you for that. I just  
13 want to point out to the body that we would erase a  
14 lot of good and hard work from both Code-Panel 5 and  
15 Code-Panel 16. A safety condition exists in the  
16 field that this work in the code was trying to  
17 repair. Experience often causes the connection  
18 termination that is now being used. Usually it's a

19 clip-on device that gets clipped onto the door of a  
20 service entrance or the lid of a meter enclosure,  
21 and it renders them inoperable. And the utility end  
22 of it, when we're trying to do maintenance on our  
23 meters, we end up having to remove the termination

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1 in order to get the meter out and then have to  
2 reinstall the termination.

3 So we were trying, the code language  
4 that was put in was put in to provide a good and  
5 safe and proper installation that didn't hinder the  
6 operation of the equipment and made it safe for  
7 maintenance of the meter, and I urge the group not  
8 to send this back to original 2005 language.

9 MR. WILLSE: Thank you. Further  
10 discussion? Seeing none, we are going to move to  
11 vote on NITMAM No. 70-22, Log No. 332. All those in  
12 favor of returning a portion of the report in the  
13 form of a proposal with related comments please  
14 raise your hands. Thank you.

15 All opposed. Motion failed.

16 We are up to Item No 70-23. Microphone  
17 No. 4.

18

19 MR. WILLIAMS: Noel Williams. I am  
20 representing myself and the motion I'm making here

21 is to reject or that is to -- excuse me. Let me  
22 take a look at the exact language. Accept an  
23 identifiable part of a comment 5-140, identifiable

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1 part means all of the proposed text except the  
2 language or Chapter 8.

3 MR. WILLSE: All right. I have a  
4 motion made. Do I have a second? I have a second.  
5 Please continue.

6 MR. WILLIAMS: One thing I want to make  
7 clear is that this is not intended to overturn  
8 anything the panel has done in terms of intent but  
9 rather to fix an unintended I'm certain it is an  
10 unintended conflict that was created.

11 There are two related issues here:  
12 Comment 140 and -- 5-140 and comment 5-141. The  
13 idea behind this was that in the 2002 -- 2005 NEC a  
14 new section was added in 251.19 that essentially  
15 reserved green or green with yellow stripes for  
16 ground bus conductors. They could not be used for  
17 ground buses or ungrounded conductors. When that  
18 was added it did not take into account those  
19 existing long standing conditions that had been used  
20 where the green, under which the green conductor had  
21 been used for other purposes. And that was already  
22 taken into account in this similarly parallel

23 language in 200.6 and 200.7 where in 200.7 allowed

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1 the white conductor to be used for some other  
2 purposes and in very limited conditions primarily  
3 where a grounded conductor was not used.

4 Now in this situation, the primary  
5 focus was looking at certain limited energy circuits  
6 where those limited energy circuits according to  
7 250.12i are not required to be the equipment  
8 supplied by those circuits are not required to be  
9 grounded. Therefore, there is no equipment  
10 grounding conductor in those circuits. And  
11 according also to 250.86 which refers to 251.12i  
12 these circuits would become grounded only if the  
13 system and this equipment only if the system was  
14 required to be grounded.

15 These low voltage or limited energy  
16 circuits grounding requirements typically fall under  
17 either 250 for AC circuits under 250.20, and  
18 250.20A. And there are three conditions there where  
19 a circuit has to be grounded, whether less than 50  
20 volts. One is where they are derived from a system  
21 that is more than 150 volts of ground, derived from  
22 underground system or they go outside the building.  
23 The majority of these circuits therefore are

1 actually not required to be grounded. Usually  
2 they're not grounded and has been very common  
3 practice long standings actually industry standard  
4 in the HVAC industry to use the green conductor as a  
5 control lay or switch lay controlling the fan.  
6 There was never anything that was submitted that  
7 indicated there was a problem with this or that  
8 particular issue should be overturned, and I don't  
9 think that it was intended in 2005 that this  
10 practice be eliminated. In effect, of course it was  
11 not eliminated and for the last 3 years for the most  
12 part people have been ignoring it.

13                 So the attempt was made this time to  
14 just fix that and allow that special case.

15                 In 250 in the proposal on Page 146, the  
16 language that was suggested after the proposal  
17 period where the proposal period the panel said the  
18 rule would be overly broad, it was narrowed down to  
19 a situation, number 1, where there is a multi  
20 conductor cable. In other words the installer  
21 doesn't really get to pick the colors that are in  
22 that cable. They come with standard color coding,  
23 and where that circuit was not required to be

1 grounded and therefore the system and equipment were  
2 not required to be grounded according to 251.12i, or  
3 it said or Chapter 8 which is not necessary because  
4 Article 250 has no jurisdiction over Chapter 8.

5 MR. WILLSE: 1 minute.

6 MR. WILLIAMS: The color green may be  
7 used for other than grounding conductor. Instead  
8 the language accepted in 250.41 will permit the  
9 color green to be used even where the system is  
10 required to have an equipment grounding conductor.

11 And so what I would say is that if you  
12 think that it is okay to use a green wire even where  
13 there is a equipment grounding conductor is required  
14 to use the green wire for something else, then you  
15 should vote against this. If you think that you  
16 should support the panel action without regard to  
17 the unintended consequences or the safety issues,  
18 you should vote against this proposal.

19 MR. WILLSE: 10 seconds.

20 MR. WILLIAMS: But, if you think that a  
21 green wire should be used for equipment grounding  
22 whenever there is equipment grounding required and  
23 otherwise only the use for some other purpose where

1 no grounding is required, then you should support  
2 this proposal.

3 MR. WILLSE: Thank you. Mr. Carpenter.

4 MR. CARPENTER: I defer to Code-Making  
5 Panel 5 Chairman Ron Toomer.

6 MR. TOOMER: Ronald Toomer, chairman of  
7 CMP 5. This comment 5-140 what it did was add a new  
8 exception to it and just to review the exception and  
9 I think it was read before, the exception went,  
10 Where equipment is connected by multi-conductor  
11 cable and is not required to be grounded in  
12 accordance with 250.112(1) or Chapter 8, the color  
13 green may be used for other than grounding  
14 conductors.

15 The panel approved that 15 to 0.

16 MR. WILLSE: Further discussion?

17 Microphone No. 2.

18 MR. LeVASSEUR: Paul LeVasseur  
19 representing the IBEW, on Code Panel 5. If this  
20 wording as proposed was accepted then the condition  
21 would arise in Class 1 circuits. For those that  
22 aren't familiar with a class 1 circuit it would be a  
23 remote control circuit limited only by the actions.

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1 That would be a start stop station for a more  
2 controlled system in an environment like a chemical  
3 factory or auto plant. We carefully crafted an  
4 exception that would not allow class 1 remote  
5 control signaling circuits and keep this exception  
6 only to power limited circuits or energy limited  
7 circuits. That was our idea. The reason, if you  
8 read the language as it applies, if it went to class  
9 1 remote control circuits, we carefully made sure  
10 that didn't happen, and I hope you all reject this  
11 motion.

12 MR. WILLSE: Thank you. Microphone No.  
13 1.

14 MR. HARTWELL: Fred Hartwell, Hartwell  
15 Electric Services Incorporated. Again, the purpose  
16 of this motion is not to have Panel 5 do anything  
17 different than what it did, really. But what the  
18 panel action has done is to inadvertently create a  
19 direct conflict within Article 250. If you have,  
20 for example, and I have been there as an inspector,  
21 I'll give you an actual example, a duct heater, a  
22 277 volt duct heater from a 482 77-volt Y system and  
23 in that duct heater is a class 2 transformer, the

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1 primary is 277 volts, the secondary is 24 volts.  
2 Language in 250.20, plain language of the code, and

3 by the way this language goes back all the way I  
4 tracked it back to 1937 code and it goes back before  
5 that. Without change. That secondary circuit of  
6 that class 2 circuit is required to have a system  
7 grounding connection. It has been required to do  
8 this for over 70 years. When you have a system  
9 grounding connection 251.12i imposes an equipment  
10 grounding requirement. And the equipment grounding  
11 conductor is a green or bare conductor.

12 The problem with the panel action is  
13 they condition this on 50 volts or less without  
14 taking into account there are lots of 50-volt  
15 circuits out there that must have a system grounding  
16 connection.

17 It's a simple mistake. It's got to get  
18 fixed. And the fix is something we can do at this  
19 meeting because if you act on Noel's proposal in  
20 contrast of what the panel worked on, then you have  
21 in his proposal a built-in reference to 250.112i and  
22 the entire correlation problem disappears.

23 MR. WILLSE: Excuse me. Are you

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1 speaking for or against the motion.

2 MR. HARTWELL: Speaking in favor of the  
3 motion.

4 MR. WILLSE: Thank you. Any further

5 discussion? Microphone No. 4.

6 MR. WILLIAMS: I wanted to respond  
7 to --

8 MR. WILLSE: Your name.

9 MR. WILLIAMS: Bill Williams speaking  
10 in favor of the motion. I wanted to respond to part  
11 of the previous comment against the motion and that  
12 is talking about this being a class 1 circuit.  
13 According to Article 250, 250.112i, the types of  
14 class circuits that were referred to would be  
15 required to be grounded, and since those circuits  
16 would be required to be grounded, they would be  
17 required to have an equipment grounding conductor.  
18 And this exception would not apply to those circuits  
19 as proposed.

20 I would also note that when I made this  
21 proposal yesterday for the Electrical Section  
22 meeting, the vote was taken before I even got to the  
23 end of the aisle as I was returning from the mike,

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1 and people afterwards told me a number of people  
2 including the people on Panel 5 told me that they  
3 didn't have time to assess this, and as soon as they  
4 assessed it they realized there was in fact a direct  
5 conflict created by this and that they would have  
6 supported the motion had they understood it.

7 MR. WILLSE: Thank you. Any further  
8 discussion? Seeing none we're going to go and vote  
9 on NITMAM No. 17-23, Log No. 337 to accept an  
10 identifiable part of comment 70-5-140. All in favor  
11 please raise your hands.

12 All opposed raise your hands. Motion  
13 failed.

14 We're up to NITMAM No. 70-24.  
15 Microphone No. 4.

16 MR. WILLIAMS: I'm Noel Williams. My  
17 intent would be to have made a motion to reject this  
18 comment 5-141 however I believe that although -- I  
19 believe it has been shown to be clearly flawed. I  
20 believe it's better than nothing so I will not move  
21 that.

22 MR. WILLSE: Thank you.

23 We are now completed with Panel 5 and

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Panel 6

1 we're up to Panel 6. NITMAM No 70-25. Microphone  
2 No. 4.

3 MR. WESCHLER: I'm Dave Weschler, the  
4 authorized speaker for Mike Walls, American  
5 Chemistry Council. I move to accept comment  
6 70-6-17. Motion made to accept comment 70-6-17. Do  
7 I have a second? I have a second. Please continue.

8 MR. WESCHLER: Thank you, Mr. Chairman.

9 This comment will propose to go back to an  
10 established practice that has existed for more than  
11 25 years that I'm aware of, of using this particular  
12 nonshielded volt cable at 5,000 volts actually 4160  
13 voltage. For some reason this has been taken out  
14 and it seems that the Code Panel feels that at the  
15 nominal 5,000 volt range this is unacceptable but at  
16 the 2,000 volt range this is acceptable.

17 The reason this wiring practice has  
18 been utilized for so many years is because it's  
19 highly reliable. It's a very effective installation  
20 method. Now it's kind of puzzling when we look at  
21 the comment from the panel and their rejection of  
22 this in which they say, and I quote, the potential  
23 hazard that arises by using nonshielded cable above

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1 2.4 kilobles exists in all locations in all  
2 conditions whether maintained by qualified or  
3 unqualified personnel this includes conduit  
4 installations and metal cable installations. I'm  
5 not sure what that really means but it sounds to me  
6 like we shouldn't be working on electrical  
7 equipment, because all electrical equipment has  
8 potential hazards. The reason we go through such  
9 great lengths of training and qualifying people is  
10 to assure that those hazards are checked and we have

11 people understand what are the hazards and are  
12 coping with these existing situations.

13 One of the aspects that I've heard is  
14 I've gone back to research this as to what is going  
15 on is that there is some concern about maintenance.  
16 Obviously this installation like every single other  
17 electrical installation we have anywhere requires  
18 maintenance. It requires people who know how to  
19 maintain the system. If they're not going to know  
20 how to maintain the system then there will be a  
21 problem. That's not an reason why we should say to  
22 prohibit this type of installation.

23 Some people believe that the correction

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1 to this is simply use a shielded cable and ground  
2 the shielded cable on both sides. In my opinion  
3 that is asking for a major disaster and the  
4 situation could be potentially worse than what we  
5 have right now. The complication becomes even  
6 further because of the problem that is now created  
7 is it fact that in order to repair this existing  
8 facility, if I can't use this unshielded cable, what  
9 you are asking me to use is a shielded cable.

10 It won't work. You're asking me to try  
11 to do something that the system was never designed  
12 to do which effectively means dial up switchgear.

13 Again, for no apparent reason.

14                   So I'm asking you to reconsider this on  
15 the basis of number 1 this is an electrical  
16 installation, 5,000 volt 4160 is a high voltage but  
17 we have substantially higher voltage all the way  
18 around the countryside. When I go inside my  
19 switchgear I have exposed buss that can be a lot  
20 high voltage. We don't out run that exposed buss.  
21 We simply give the appropriate training and make  
22 sure our people are qualified and understand what  
23 the hazards are and how to safeguard them.

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1                   There is nothing here in this whole  
2 proposal or the past history that says what is going  
3 on or why this should be totally banned from being  
4 used. And guess what, there are folks outside of  
5 the national electrical code that will use this.  
6 It's being used in Canada and used in other places  
7 because it is such a reliable system.

8                   So if you are going to reject it at  
9 least come up with reasons why it should be  
10 rejected, but don't base it on the fact that number  
11 1 perhaps there is one company out there who can't  
12 maintain it. Number 2, it can be maintained. It  
13 requires somebody to get qualified. And we all know  
14 that people need to be qualified to work on

15 electrical equipment, right?

16 So if we get the qualified people and  
17 it is maintained, there is no issue here. The issue  
18 is created if this panel, if this committee now goes  
19 back and says you can't use this because now I have  
20 several thousands of installations that will require  
21 us doing something --

22 MR. WILLSE: 30 seconds.

23 MR. CARPENTER: -- the solution will

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1 cause other problems. I ask your support to return  
2 to the practice and allowing us to use the higher  
3 voltage 4160 which is nominal 5,000 volts. Thank  
4 you.

5 Thank you. Mr. Carpenter.

6 MR. CARPENTER: I defer to Code-Making  
7 Panel 6 chair Scott Cline.

8 MR. CLINE: Scott Cline, chairman of  
9 Panel 6 for the 2008 cycle, speaking in opposition.  
10 5 NITMAM's are related to the design voltage level  
11 allowed when using non shielded cables. Existing  
12 code limits the design utilization voltage to 2.4  
13 KV. Many proposals and comments were presented to  
14 allow higher voltages under various conditions. The  
15 comment anecdotal argument given was that these  
16 cables had once been used safely for many years. If

17 this argument had been evaluated as valid, it would  
18 have prevented the previous cycles action lowering  
19 the allowed utilization voltage to 2.4 KV. Further  
20 had any verifiable data showing that such safe use  
21 had been submitted with either proposals or  
22 comments, the panel might have voted to allow at  
23 least some uses.

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1 40 percent of our comments addressed  
2 these issues with these cables. The issues were  
3 discussed in great depth. The panel voted to allow  
4 a single exception for the very special case of  
5 certain airfield runway lighting. This allowance  
6 was not due to believing that the application had  
7 fewer electrical safety risks. It was due to the  
8 evaluation that the safety risk to aircraft meeting  
9 this runway lighting was a much higher life loss  
10 risk. The panel's evaluation was that exposure to  
11 risk when these cables are utilized to above 2.4 KV  
12 was otherwise not shown to be acceptably safe.  
13 Please vote against this motion.

14 MR. WILLSE: Thank you. Microphone No.  
15 5.

16 MR. LaBRAKE: Neil LaBrake representing  
17 Edison Electric Institute. I rise in support of the  
18 motion on the floor. And it is a qualification

19 issue and we believe that nonshielded cables  
20 operating above 5 KV can be done so safely and work  
21 safely by a properly trained person that follow  
22 appropriate safety rules. So we ask for support of  
23 this motion. Thank you.

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1 MR. WILLSE: Thank you. Microphone No.  
2 2.

3 MR. LAIDLER: Thank you. Bill Laidler  
4 representing the IBEW and principal member on  
5 Code-Making Panel No. 6.

6 Mr. Chairman and fellow members, I  
7 speak in opposition to the motion. Panel 6 worked  
8 very hard during both cycles. During the 2005 cycle  
9 during the 2008 cycle. We took the proposal that  
10 came in in 2005 and argued and debated it hard, on  
11 both sides. Both sides went out and they gave very  
12 strong arguments. It was a very close vote. We  
13 just got the 2-thirds vote to lower the voltage  
14 rating to 2400 volts. This is an exception.

15 The main rule already stated in 310.6  
16 that conductors operating over 2,000 volts should be  
17 shielded and I maintain they should be shielded for  
18 safety reasons. We were shown evidence people made  
19 suggests that the panel just acted arbitrarily. We  
20 were given evidence showing problems that existed

21 with non shielded conductors operating in higher  
22 than 2000 volts.

23 We acted upon it in a prompt manner,

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1 very good manner. We took into account the safety  
2 issues. Both sides came up with good argument. I'm  
3 sure there are many installations out there that are  
4 operating fine, unshielded cable. This are many  
5 people out there that drive over the speed limit  
6 without getting a traffic ticket or getting into an  
7 accident that doesn't mean we should raise the speed  
8 limit or do a --make speeding legal.

9 Mr. Chairman and members I'm asking you  
10 to support the action done by Panel 6 and continue  
11 to support us by voting this motion down. Thank  
12 you.

13 MR. WILLSE: Thank you. Microphone No.  
14 4.

15 MR. GAUDET: John Gaudet --

16 MR. WILLSE: Microphone 4.

17 MR. VOLTZ: Don Volts, Mustang

18 Engineering, I'm an alternate member of Code Panel  
19 6, speaking for myself. I do a lot of business --

20 MR. WILLSE: For or against?

21 MR. VOLTZ: Speaking for the motion.

22 MR. WILLSE: Thank you.

23

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MR. VOLTZ: I work for a lot of petro

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1 chemical industry and quit a bit of the offshore  
2 industry along the Gulf Coast, and what we are going  
3 to see is a problem when we go to the off-shore  
4 facilities on the Continental Shelf, many times we  
5 are using nonshielded cable for our 4 KV motors and  
6 the terminal boxes are very small. So they're on  
7 the way of many exitways and many pipeways and et  
8 cetera. If we have to move to shielded cable, we're  
9 going to have to double maybe even triple the size  
10 of these boxes so that we can have shielded cable  
11 for the termination.

12 Now what that may do is it may cause  
13 the box to extrude into one of the exitways or one  
14 of the fireways that we have for escape.

15 So I'm asking everybody here to support  
16 this motion because it will cause the offshore  
17 industry undue problems.

18 MR. WILLSE: Thank you. Microphone No.  
19 5.

20 MR. STEWART: H.R. Stewart, of HRS  
21 Consulting. I'm here to represent Mr. Bruce McClung  
22 who is the principal of Code Panel 6. I would like  
23 to make some comments and I am in favor of this

1 motion. And a couple of others put them all together  
2 give them all to us. I haven't been in this  
3 business but 49 years. It's with cable  
4 construction, application and installation. A 5 KV  
5 nonshielded cable has been used without incident in  
6 this whole time. The installation and jacketing  
7 materials that we have today are a high dielectric  
8 strength higher dielectric withstand and a higher  
9 surface discharge resistance. So yes you are going  
10 to get discharge, but it is not going to hurt the  
11 cable and not going to hurt the person.

12                   The requirement of using a shielded  
13 construction above 2400 volts is a much higher risk  
14 than using a 5 KV nonshielded cable. The  
15 termination and Don mentioned, the terminations must  
16 be made with the stress cone and must have a 5 KV  
17 equivalent and there is not enough room in even the  
18 new switchgear brand spanking new switchgear to make  
19 these terminations. The stress code is about 5 or 6  
20 inches long and you have to have about 5 or 6 inches  
21 of clearance. And if you don't properly terminate  
22 it, it will result in a higher rate of failure far  
23 of electrocution.

1                   The shielded cable with an overall  
2 shield must be properly installed. If it's grounded  
3 in one end only then you cannot exceed 25 volts on  
4 the shield. And only because you're in a little  
5 tight spot so you don't ground the other end. If  
6 you're at 25 volts, the shock will not necessarily  
7 cause electrocution, but it will damn sure scare the  
8 hell out of you and get you in trouble with  
9 something else. If the shield is grounded at both  
10 ends, a circulating current will flow within the  
11 shield. If this is not properly designed, the  
12 circulating current will cause the cable to overload  
13 and cause premature failure.

14                   And in short, the use of 5 KV  
15 nonshielded cable is a safer system and more  
16 reliable system than requiring a 5 KV cable to be  
17 shielded cable.

18                   Now I have a couple of other little  
19 thoughts I would like to make. In proposal 6-37.  
20 There is an exception for airport lighting. The  
21 airport lighting cable is a nonshielded cable.  
22 There is one instance that I know where they put  
23 shielded cable in because they did not have this

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1 exception. Now this code cycle allows them this  
2 exception. But that 5 KV nonshielded cable is  
3 operated at higher than 4160. That's a constant  
4 current, it's a constant current transformer and as  
5 the bulbs go out they raise voltage. And it can go  
6 up to 10 KV.

7 Now I know of only one or two instances  
8 where this has been a problem, but if you force  
9 them, they got an exception and if they can get an  
10 exception there is also another exception on using  
11 the shielding, nonshielding cable in equipment,  
12 inside the equipment. Well, what is the difference  
13 between inside a piece of equipment and in a piece  
14 of conduit?

15 MR. WILLSE: 1 minute.

16 MR. STEWART: Okay. Well, I would  
17 encourage this group to not take away the exception  
18 for the F A A circular and allow that to be due but  
19 if you don't to anything else at least give the user  
20 industry, like the industrial exception, that  
21 exception also. Thank you.

22 MR. WILLSE: Thank you. Microphone No.

23 3.

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2 with KCI Technologies, but I'm representing myself.  
3 Everything that gentleman said --

4 MR. WILLSE: For or against?

5 MR. SHANNON: I'm for the motion, for  
6 the 5 KV cable, to reinforce the airport situation  
7 because I have done airport lighting and I learned  
8 it from an old master. Airport lighting is a  
9 constant current thing. Yes, it's a variable  
10 voltage, can run anywhere from 0 to 5 or even  
11 higher. It's an on grounded system so it's really  
12 running 5 KV to ground. It's deliberately on  
13 grounded because if you ground it you can bypass  
14 lights out there. It's a series circuit. It's very  
15 low current. It's 5.5 generally but can be higher  
16 or lower fixed current. This on grounded system was  
17 approved and I hope this doesn't make you take it  
18 back away the exception because there is no way that  
19 they could use anything but on shielded cable in the  
20 cones that they're allowed. When you go to the  
21 industry quite often the 4160 is a grounded system  
22 which means it's only running at 2400 volts to  
23 ground, not 5,000 volts to ground. I know back in

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1 the early days a lot of pulp mills were wired with  
2 it. I go along with the guy, it takes a fairly big  
3 box on a motor to terminate the terminators and

4 everything else. I can see the problems out on the  
5 offshore rigs where they have very little room. I  
6 don't think there should be a problem with 5 KV on  
7 shielded cable, 4160 grounded system when we don't  
8 have the problem on every, I'll guarantee you it's  
9 every airport out there except the small ones.  
10 There is a few parallel circuits out there. But  
11 just about every big airport they use 5 KV cable.  
12 And if you want to talk reliability, talk to the  
13 F A A.

14 MR. WILLSE: Thank you. Microphone No.  
15 4.

16 MR. HOLUB: Richard Holub, I represent  
17 the American Chemistry Council, I'm an alternate on  
18 Panel 6. To make the statement that Panel 6 fairly  
19 evaluated all the proposals on this subject is a  
20 gross overstatement. If you read the panel  
21 statement, the panel statement for all of these is  
22 the same. It's identical. To state that conduit  
23 installations are unsafe, and metal-clad

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1 installations are unsafe is clearly inappropriate.

2 This change in the 2005 code had an  
3 unintended response and basically it removed the  
4 listing the UL listing for cable to be used to 5 KV.  
5 Now the code it not intended to be retroactive. It

6 is not intended to go back and apply to existing  
7 installations. But what we've in fact done is apply  
8 our code to existing installations because we  
9 removed the listing for 5 KV on shielded cable. So  
10 if I need to replace a cable, I can no longer  
11 purchase a 5 KV listed unshielded cable to use for  
12 an existing installation.

13 Many different iterations were proposed  
14 before this panel, including ones that would limit 5  
15 KV unshielded only to existing installations. All  
16 of them have been rejected. The panel stuck their  
17 head in the sand and has not addressed the problem.  
18 So I urge you to support this motion and accept this  
19 comment. Thank you.

20 MR. WILLSE: Thank you. Microphone No.  
21 6.

22 MR. ZIMNOCH: Joseph Zimnoch, Panel 6  
23 member, against the proposal on the floor. I'm an

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1 engineer with the Okonite Company, have been for the  
2 last 23 years, ten of which I spent in the high  
3 voltage research lab testing cables and  
4 terminations.

5 I guess the question comes up why do we  
6 need a shield in the first place? What is the  
7 purpose of the shield? Why don't 600 volt cables

8 have shields. Basically it's there to limit the  
9 amount of discharge that builds up on the outside  
10 surface of the cable. Approximately a hundred years  
11 ago our electric forefathers figured this out. They  
12 fought for a patent and were successful. At that  
13 time they tried to add more insulation, as I heard  
14 some suggests here now. That actually resulted in  
15 something called a belted P I L C cable that didn't  
16 work. Shielding was the thing.

17 In fact the more insulation you applied  
18 the greater the chance you get for more discharge.  
19 It seems to me that the threshold for this  
20 phenomenon is around 2,000 volt and you can look  
21 back in certain areas of code and still find this  
22 2,000 volt limitation. Once you get a voltage  
23 build-up on the outside, the potential is there.

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1 The shield drains off that potential. That's the  
2 purpose of it. This build-up occurs both at  
3 terminations and on the cable within cable and  
4 within the conduit. We've known this for many  
5 years. Most cable companies, I C E A and even IEEE  
6 recommended using shielded cable at 4160. In fact,  
7 IEEE guide 1242, guide for cable selection for petro  
8 can also recommended shielded cable and in there the  
9 author quotes: It is recommended that cables

10 operating at 4 KV and above be shielded.

11 In the end this is a fire, a safety,  
12 and a reliability issue. It affects all levels of  
13 training. It is a problem in the field. I know,  
14 have personally gone out on many complaints. The  
15 use of more insulation or more covering or conduit  
16 do not eliminate discharge. The use of shielded  
17 cable at 4160 or higher can only help or improve  
18 reliability and installation. That's the reason you  
19 don't see it even above those levels. Thank you.

20 MR. WILLSE: Thank you. Microphone No.  
21 5.

22 MR. FREDERICKS: Carl Fredericks with  
23 Dow Chemical and speaking in favor of the motion.

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1 There are a number of, I think, good comments that  
2 were made in favor of the motion, and I won't repeat  
3 or I'll try not to repeat too many of these here.  
4 But I think in particular we need to consider the  
5 comments about boxes. Those are very real  
6 situations where we have existing boxes. You can  
7 actually get a less reliable and a less safe  
8 installation if you try to force a shielded cable  
9 installation into an underside box that is not  
10 suitable for that service. And it is exactly the  
11 same issues with airport runway lighting. And I

12 don't think there is any valid reason to permit this  
13 installation for airport runway lighting and not for  
14 industry. There were comments made that there is a  
15 greater safety issue relative to airplane landing or  
16 what have you, but I think the same safety issues  
17 certainly exist in the industry and that has to be  
18 recognized. We can actually have less reliable less  
19 safe installations if we force shielding cables into  
20 installations that were designed for unshielded  
21 service. Thank you.

22 MR. WILLSE: Thank you. Microphone No.  
23 3.

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1 MR. ELKINS: Doug Elkins representing  
2 ACC American Chemical Council. I want to make a  
3 point that what is actually happening --

4 MR. WILLSE: For or against?

5 MR. ELKINS: For. Actually lowering  
6 the safety. One of the problems that I think has  
7 been alluded to but not discussed directly is  
8 explosions in motor terminal boxes. There was  
9 actually a PCIC paper some years ago on this. We  
10 experienced this in our company that I work for, we  
11 had thousands of installations of these motors and  
12 had termination box explosions.

13 What you are doing is adding stress  
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14 cones in these boxes which is adding equipment which  
15 lowers the reliability. You are going to have more  
16 explosions particularly in areas where petrochem  
17 businesses focus a lot in the United States down the  
18 Gulf Coast, the boxes get a lot of moisture in them,  
19 all along the coast, and you're really subject to  
20 these sort of explosions. Personnel in the vicinity  
21 boxes injured by shrapnel.

22 So installing that cable inside of a  
23 conduit provides, that shielding the gentleman just

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1 spoke to, so you don't have anyone exposed to the  
2 discharge but people are definitely exposed to  
3 shrapnel from these exploding motor boxes. Thank  
4 you.

5 MR. WILLSE: Thank you. Microphone 2.  
6 Microphone No. 4.

7 MR. HIRSCHLER: Marcelo Hirschler, GBH  
8 International, speaking for myself. I call the  
9 question.

10 MR. WILLSE: The question has been  
11 called. All those in favor of calling the question  
12 please raise your hand. Thank you.

13 All opposed. Thank you. We'll now go  
14 to vote on NITMAM 70-25, Log 318, all those to  
15 accept comment 70-6-17 please raise your hands.

16 Thank you.

17 All those opposed. Motion failed.

18 THE FLOOR: Count.

19 MR. WILLSE: All right. We are going  
20 to do a standing count. All delegates with the gold  
21 ribbon please fill in your ballot. I call for a  
22 standing vote of the individual members. You must  
23 have a badge with the word voting on the top with

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1 the black strip, to be counted. Those voting  
2 members for the motion please stand.

3 (Affirmative vote counted.)

4 Delegate members, those with the gold  
5 badge, fill out the ballots, turn them in.

6 You may be seated. All those opposed  
7 please stand.

8 (Opposed vote counted.)

9 It looks like my thumb does not need to  
10 be recalibrated. All those in favor was 100. All  
11 opposed 145. The motion was defeated.

12 We're now up to comment NITMAM No.  
13 70-26, Log 339, again Log 339, NITMAM 70-26.

14 MR. STEWART: This is a very similar  
15 proposal from the one that you just voted to --

16 MR. WILLSE: Name.

17 MR. STEWART: My name is H. R. Stewart  
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18 with A C R S Consultants. I'm a principal member on  
19 Panel 7 representing IEEE, but today I'm  
20 representing Mr. Bruce McClung because he made these  
21 comments.

22 MR. WILLSE: You're making a motion to  
23 accept proposal 70-6-13.

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1 MR. STEWART: Yes.

2 MR. WILLSE: I have a motion made. Do  
3 I have a second? Do I have a second?

4 I do. Please continue.

5 MR. STEWART: A lot of the discussion  
6 that we've already had we're not going to go through  
7 all that except that this proposal is a little more  
8 sensitive because it does emphasize the safety  
9 issues of cables in conduit or in metal clad cables.

10 There is one other point that I would  
11 like to make out. We voted here just on this other  
12 panel, the other proposal, to not allow use of 5 KV  
13 nonshielded cable. Now how can we do that when we  
14 have said it's okay for the F A A to use it on  
15 airport lighting cable when the voltage on airport  
16 lighting cable goes up to 810 KV and we're talking  
17 about phase to ground. That is totally  
18 inconsistent. I'm not saying take away the  
19 exceptions or the airport lighting. I'm saying give

20 us that same exception in the user industry. Thank  
21 you.

22 MR. WILLSE: Thank you. Mr. Carpenter.

23 MR. CARPENTER: I defer to Code-Making

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1 Panel 6 chair Scott Cline.

2 MR. CLINE: Scott Cline, chairman of  
3 Panel 6 speaking in opposition. Again this is an  
4 extremely similar issue. The existing code limits  
5 the design utilization voltage to 2.4 KV. We  
6 received many proposals and comments to try and  
7 allow higher voltages under certain conditions. We  
8 had no verifiable data showing that any such safe  
9 use was given to us for evaluation in proposal or  
10 comment stage, otherwise we might have voted to  
11 allow some other safe uses. 40 percent of our  
12 comments addressed these issues so that there were  
13 many discussions over a long period of time in  
14 regard to this situation.

15 The very special case of the airport  
16 runway has to do with cable that is under ground  
17 under highly controlled circumstances. And it is  
18 obviously critically important that runway lighting  
19 stay on when airplanes are attempting their  
20 approaches.

21 This panel's evaluation was that

22 exposure to risk when these cables are utilized  
23 above 2.4 KV was otherwise not shown to be

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1 acceptably safe, and again, I ask to please vote  
2 against this motion.

3 MR. WILLSE: Thank you. Microphone No.  
4 5.

5 MR. LaBRAKE: Neil LaBrake representing  
6 Edison Electrical Institute, and I rise in support  
7 of the motion on the floor to accept proposal 6-13.

8 MR. WILLSE: Thank you. Microphone No.  
9 2.

10 MR. HICKMAN: Palmer Hickman speaking  
11 for myself. I would like to call the question.

12 MR. WILLSE: The question has been  
13 called. All those in favor of calling the question  
14 please raise your hand. All opposed. Thank you.

15 We'll now vote on NITMAM 70-26 Log  
16 No. 339. All those to accept proposal 70-6-13  
17 please raise your hands. Thank you.

18 All opposed. Motion failed.

19 THE FLOOR: Division.

20 By a show of hands, how many people are  
21 going to be taking the buses back so we can make  
22 sure we order enough buses for this evening. Thank  
23 you.

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1 Two-minute break.

2 THE FLOOR: Point of information.  
3 Division.

4 MR. WILLSE: Division of the question?  
5 I'm sorry. That was plainly failed. Thank you.  
6 Two-minute break.

7 Okay. I have just been corrected. We  
8 will, after the two-minute break, we'll come back to  
9 the vote for Log 339 on proposal 70-613.

10 (Brief recess.)

11 MR. WILLSE: The closure of the buses  
12 got in the way.

13 We are going to take a vote on all  
14 those who want to close the question. Please raise  
15 your hands. To close the question. Close debate on  
16 the question. Thank you.

17 All opposed. Thank you. The motion  
18 carries.

19 Now we are going to vote on the NITMAM  
20 No. 70-26.

21 THE FLOOR: Mr. Chairman point of  
22 order. We asked that we get a -- in Pirate of  
23 Caribbean call it a parlay, you call it a what? To

1 count the votes. I want to see a count of votes on  
2 that last, if you don't mind.

3 MR. WILLSE: For closure?

4 THE FLOOR: No.

5 MR. WILLSE: Just wait a minute then.  
6 This next step is to vote on the NITMAM 70-26 Log  
7 339. All those in favor of Log 339, please raise  
8 your hands. Okay.

9 All opposed. Again, motion fails.

10 Thank you.

11 THE FLOOR: Mr. Chairman, can I have my  
12 parlay.

13 MR. WILLSE: You want a standing count.

14 THE FLOOR: Yes, please.

15 MR. WILLSE: On a motion that has more  
16 than half that has raised their hands. I'm sorry  
17 that's out of order.

18 Number 70-27. Mr. Neil LaBrake.

19 MR. LaBRAKE: Thank you. My name is  
20 Neil LaBrake representing Edison Electric Institute  
21 and submitter of this NITMAM.

22 MR. WILLSE: You're accepting Comment  
23 70-6-13.

1 MR. LaBRAKE: That is correct.

2 MR. WILLSE: I have a motion made. Do  
3 I have a second? I have a second. Please continue.

4 MR. LaBRAKE: Thank you. My motion is  
5 to accept Comment 6-13 and it is on 3-10.6 and 2007  
6 NEC ROC on Page 173.

7 Comment 6-13 was submitted to accept in  
8 principle proposal 6-15 in the ROP on Page 782.  
9 This comment was rejected by the panel, panel 6, by  
10 vote of 8 to 3. Panel 6 rejected comment 6-13  
11 because they believed that the use of nonshielded  
12 cables above 2400 volts is unsafe under any and all  
13 conditions. Acceptance of the original proposal  
14 6-15 would have permitted the use of nonshielded  
15 listed cable up to 5 KV without consideration to the  
16 use of qualified persons to perform maintenance.  
17 The panel rejected this proposal on the grounds that  
18 it presented a safety hazard for personnel working  
19 in close proximity.

20 Acceptance of 6-13 with revised text  
21 would permit the use of nonshielded cables up to 5  
22 KV but only under the conditions of maintenance and  
23 supervision that would ensure servicing by qualified

1 persons. We believe Panel 6 is incorrect in its  
2 assertion that listed nonshielded cables operating  
3 within their listings are unsafe under any and all  
4 conditions.

5 We believe there is a training issue.  
6 Prior to 2005 nonshielded cables were installed and  
7 operated at voltages above 5 KV for decades. We  
8 believe the nonshielded cables can be operated  
9 safely and voltage up to 5 KV and work safely by  
10 properly trained persons that follow appropriate  
11 safety rules. And there were no further evidence to  
12 show that there is a safety hazard with 5 KV cables  
13 in the past.

14 On behalf of the electric utility  
15 industry, that I am representing through E E I, I  
16 respectfully request the general assembly and NFPA  
17 to reconsider the proposed action in permitting the  
18 use of nonshielded cable up to 5 KV and 310.6 and  
19 accept Comment 6-13. Thank you.

20 MR. WILLSE: Thank you. Mr. Carpenter.

21 MR. CARPENTER: I'll defer to  
22 Code-Making Panel 6 Scott Cline.

23 MR. WILLSE: Microphone 4.

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1 MR. CLINE: Scott Cline chairman of

2 Panel 6 speaking in opposition. Again, very similar  
3 issues. If any verifiable data showing such safe  
4 use had been submitted with either the proposals or  
5 the comments the panel might have voted to allow at  
6 least some uses. We were not given any such  
7 documentation showing safe use even under special  
8 conditions of qualified personnel. The panel's  
9 evaluation was that exposure to risk when these  
10 cables are utilized above 2.4 KV was otherwise not  
11 shown to be acceptably safe. Please vote against  
12 this motion.

13 MR. WILLSE: Thank you. Microphone No.  
14 2.

15 MS. LITTLE: My name is Linda Little  
16 representing myself. I would like to call for the  
17 question.

18 MR. WILLSE: You want to call the  
19 question, all in favor of calling the question  
20 please raise your hands. All opposed. Motion  
21 carries.

22 We're now going to vote on NITMAM No.  
23 70-27 Log 345, all those in favor of accepting

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1 Comment 70-6-13 please raise your hands. Thank you.

2 All opposed. Motion failed.

3 We are now up to NITMAM 70-28, Log 402.

4 MR. WECHSLER: Dave Wechsler speaking  
5 for the American Petroleum Institute. I'm the  
6 designated representative from Paul Hamer.

7 MR. WILLSE: Yes, sir, you are.

8 MR. WECHSLER: I move acceptance of  
9 Comment 70-6-26.

10 MR. WILLSE: Thank you. I do have a  
11 motion made. Do I have a second? I do have a  
12 second. Please continue.

13 MR. WECHSLER: This recommendation is  
14 along similar lines but this is a brand new  
15 exception to deal with this unshielded cable. The  
16 point and there has been a lot of discussion and I  
17 have great respect for my colleagues on C M P 6 and  
18 I'm also a code member on another panel and I  
19 recognize what they're going through in looking at  
20 data.

21 There is a cycle in this called chicken  
22 and hen syndrome, which came first. The  
23 installation was being done and something triggered

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1 that that says we can no longer do it. And I'm  
2 looking searching for the traumatic event that says  
3 this was so unsafe that we can't do this anymore.  
4 And yet at the same time, the panel goes and says  
5 it's okay to use this in F A A requirements which

6 have wet locations which are differing and they're  
7 allowed to go to a higher voltage.

8 Now explain to me how this is, how the  
9 electric code is a safety issue and how we can say  
10 on one hand industry with its qualified people can't  
11 use this at the 5,000, 4160 KV level, 41000 volts  
12 and the F A A can use this. This is totally  
13 bizarre. You've given them an exception. They  
14 don't have the history. You think it's okay for  
15 them. Is it the people? Do we need to hire F A A  
16 people in our industrial plants? Is that what it  
17 takes to make it safe? Is it they have better  
18 maintenance than we have? Do they have some secrets  
19 that they can use that the rest of don't? Do they  
20 have smarter electrons flowing through their cables?

21 Guys, let us get real with this. You  
22 can't give one people an exception and say the other  
23 people who have been doing this 30 years, you can't

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1 do it. You have got to give some justification as  
2 to what the heck is going on. You have been seeing  
3 appeal after appeal saying tell us what is wrong.  
4 We have, and all we're saying is where is this data  
5 that says this system is so unsafe that we don't  
6 want you allowed to use it. That's not what I'm  
7 hearing. That's not what you're saying. You're

8 saying is, your action is call the UL Laboratory to  
9 take back their listing at that voltage and reapply  
10 it to the different voltage. And yet, you are going  
11 to let the FAA and their requirements use the same  
12 cable.

13 Come on guys, you can't have it both  
14 ways. I understand that there is a strong emotional  
15 feeling and perhaps you can see some in my voice,  
16 but you know we have to move on. We have people,  
17 these systems have to work. You can't shut down  
18 industry and say you can't do this unless you can  
19 come up with good defendable reasons. The panel is  
20 split and the panel split over technical issues but  
21 where is this inherent safety problem. Where is  
22 this condition that says this is so unsafe my  
23 goodness we'll kill every man, woman, and child on

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1 the face of the earth. That is effectively the  
2 procedure what I'm hearing out of this organization.  
3 That's not realistic. You need to support this.  
4 Thank you.

5 MR. WILLSE: Thank you. Mr. Carpenter.

6 MR. CARPENTER: I defer to Code-Making  
7 Panel No. 6 chair Scott Cline. Microphone 3.

8 MR. CLINE: Scott Cline, chairman panel  
9 6, speaking in opposition. Just to try to address

10 his specific concerns and statements, the data  
11 restricting the use to 2.4 KV was part of a previous  
12 cycle's actions and had nothing to do with the  
13 actions of the panel at this time. The current rule  
14 is a limitation 2.4 KV. We chose to, except for the  
15 air field application, to not allow any other uses.  
16 And the difference with the F A A aircraft use is  
17 quite obviously, aircraft attempting to land at  
18 airports at night and probably under inclement  
19 weather, and there were technical statements given  
20 to us to show that the unshielded cable application  
21 was safer particularly in the case of lightning  
22 strikes. So that particular use was allowed.  
23 And again, I'll ask the floor to vote

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1 against this motion.

2 MR. WILLSE: Thank you. Microphone No.  
3 2.

4 MR. SASSAMAN: Harry Sassaman,  
5 alternate on Code Panel No. 6. I'm against this  
6 motion, and I support my chairman's position that he  
7 just said. I would like to call the question.

8 MR. WILLSE: Sir, you can't do both at  
9 the same time.

10 Microphone No. 5.

11 MR. LaBRAKE: Neil LaBrake representing

12 Edison Electric Institute. I am in support of the  
13 motion on the floor. Without repeating myself in  
14 the previous NITMAM, we rise in support of a motion  
15 on the floor and in the last code cycle there was  
16 insufficient technical substantiation supporting the  
17 change in the last cycle to pull this out of the  
18 NEC. There were no reported lists of fatalities or  
19 injuries, sorry to say, but that would have been  
20 overwhelming evidence.

21 So we rise to support the motion on the  
22 floor. Thank you.

23 MR. WILLSE: Thank you. Microphone No.

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1 2.

2 MR. REISBERG: Marty Reiberg  
3 representing myself. I call for the question.

4 MR. WILLSE: The question been called.  
5 All in favor of calling the question please raise  
6 your hands. Thank you.

7 All opposed. Motion carries. We now  
8 vote on NITMAM No. 70-28 which is Log 402. All  
9 those in favor of accepting Comment 70-6-26 please  
10 raise your hands. Thank you.

11 All opposed. Motion failed.

12 We're up to NITMAM No. 70-29 Log 343.  
13 Microphone No. 5.

14 MR. LaBRAKE: Neil LaBrake representing  
15 Edison Electric Institute, and I am the submitter of  
16 this NITMAM. Motion to the assembly is to accept  
17 Comment 6-29 on 310.7 in the 2007 ROC.

18 MR. WILLSE: We have a motion made to  
19 accept Comment 70-6-29. Do I have a second? I have  
20 a second. Please continue.

21 MR. LaBRAKE: Thank you.

22 Comment 6-29 was submitted to accept in  
23 principle proposal 6-22 in the 2007 NEC ROP on page

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1 284. This comment was rejected by Panel 6 on a vote  
2 of 8 to 3. Currently 310.7 permits direct buried  
3 cables rated 2001 to 5000 volts to have an overall  
4 metallic shield or armor.

5 Proposal 6-22 if accepted would clarify  
6 that these cables must be listed by qualified  
7 testing laboratory. The panel rejected the proposal  
8 only because it violated the NEC style manual.  
9 Comment 6-29 if it accepted would have put the text  
10 into the NEC style manual format, thus direct buried  
11 cables would continue to be permitted up to 5,000  
12 volts if they are listed and have an overall  
13 metallic shield or armor.

14 These cables have been permitted for  
15 decades and have an outstanding service record. On

16 behalf of the electric utility industry that I am  
17 representing through Edison Electric Institute, I  
18 respectfully request that the general assembly and  
19 NFPA reconsider the proposed action and permitting  
20 the use of nonshielded listed cables up to 5 KV and  
21 310.7 and accept Comment 6-29. Thank you.

22 Mr. Carpenter.

23 MR. CARPENTER: I call on Code-Making

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1 Panel 6 chair Scott Cline.

2 MR. WILLSE: Microphone No. 3.

3 MR. CLINE: Scott Cline chairman Panel  
4 6 speaking in opposition. The application of these  
5 cables as I stated was very long very well  
6 discussed. The limit is 2.4 KV. The listing of a  
7 higher voltage cable while that cable can be  
8 installed is not allowed to be utilized at the  
9 higher level.

10 Comment 632 also changed the wording  
11 of exception 310.7 from 5,000 to 2400 volts. And  
12 again I'll ask the floor to vote against this  
13 motion.

14 MR. WILLSE: Thank you. Microphone No.  
15 2.

16 MR. LAUGHLIN: Mr. Chairman. Rich  
17 Laughlin representing myself. Move the previous

18 question, please.

19 MR. WILLSE: The question has been  
20 moved. All those in favor please signify by raising  
21 your hand. Thank you.

22 All opposed. Motion carries.

23 We'll now vote on NITMAM No. 70-29, Log

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1 343. All those in favor of accepting Comment  
2 70-6-29 please raise your hands. Thank you.

3 All opposed. Motion failed.

4 We're up to NITMAM No. 70-30.

5 Microphone No. 4.

6 MR. HOLUB: Mr. Chairman, Richard Holub  
7 I'm one of the designated representatives of Mike  
8 Wallis. And I move we accept Comment 70-6-48, panel  
9 page 70-184 in the ROC.

10 MR. WILLSE: Name again please.

11 MR. HOLUB: Richard Holub.

12 MR. WILLSE: Very good. We have a  
13 motion made to accept comment 70-6-48. Do I have a  
14 second? I do have a second. Please continue.

15 MR. HOLUB: Major changes in the  
16 national code concerning passive conductors should  
17 always result from some real live issue. In the  
18 case of this comment, the basis of the proposal was  
19 an academic study performed by consultants who were

20 not surprisingly paid by the Copper Development  
21 Association. The test was performed in Las Vegas,  
22 Nevada, and proved exactly what the Copper  
23 Development Association wanted. The Conduits

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1 weren't inside when lying on a black roof in the Las  
2 Vegas sunlight. The study was based on limited  
3 range of conduit sizes and only included conductor  
4 inside the conduit. It did not include cables  
5 inside the conduit. Roof pitch and roof color were  
6 not considered in the original proposal. Despite  
7 the limitations of all this testing, it was  
8 conducted by an organization who can benefit from  
9 the result, the proposal that the panel accepted  
10 requires derating the ampacity of conductors within  
11 one half inch of a roof to 33 percent of the current  
12 table 310.16 ampacity.

13 None of the tests conducted were  
14 independently verified. And in all cases we had not  
15 shown there is any problem with existing situations.  
16 All we've done is an academic test that says  
17 conduits heat up inside.

18 In essence the proposal is covertly  
19 changing, the long established definition of ambient  
20 temperature without justification, and there again  
21 have been no examples cited with problems with

22  
23

existing installations.

In support of rejecting this, there

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1 were many examples supporting the existing deration  
2 tables proposed. The proposal as done now is  
3 broadly worded and reaches well beyond the scope of  
4 the study. It changes the ambient temperature  
5 definition to correct the problem which has not been  
6 substantiated. Essentially all conduits on rooftops  
7 exposed to sunlight will be required to be derated  
8 with no regard to how long they're exposed or where  
9 they're located. I urge you to support this comment  
10 and reject the text inserted. Thank you.

11 MR. WILLSE: Thank you. Mr. Carpenter.

12 MR. CARPENTER: I defer to Code-Making  
13 Panel 6, Scott Cline.

14 MR. CLINE: Scott Cline chairman of  
15 Panel 6 speaking in opposition to the motion. The  
16 panel recognized that this was a major change.  
17 There was significant discussion of the proposal  
18 both at the proposal stage and again at the comment  
19 stage. 20 percent of the comments we received were  
20 related to this issue. These discussions led to  
21 confirmation of the high quality of the proposals  
22 submitted test results as being conservative,  
23 substantive, and acceptable. This issue was

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1 recognized as a very significant one and was not  
2 treated lightly. Please vote against this motion.

3 MR. WILLSE: Thank you. Microphone No.  
4 2.

5 MR. LAIDLER: Thank you, Mr. Chairman.  
6 Bill Laidler representing the IBEW speaking in  
7 opposition to the motion. Being a member of Panel 6  
8 this is another one that came, held, I should say  
9 come across in both cycle, I 2005 and 2008.

10 2005 the panel looked at the evidence  
11 that was submitted by the consultants and we felt  
12 that they were not fair in the sense they were just  
13 taking one location. We asked them to come back if  
14 they wanted to to submit a proposal in 2008 with  
15 further data showing what the effects would be or  
16 with the raceways being exposed on rooftops and  
17 direct sunlight, and all locations. They came back  
18 with that data and more than that.

19 We sat down did again a lot of  
20 deliberations and talked and debates and again, this  
21 is nothing new in the code. 310.16 gives ambient  
22 temperatures based -- gives ampacity based upon a  
23 30degree semi grade ambient temperature, 86-degree

1 Fahrenheit, and if you change those temperatures you  
2 have to adjust the ampacity, and inspector wires can  
3 enforce that prior to this. He can go up on the  
4 roof on a sunny July day, say it's 140 degrees here,  
5 start derating from there or adjusting from that  
6 temperature.

7 All we've done here is given guidance,  
8 we have given you a table or a -- fine print note I  
9 should say, that suggests a way to find the means of  
10 meeting the high temperature for a specific area and  
11 start adjusting from there. Yes you are going to  
12 have to add some degree to that based upon the  
13 higher temperature, but we've given you guidance we  
14 are not going to let an inspector wires, which I  
15 happen to be one, just arbitrarily take the  
16 temperature. We're giving you some guidance, giving  
17 the installer guidance. This has always been in the  
18 code. We're just giving you more, again, not to be  
19 redundant, but guidance. This is nothing new. This  
20 is a problem. I would like to use the analogy of a  
21 fixture that has been in a house that was installed  
22 in 1930. It works fine. There is no problem until  
23 the homeowner wants to change the fixture calls in

1 an electrician. Electrician takes down the fixture  
2 and all of a sudden he looks up or she looks up and  
3 the insulation is falling off. It was all crap.  
4 What do I do now. It was working. We know this is  
5 a problem. We know this when we try to pull the  
6 wires out of the raceway that is on the rooftop. We  
7 usually have to take the sawzall and cut up the  
8 raceway.

9 I ask the panel members here to support  
10 Panel 6. Again we did a lot of hard work on this, a  
11 lot of debate, and again, ask for your support.  
12 Thank you.

13 MR. WILLSE: Thank you. Microphone No.  
14 5.

15 MR. FREDERICKS: Carl Fredericks from  
16 Dow Chemical and speaking in favor of the motion.

17 I think again, it is great that the  
18 panel made the efforts it made and trying to do  
19 their best, but looking at the result, I can only  
20 say it seems clear to me at least that the result is  
21 far too broad versus what the data supported.  
22 Ampacity is one area of our industry that is very  
23 well known. There is literally probably no

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1 electrical circuit configuration that can't be  
2 pretty definitively evaluated for ampacity. And  
3 given that I would guarantee that not every  
4 installation on a rooftop needs the kind of derating  
5 that the panel has adopted. Maybe some very limited  
6 set of installations under, as maybe was suggested  
7 test conditions might.

8 I really think the panel should have  
9 retained some independent expertise or NFPA should  
10 have. I think this is a clear case where the panel  
11 has adopted some things which are technically not  
12 substantial and not substantiated, and I think if we  
13 allow much more of this we are going to end up with  
14 a code that is technically incorrect and ultimately  
15 will not stand. Thank you.

16 MR. WILLSE: Thank you. Microphone No.  
17 6.

18  
19 MR. LINDSAY: My name is Travis  
20 Lindsay, Travis Lindsay Consulting Services, Las  
21 Vegas Nevada. Speaking against the motion. I  
22 actually am the submitter of the proposal and the  
23 technician that did most of the testing. I would

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1 suggest that the panel was extremely articulate in  
2 their resolve and their work that they did that they  
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3 were careful, diligent, deliberate, that the two  
4 code cycles that it took for this review was not in  
5 vain. And that it is wrong and arbitrary to ignore  
6 their hard work.

7 And so I guess I would just say in  
8 conclusion that they've done their job. We've done  
9 ours. That the numbers are accurate and they should  
10 be adhered to. Thank you.

11 MR. WILLSE: Thank you. Microphone No.  
12 4.

13 MR. VOLTZ: Don Voltz. I'm with  
14 Mustang Engineering.

15 MR. WILLSE: Thank you.

16 MR. VOLTZ: Representing myself. One  
17 of the things I wanted to bring up, I listened to my  
18 colleagues over here saying we are giving -- I'm on  
19 Panel 6, a member. We're giving you guidance. No,  
20 we don't want to give them guidance. We are telling  
21 them what the ampacity has to be.

22 In the 2005 code we had a fine print  
23 giving them guidance which was great. That gave

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1 people some leeway when applying the conduit on some  
2 rooftops. But now under the new rules, they'll have  
3 to apply these ampacity derating. If you look at  
4 that, if you have a 60 amp feeder that is going

5 across that roof in a conduit, you know you're going  
6 to use a number 6 wire you have to go to a number 2  
7 and that causes other problems at terminations, at  
8 circuit breaker ratings, etc. So there is a lot of  
9 other factors that need to come into play when you  
10 start looking at the derating required from this  
11 application. Thank you.

12 MR. WILLSE: Thank you, Microphone  
13 No. 2.

14 MR. COLMAN: Providence Health System:  
15 Call the question.

16 MR. WILLSE: The question has been  
17 called. All in favor of calling the question,  
18 please raise your hands. Thank you.

19 All opposed. Motion carries. We'll  
20 now go to vote on NITMAM No. 70-30 deals with Log  
21 319. All those in favor of accepting comments  
22 70-6-48 please raise your hands. Thank you.

23 All those opposed. Motion failed.

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1 We've now completed Panel 6.

2 Yes. Microphone 4.

3 MS. HORTON: No, I'm for the next item.

4 Panel 7 MR. WILLSE: All right. We're up to

5 Panel 7, 7-31. Microphone 4.

6 MS. HORTON: Pat Horton representing  
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7 the Steel Tube Institute, and I'm the designated  
8 representative for William Wolfe.

9 MR. WILLSE: Thank you.

10 MS. HORTON: Apparently this mike is  
11 not picking up so I would like to adjust it, please.

12 MR. WILLSE: Mike 4 raised, please.

13 MS. HORTON: I move that comment  
14 70-7-27 be accepted, and this is found on Page 203  
15 of the ROC.

16 MR. WILLSE: We have a motion made to  
17 accept Comment 70-7-27. Do I have a second? We do  
18 have a second. Please continue.

19 MS. HORTON: This proposal consists of  
20 Comment 7.105 to proposal 7.115 for the 2005 code.  
21 It was a carry over. And it relates to proposal  
22 7-51 of the 2008 ROP found on Page 334.

23 What this proposal would do is permit

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1 NM, NMC and NMS in types 1 and 2 buildings where  
2 it's installed in a raceway, any raceway that is  
3 permitted in those buildings. That practically  
4 covers all raceways that are in the NEC.

5 This is a broad range provision. The  
6 proposal 105 that was held in the 2005 cycle was  
7 held for further study. We are unable to determine  
8 what further study has happened because to date

9 there has been no new nor no old data that answers a  
10 lot of questions in nonproviding for any study. The  
11 panel notes some tables in Chapter 9 and so forth  
12 but those tables existed during the 2005 cycle. So  
13 there is nothing new to look at. I don't know what  
14 further study has been made.

15 There is a possibility that this  
16 proposal is in conflict with proposal 7-78 for the  
17 2008 code and 7-78 is found on Page 340. We believe  
18 that conflict with 7-51, the thing that happened was  
19 that in the 2005 code, optic fiber cable was the  
20 composite cable which is the same as cyber cable was  
21 deleted from 7-70.9 so they were trying to find a  
22 way to put it in 334. That is found in 7-78 but  
23 that section, 334.104 C and it only allows N M S

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1 cable. So there is a conflict between the two  
2 sections. As Mr. Brown noted in his Code Panel 7  
3 comment, negative comment on his ballot on proposal  
4 7-51, that technical substantiation should be  
5 closely reviewed by Code Panel 6. We agree with  
6 that. This has not been done, and there have been  
7 long ampacity concerns within cable when it's in  
8 insulation. Now you're putting it into raceways and  
9 we aren't sure what effect that is going to have  
10 because there is no data that has been provided for

11 that.

12 We urge the manufacturers here to  
13 consider how concerned they would be should a  
14 proposal be accepted without data that involved the  
15 use of their product and what could be an unsafe  
16 manner. We need answers to the concerns that have  
17 been expressed and in the interest of time, I'm not  
18 addressing a lot of the technical issues because  
19 I've learned that Mr. Sam LaDart who is a member of  
20 Code Panel 7 and he cast a negative vote on this and  
21 he had some very pertinent issues that he raised.  
22 Being an installer, I would like to defer to  
23 Mr. LaDart for him to explain all the technical

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1 issues that concern him from what he sees in the  
2 field and things he thinks can happen.

3 We urge you to vote yes on this motion.  
4 Thank you very much.

5 MR. WILLSE: Mr. Carpenter.

6 MR. CARPENTER: Yes. I would like to  
7 defer to Code-Making Panel No. 7 chair Gaylen  
8 Rogers.

9 MR. ROGERS: Gaylen Rogers, chairman of  
10 Panel 7, and in speaking to reject this proposal.  
11 The panel looked at different cable types also  
12 looked at putting this cable inside of the conduit

13 systems, and the type of construction, this is for a  
14 type 1 and type 2 construction. And there is  
15 specific requirements for the type of wiring systems  
16 and how to protect it. And so I urge you to support  
17 the panel action on this. Reject this comment.

18                   You know if you look at some of the  
19 ramifications of this, it's really not something  
20 that, I don't think anybody would want to do because  
21 of the cost and the type of cable that would be used  
22 in this type of installation. However, the panel  
23 did want to leave open the possibility for somebody

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1 that might want to use an N M cable in this type of  
2 construction. Thank you.

3                   MR. WILLSE: Thank you. Microphone No.  
4 1.

5                   MR. LaDART: Thank you, Mr. Chairman.  
6 Sam LaDart representing the R B W on Code-Making  
7 Panel No. 7, and I am speaking in favor of the  
8 motion on the floor to accept the comment. Type N M  
9 cable is not designed to be routinely installed  
10 within a raceway system. Raceway systems are  
11 allowed to contain as much as 360 degrees of total  
12 bend between pull points. Damage to the outer seat  
13 of N M cable which is listed for use of up to 600  
14 volts could easily occur even when installed in

15 accordance with the raceway articles.

16           The major concern however is the safe  
17 dissipation of the heat. Type N M cable conductors  
18 are housed within a cable sheath. If the cable is  
19 further confined within a raceway, there is far less  
20 opportunity for the safe dissipation of the heat.  
21 Furthermore, consider that the raceway can possibly  
22 be surrounded by thermal insulation. The operation  
23 temperature of the conductors could easily be

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1 exceeded. The resulting insulation degradation is  
2 clearly a situation that the code requires us to  
3 avoid.

4           Proposal 7-51 establishes a new  
5 condition of use for type N M cable. The matter  
6 should be reviewed by Panel 6. Panel 6 at least  
7 have the opportunity to weigh in on the discussion  
8 and resolve the impasse the issue that has not been  
9 address if Article 310. Therefore I'm asking you to  
10 accept the motion simply to allow Panel 6 to address  
11 this safety concern. Thank you.

12           MR. WILLSE: Thank you. Microphone No.  
13 4.

14           MR. LOYD: Dick Loyd speaking for  
15 myself as a member of Panel 8. This particular  
16 cable will have low voltage or could have low

17 voltage communications. It's a mixed use cable N M  
18 S, and the stresses of putting it in a raceway will  
19 allow 490 degree bends in our raceways. Just  
20 sitting here listening to the arguments I think the  
21 cable should be evaluated for that pulling stress.  
22 Normally N M cable is manufactured to be placed in  
23 place rather than pulled in a raceway. So although

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1 I know we do allow it to go in raceways, this is a  
2 little bit different in material because it does  
3 have the limited energy cables in it. And those may  
4 not be able to withstand that stress. I'm speaking  
5 for this motion to hold this comment.

6 MR. WILLSE: Thank you. Any further  
7 discussion? Seeing none we are going to proceed to  
8 the vote on NITMAM No. 70-31, Log 384. All those in  
9 favor of accepting Comment 70-7-27, please raise  
10 your hands. Thank you.

11 Those opposed. That's too close.  
12 We'll do a standing count. So I am not going to  
13 call that one. I will rule on the hand vote.  
14 Therefore we'll proceed to a vote count. Delegates  
15 for organizations please fill out the green form  
16 handed to you previously. They will be collected by  
17 NFPA staff.

18 I now call for the standing vote of  
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19 individual members. You must have a badge with the  
20 words voting on the top with a black stripe to be  
21 counted. All those voting for the motion please  
22 stand.

23 (Vote in favor taken).

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1 Organization members those with the  
2 gold ribbon please fill out your ballot and return  
3 it to staff. Be seated.

4 Those opposed please stand.

5 (Opposed vote taken. )

6 The vote 93 for, 120 against, the  
7 motion is defeated.

8 Moving on to NITMAM No. 70-32, Log No.  
9 287. Mr. Gerald Horn are you present? Thank you.  
10 Microphone No. 2.

11 MR. HORN: Thank you, Mr. Chairman. My  
12 name is Jerry Horn representing Spencer Research and  
13 Development. I also have been an electrical  
14 contractor for the last 40 years. I'm here to make  
15 a motion to have my proposal 70-7-65 accepted.

16 MR. WILLSE: We have a motion made to  
17 accept proposal 70-7-65. Do I have a second? I do  
18 have a second. Please continue.

19 MR. HORN: For several decades before I  
20 was even born and certainly since all the time I

21 have been in this industry, electricians have been  
22 drilling holes through the wood joists and basements  
23 of new homes that they are wiring. What my proposal

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1 is all about is to put a product on the market which  
2 will basically eliminate filling the holes.

3 In order to do this, 334-15 C, which  
4 only allows two methods to install N M cable in  
5 basements when you run perpendicular to the joist,  
6 one is to drill holes through the joist and the  
7 other is to put up a running board and attach the  
8 N M cable to it. In today's world, you can't cost  
9 effectively put up a running board. So everybody  
10 drills holes. Even as we're meeting here today,  
11 probably a million holes drilled in homes in the new  
12 homes being built across the United States.

13 I basically came up with a product  
14 which is UL listed, in fact most of you won't be  
15 able to see it. It's this here little gizmo, and  
16 basically what this does is nail to the bottom of  
17 the joist next to the center beam of the house,  
18 preferably between that center beam and the duct  
19 work and basically all the home runs that go back to  
20 the panel are pulled through this as opposed to  
21 drilling all the holes through the joists and  
22 running the N M cable through those holes.

The NEC requires that the holes drilled

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1 through joists be up a minimum of an inch and a  
2 quarter. Most building codes require that they be  
3 up at least 2 inches. So there is a definite  
4 recognize that there is a weakening of the joists in  
5 all these holes are drilled. And this little  
6 product puts an end to that. However, to put this  
7 product in the market, 334.15 C needs to have some  
8 added text, and that's what my proposal is.

9           The text that I've asked for to be  
10 added, and I am going to read you 15-334-15 C. It  
11 basically says, smaller cable shall be run either  
12 through portholes in joist or on running boards, and  
13 this is what I would like to add, or by a listed  
14 method approved for securing and supporting N M  
15 cable directly to the lower edges of ceiling joists  
16 in basements when N M cable is run perpendicular to  
17 the joist.

18           I think that's about all I can say for  
19 it.

20           MR. WILLSE: Thank you. Mr. Carpenter.

21           MR. CARPENTER: Yes. I would like to  
22 defer to Code-Making Panel No. 7's chair Gaylen  
23 Rogers.

1 MR. WILLSE: Microphone No. 4, please.

2 MR. ROGERS: Gaylen Rogers. I'm chair  
3 of Panel 7. And we would like to reject this  
4 proposal. We did give Mr. Horn a chance to address  
5 the panel and show his product.

6 There is three things to consider here.  
7 One is securing cables. One is protecting cables.  
8 One is supporting cables. We felt that these three  
9 items need to be taken care of. And we feel that  
10 this proposal does away with the protection of those  
11 cables. And so I would like you to support the  
12 panel action in rejecting this proposal.

13 MR. WILLSE: Thank you. Any further  
14 discussion? Microphone 2.

15 MR. HORN: Gerry Horn representing  
16 Spencer Research and Development. In regards to  
17 Gaylen's comments, this product is surrounded by  
18 16th inch metal. This is the same metal, same  
19 thickness that is required on several instances in  
20 the code for the protection of small cables.

21 UL has approved this. It is listed,  
22 and the only obstacle there is 334.15 C which says  
23 that I would first have to install a running board

1 in order to install this. But it does protect the  
2 cables, for the bottom and both sides are encased in  
3 metal, and as far as the supporting, this is  
4 supporting as well as the hole that goes through the  
5 joist.

6 So basically everything that Gaylen  
7 mentioned is basically covered by this product.  
8 Thank you.

9 MR. WILLSE: Thank you. Any further  
10 discussion? Seeing none we'll go to the vote on  
11 NITMAM No. 70-32 which deals with Log 287. All  
12 those in favor of accepting proposals 70-7-65,  
13 please raise your hands. Thank you.

14 All opposed. Motion failed.

15 Panel 7 we have 70-33 dealing with Log  
16 357. Microphone No. 1.

17 MR. LaDART: Thank you, Brother  
18 Chairman. I'm Sam LaDart representing the IBEW on  
19 Panel 7. I am withdrawing the NITMAM to accept  
20 Comment 7-55.

21 MR. WILLSE: Thank you. Withdraw the  
22 NITMAM and at this point I would like to turn the  
23 podium over to Mr. Shane Clary who is a member of

1 council to continue the discussion for the certified  
2 amending motions. (Applause.)

3 MR. CLARY: Thank you, Pete.

4 Good afternoon, my name is Shane Clary  
5 and I have the distinct pleasure and privilege of  
6 being a member of your Standards Council.

7 Panel 8 We'll proceed to Panel 8. And Log No.  
8 70 and group amending motion 70-34. Motions  
9 identified by log numbers 397, 396, 394, 395, 392,  
10 393, 391, 389, and 390 taken together seek to  
11 maintain previous addition text in five different  
12 sections of the code. Generally, the text at issue  
13 concerns support of several types of conduit and  
14 motions themselves should be consulted for a  
15 description of the precise action sought. All 9  
16 motions have been certified as proper. In addition,  
17 with the agreement of the authorized maker of the  
18 motions, these motions are being considered as  
19 dependent motions which will be debated and voted on  
20 by the assembly as a single up or down package.  
21 see NFPA Technical Meeting Convention Rules 2.3.  
22 Accordingly, the following procedure will be in  
23 effect for these motions at the technical session:

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1 The 9 dependent motions will be grouped into a  
2 single Group Amending Motion identified as Motion  
3 70-34 which, once made by the authorized person,  
4 will effectively place all 9 dependent motions on  
5 the floor for debate and vote as a single up or down  
6 motion.

7 Recognize Microphone No. 1.

8 MR. HARTWELL: Thank you, Mr. Chairman.  
9 Fred Hartwell, Hartwell Electrical Services,  
10 Incorporated, and I move to accept the motions  
11 presented under the group amending motion 70-34.

12 MR. CLARY: Thank you. Do I have a  
13 second? I have a second.

14 Please proceed.

15 MR. HARTWELL: These motions taken  
16 together correct a problem that has, I think, been  
17 inadvertently introduced into the code for 2008. If  
18 you look at the general requirements for supporting  
19 electrical raceways, and I'm going to oversimplify  
20 this slightly, as your raceway is approaching an  
21 enclosure, if you put a clip 3 feet away from the  
22 enclosure, you're done. You don't have to think  
23 about whether that raceway runs between that clip

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1 that is 3 feet from the enclosure. You don't have  
2 to think about whether that raceway has 3 or 4

3 couplings in it. You don't have to think about  
4 whether the raceway when it arrives at the enclosure  
5 wall whether it is arriving at a concentric knock  
6 out. As long as you're within 3 feet you are done.  
7 And we have been doing it this way for at least  
8 70 years. And in this cycle we have now a whole new  
9 set of requirements when that raceway connects to  
10 enclosures.

11 Please think about this carefully.  
12 Please use any field experience you have. Think  
13 about this, because if this motion fails we are  
14 going to go into 2008 with a requirement for  
15 example, let's put 2 enclosures 4 and a half inches  
16 apart. Now if you you have 2 enclosures 4 and a  
17 half inches apart, you are going to buy a 6-inch  
18 conduit nipple. But if one of those enclosures  
19 happens to have a concentric knock-out, which is  
20 very common, oh, you have now a requirement to  
21 provide strut and a support, some support method for  
22 that 4 and a half inches of exposed conduit between  
23 the two enclosures. That is what this code is going

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1 to require if all five of these articles.

2 Now let's look at 2 enclosures that are  
3 13 inches apart. You go to a supply house. You  
4 don't find a 14-inch conduit nipple on the shelf.

5 But you say to yourself, but I can buy a 6 and  
6 8-inch nipple and twist them together in a rigid  
7 conduit coupling and connect the two enclosures.  
8 And remember this is of any size. These rules apply  
9 to any size. This could be a 4-inch raceway. Not  
10 very people are geared threaders to make up a  
11 14-inch nipple. You are going to try to put these  
12 together with a coupling. But this rule will say  
13 that if you have a coupling connecting in that  
14 intervening stretch of raceway you have to  
15 independently support it.

16 The next step is, let's suppose that I  
17 am going to connect two raceways with a conduit  
18 sweep, 90 degree conduit sweep, let's say it's a  
19 2-inch conduit sweep or 2-inch E M T sweep.  
20 Typically you have total length somewhere around  
21 19 inches. It's longer than 18 inches. This rule  
22 is going to say any time you are greater than  
23 18 inches --

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1 MR. CLARY: 1 minute.

2 MR. HARTWELL: Thank you. Any time you  
3 are greater than 18 inches, even with no intervening  
4 couplings, even with no concentric knock-outs, you  
5 have to independently support it. We have never  
6 been doing this. And I think it brings a real

7 problem if we pursue this for 2008. I urge you to  
8 take a real close look at this.

9 Again, if you have conduit clip, you go  
10 36 inches with any number of couplings and  
11 concentric knock-outs, no problem. Thank you.

12 MR. CLARY: Thank you. Mr. Carpenter.

13 MR. CARPENTER: Yes, I defer to  
14 Code-Making Panel Chair Julian Burns.

15 MR. BURNS: Mr. Chairman, I would also  
16 like to take this opportunity to talk about what a  
17 great job and diligent job all the members on Panel  
18 8 did for all the proposals not just these. But I  
19 will say that everything that Mr. Hartwell has  
20 talked about was evaluated during the panel process  
21 and during the comment process. That's where we  
22 come up.

23 I stand based on the knowledge that the

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1 panel committee members have and where we stand, I  
2 stand in opposition of this comment. We defeated  
3 his comment 11 to 1. I stand in opposition to the  
4 comment that is on the floor at this time.

5 MR. CLARY: Microphone 3.

6 MR. BLACK: Art Black, Carmel Fire  
7 Protection. Point of order. The motion was to  
8 accept these comments and I see about half of the

9 comments that are reject. So I think the proper  
10 motion should be to take the appropriate actions in  
11 this grouping rather than accept.

12 MR. CLARY: Thank you. It does have  
13 the same effect though.

14 Microphone No. 2, please.

15 MR. HUMPHREY: David Humphrey,  
16 principal member of Code-Making Panel No. 8 and I  
17 stand in opposition to the motion. The issue has  
18 been evaluated carefully by Panel 8 where it is  
19 actually a relaxation of the standards that have  
20 been in place for many years. We looked at the  
21 practical difficulty of providing the supporting  
22 means and securing means necessary in the .30  
23 sections of the applicable articles. We found that

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1 the impracticality of putting in supporting hardware  
2 for these very short runs led us to relax the  
3 standard from the 36-inch dimension that we have to  
4 be within the supporting hardware down to 18 inches.

5 We've heard how we would have to add  
6 additional hardware and so forth where we didn't  
7 before and that is not the case. This simply  
8 provides a means to omit the strap, putting the  
9 strap and your back to the previous editions of the  
10 code.

11 MR. CLARY: And Microphone No. 2.

12 MR. DABE: Joe Dabe, IBEW, also Panel 8  
13 member. To be a little more specific about this,  
14 Mr. Hartwell requests we accept his comments 811,  
15 24, 41 and 60 in which he states there are no  
16 special requirements for short length or raceway run  
17 between enclosures of various sizes, various sorts.

18 This is in direct conflict with 344.30,  
19 352.30, 358.30 all of them, which specifically  
20 states that these raceways shall be securely  
21 fastened within 3 feet of each outlet box, junction  
22 box, device box, et cetera. There is no special  
23 support rule as Mr. Hartwell states, just the

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1 already existing securely fastened rule.

2 The vote was 11 to 1 on every one of  
3 these and the negative to Mr. Hartwell's  
4 requirements. The solution we found was  
5 Mr. Humphreys which was accepted 11 to 1 for all  
6 these comments which would have relaxed these to  
7 18 inches as long as we didn't encounter an  
8 oversized concentric or eccentric knock-out. Thank  
9 you.

10 MR. CLARY: Thank you. Microphone No.  
11 4.

12 MR. CARTEL: My name is Cartel. I work

13 for Princeton Boro. I'd like to support the  
14 proposal.

15 MR. CLARY: Thank you. Microphone No.  
16 4.

17 MR. HOLT: My name is Mike Holt, and I  
18 was the person that actually submitted the proposal,  
19 and it got changed to the comment stage and I'd just  
20 like to take maybe 10 seconds to read the actual  
21 text of the code in case people are confused. I  
22 thought it was kind of clear. It has to do with  
23 Part C dealing with unsupported requirements, and so

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1 we're not talking about adding a support  
2 requirement.

3 Where oversized concentric knock-outs  
4 oversized concentric knock-outs are not encountered  
5 the raceways permitted to be unsupported where the  
6 raceway is not longer than 18 inches. We're talking  
7 about an amount of pipe between a box and another  
8 box and it's 18 inches long or 16 inches long. This  
9 says you won't have to support it. It's just that  
10 simple.

11 My proposal was to go up to 3 feet  
12 because you could go up to 3 feet and put a strap,  
13 so if you can go up 3 feet and put a strap why not  
14 between 2 boxes. The panel code 18 inches, okay, I

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have no problem with that.  
So I'm a little confused that this is  
confusing because we're talking about a requirement  
that is for not supporting a 18 inch piece of  
raceway. So I'm hoping that you will reject this  
motion that is made here, and that we just allow  
short pieces of raceways not to have a strap  
especially if you put an offset nipple. How to you  
strap an offset nipple because it's only 4 inches

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and it's a raceway. Maybe not that's probably not a  
raceway but something that you made.  
MR. CLARY: Microphone No. 4.  
MR. GOLDBERG: Thank you, Mr. Chairman.  
For the record my name is Mark Goldberg, chief  
electrical inspector for the State of New Hampshire.  
And I think we heard the issue. I don't need to  
repeat. I do speak in favor of the motion. I  
support Mr. Hartwell's motion on the floor. I don't  
need to repeat what he already said. Thank you.  
MR. CLARY: Microphone No. 2.  
MR. DABE: One final fact. Joe Dabe,  
IBEW. The original proposal --  
MR. CLARY: In favor or against.  
MR. DABE: Speaking against. The  
original proposal requested unfastened or supported

17 raceway up to 36 inches because a 3-inch piece of  
18 conduit between enclosures would be difficult to  
19 fasten. We gave 18 inches. I believe this is more  
20 than fair. Thank you.

21 MR. CLARY: Thank you.

22 Microphone No. 4.

23 MR. WILLIAMS: Noel Williams speaking

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1 in favor of this proposal, speaking on my own  
2 behalf. A couple of other things that I think have  
3 not been mentioned, the main issue or problem was  
4 well represented by Mr. Hartwell, but the original  
5 proposal said that these installations of  
6 unsupported conduits were violations that occurred  
7 every day. I'm paraphrasing.

8 And I think that there is a little bit  
9 of a fallacy in that basic statement. And that is  
10 the general interpretation I believe that I have  
11 seen in the field is that if I ran a 3-inch conduit  
12 between 2 boxes or a 3-foot conduit of any size  
13 between 2 boxes or between 2 enclosures or 2  
14 cabinets, it was generally considered to be  
15 supported by, connected to the two cabinets. And it  
16 wasn't unsupported. It wasn't a violation. Most  
17 people would see that kind of thing and never call  
18 it as a violation. It might come out of the floor

19 with a ridged conduit, come up 3 feet or 4 feet and  
20 into -- 3 feet I guess would be -- 4 feet would be  
21 beyond the limit, but 3 feet would come up and into  
22 the bottom of some cabinet and considered to be  
23 supported.

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1 I don't think that the original issue  
2 was really correct. I don't think these were  
3 unsupported. The other thing is I think that this  
4 creates a couple of other issues because now it  
5 requires this unsupported conduit to terminate in a  
6 box which, if I think about this in the larger  
7 context, that means that all of my conduit stems for  
8 pendant hung fixtures on listed swivel-type fittings  
9 are going to be limited to 18 inches is going to be  
10 a maximum length now, and it is completely  
11 inconsistent with the other requirement in B for  
12 rigid nonmetallic, rigid metal conduit and  
13 intermediate metal conduit that permit a length of  
14 up to 20 feet to be supported only at the ends.  
15 Thank you.

16 MR. CLARY: Microphone No. 3.

17 MR. LOYD: Dick Loyd speaking for  
18 myself, member of Panel 8. Just to make it clear,  
19 we have taken a position over the last several code  
20 cycles that we do not --

21 MR. CLARY: Speaking in favor or  
22 against.

23 MR. LOYD: I'm speaking against the

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1 motion. We have taken a position in Panel 8 very  
2 consistently to state that we do not believe the box  
3 is a support, and we do not believe the termination  
4 is the way to support conduit. Conduit should be  
5 supported independently and securely fastened within  
6 3 feet of each termination.

7 So these gentlemen that are speaking  
8 for this are misinformed. In Panel 8 we do not  
9 allow the box to be used as support.

10 MR. CLARY: Microphone No. 4.

11 MR. HOLT: Mike Holt again. That is  
12 why I had the proposal --

13 MR. CLARY: In favor or against?

14 MR. HOLT: Against this particular  
15 motion. If the connectors on the raceways are  
16 considered the means of support then of course my  
17 proposal would never have been submitted because  
18 then we know that you can go 3 feet and the  
19 connectors are. But Panel 8 has been very clear  
20 consistently that the raceway, the fittings are not  
21 the means of support so therefore if you have a  
22 raceway between enclosures and if it's 3 feet or

23 whatever the distance is you have to secure it and

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1 support it. Period. My motion was to allow you to  
2 have it unsupported. It was to relax the  
3 requirement because sometimes it's not practical and  
4 I understand maybe the language is not perfect and  
5 especially if you thought the fittings were support  
6 now you're thinking this becomes a more stringent  
7 requirement and if you hear Panel 8 it's not  
8 support, then maybe you'll see this is a less  
9 stringent requirement. It's practical, guys.

10 MR. CLARY: Seeing no one else at the  
11 mike, we'll come to the vote for motion 70-34. All  
12 in favor of the motion please signify by raising  
13 your hands. Thank you.

14 All against. The motion fails.

15 We're now moving to 70-35, Log 316.

16 MR. TOLLEFSON: Mr. Chairman,  
17 Microphone No. 4.

18 MR CLARY: Microphone No. 4.

19 MR. TOLLEFSON: As a point of order, we  
20 request that we change the order on these and take  
21 36 before 35.

22 MR. CLARY: Please proceed. Approved.

23 MR. TOLLEFSON: Thank you. Steve

1 Tollefson, CANTEX. Mr. Chairman.

2 MR. CLARY: Yes.

3 MR. TOLLEFSON: I move to reject an  
4 identifiable part of Panel Comment 8-45a  
5 specifically the material shall be homogeneous  
6 without the use of foaming agents except as  
7 permitted in 352.10(G), for direct burial  
8 underground encased in concrete.

9 MR. CLARY: Do we have a second? A  
10 second. And again this is to reject an identifiable  
11 part of Comment 70-8-45 and the identifiable part  
12 is, the material shall be homogeneous without the  
13 use of foaming agents except as permitted in  
14 352.10(G) for direct burial underground encased in  
15 concrete. Also logs number 369 and Log 401 more  
16 promotions for a single motion per part 2.4  
17 convention rules.

18 Please proceed.

19 MR. TOLLEFSON: Thank you, Mr.  
20 Chairman. 8-45a pertains to the permissible uses of  
21 cellular-core PVC under AC 352.100. While the panel  
22 comment properly recognized that cellular-core PVC  
23 like all other PVC belongs in Article 352 it limited

1 its use to direct burial and encased in concrete  
2 only.

3                   The reason for this limitation was that  
4 Panel 8 adopted its comment UL had not fully  
5 completed the sunlight resistance testing on the  
6 conduit being reviewed. CAN TEX Fote-Duct.  
7 Fote-Duct has since passed the sunlight resistance  
8 test and UL has listed the product under UL 651.  
9 Thus the justification for limiting the  
10 cellular-core PVC to underground use only no longer  
11 exists and the limiting language should be deleted.

12                   In short, we support the panel's  
13 comment for as far as it goes but seek to take it  
14 one step further: To allow cellular-core PVC to be  
15 used for aboveground applications as well.

16                   For the most part, the panel comment  
17 supports CANTEX's core position that cellular-core  
18 PVC like all other PVC belongs in NEC 352. Because  
19 UL had not yet completed the sunlight resistance  
20 test, Panel 8 decided to limit the product's use to  
21 underground applications only. In so doing,  
22 however, several panel members, including CANTEX, to  
23 pursue further motions such as this motion when such

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1 test data was completed.

2 Consistent with those recommendations,  
3 CANTEX now comes to you the membership with the  
4 request to remove this final limitation in light of  
5 its successful test date. So that you understand  
6 our position, Fote-Duct has passed all UL 651 tests  
7 and meets all of the safety criteria set forth in  
8 NEC 352.100. As Fote-Duct has proven safe for fire,  
9 shop, and safety, it should be treated like any  
10 other rigid PVC found in the code.

11 In conclusion, all we want to do is  
12 delete the following phrase from the panel comment.  
13 Again, the material shall be homogeneous without the  
14 use of foaming agents except as permitted in  
15 352.10(G) for direct burial and underground encasement  
16 in concrete.

17 Please remember this is a very minor  
18 change. That does not undo Panel 8's other good  
19 work to this or any other section of Article 352.  
20 The net effect of removing this limitation will be  
21 the cellular-core PVC listed under UL 651 will be  
22 permitted for the full range of uses under 352.100.

23 Thus we ask you to vote yes for our

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2 comment 8-45a. Thank you.

3 MR. CLARY: Thank you. Mr. Carpenter.

4 MR. CARPENTER: I defer to Code-Making  
5 Panel 8's chairman, Julian Burns.

6 MR. CLARY: Julian Burns.

7 MR. BURNS: Thank you, Mr. Chairman.

8 Due to diligent work done during CMP 8's cycle for  
9 the 2008 NEC, we evaluated at the time that we met  
10 at Redondo Beach, all the documentation that CANTEX  
11 submitted. Based on the submittal of all their  
12 documentation we felt that it was necessary to limit  
13 the utilization of this new type of product to  
14 direct burial only.

15 Based on the action of the panel during  
16 this cycle, I stand in opposition based on the  
17 panel's work.

18 MR. CLARY: Thank you.

19 Microphone No. 4.

20 MR. LINDSAY: Travis Lindsay, Lindsay  
21 Consulting Services. I speak in favor of the  
22 motion. During the code hearing in Redondo Beach, I  
23 was present. There were a number of code panel

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1 members, even a statement in the code panel record  
2 that says essentially CANTEX should pursue the  
3 option of motions provided that they would receive

4 sunlight resistance testing. They pursued that.  
5 They did indeed receive that. That's why they came  
6 here, because they were basically directed by that  
7 panel to do so.

8                   NEC 352 additionally requires already  
9 sunlight resistance to be a part of the testing and  
10 marking requirements of products. It's already in  
11 352.100. It doesn't need to be double-stated in the  
12 code. Therefore, if the product is capable of  
13 sunlight resistance it's been tested for, it's been  
14 listed for and should be allowed for it.

15                   Additionally I would like to say no  
16 follow-up motion should be needed since the language  
17 being stricken does not affect the code in any other  
18 way. Thank you.

19                   MR. CLARY: Thank you.

20                   Microphone 4.

21                   MR. HOLUB: Richard Holub, speaking on  
22 behalf of myself. I'd like to point out that it  
23 seems to me --

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1                   MR. CLARY: For or against the motion?

2                   MR. HOLUB: Speaking for the motion.

3 It seems to me inappropriate to be hijacking a  
4 national electric code and turning it into the  
5 product code. There is a product code. A product

6 has been evaluated to the product code, it has been  
7 listed to the prop duct code. Let's leave it at  
8 that and support this motion. Thank you.

9 MR. CLARY: Thank you. Number 3.

10 MR. STAUFFER: I'm Brooke Stauffer,  
11 chair of the NFPA Electrical Section. At our  
12 meeting yesterday the Electrical Section voted to  
13 support this motion. We recommend affirmative vote  
14 on Motion 36.

15 MR. CLARY: Thank you.

16 Microphone No. 2.

17 MR. DOLLARD: Thank you, Mr. Chairman.

18 Jim Dollard with the IBEW and I rise in opposition  
19 to the motion on the floor. We believe that this  
20 body should support the work of Code-Making Panel  
21 No. 8. As a new product comes into existence it  
22 needs to jump through all of the hoops and it is our  
23 opinion that there are hoops that we haven't worked

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1 out yet. You did hear here today they met the  
2 requirements of 651 and that is absolutely true.

3 I will explain to you that 651 does not  
4 evaluate bending. This product is not a solid wall  
5 product. There is a solid inner liner and a solid  
6 outer liner over a foam core. So when you bend this  
7 product, what is going to happen, the manufacturer

8 says you can bend that, and I don't doubt that. No  
9 one has tested what happens when you bend. You are  
10 going to take that outer layer and you have to  
11 shrink it. There is no two ways about it. It has  
12 to get smaller. And that's of concern to us because  
13 we are looking, and we discussed in the Electrical  
14 Section the other day, at expanding the use of PVC  
15 to Article 501 applications. We need to make sure  
16 that when you bend the product it's  
17 going to hold up. When you bend the product it's  
18 going to do what a solid wall product does.

19 In addition, in some cases a schedule  
20 40 product, solid wall product can be used and fire  
21 proofed in a given situation. We are now going to  
22 allow a different product with a little bit of solid  
23 on the inside and a little bit of solid on the

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1 outside an a foam core to be used in the same exact  
2 situation.

3 It's our opinion that this needs to go  
4 back to UL 651. We need to get a bending test and  
5 we need to get the fireproofing test done on this  
6 product. I urge you to reject the motion on the  
7 floor.

8 Thank you, Mr. Chairman.

9 MR. CLARY: Thank you. Microphone No.  
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10 4.

11 MR. WESCHLER: Dave Weschler, Dow  
12 Chemical Company. I speak in favor of this  
13 particular NITMAM. As I sat and listened to the  
14 discussion yesterday at the Electrical Section. I  
15 was impressed with the fact that the due diligence  
16 taken by Panel 8 went through quite a bit of  
17 deliberations on this particular issue and  
18 identified almost everything down to one particular  
19 test dealing with sunlight resistance.

20 The National Electric Code is not a  
21 product code. It's dealing with performance of  
22 products. This particular product was demonstrated  
23 as passing UL test that was mentioned earlier. To

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1 come up now and say it needs additional requirements  
2 above and beyond what was originally in here does  
3 not seem to be strictly what we should be about.  
4 The Electrical Section demonstrate supported it that  
5 it should go forward and I think that's the message  
6 we should take to the membership that the entire  
7 Electrical Section agrees with it. If we had that  
8 report at Panel 8 it probably also have gone through  
9 at the same time.

10 Therefore, I recommend to support this.

11 MR. CLARY: Thank you. Microphone No.  
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12 2.

13 MR. DAUBERGER: Thank you, Mr.  
14 Chairman. I'm George Dauberger. I work for Thomas  
15 and Betz, I'm a member of Code-Making Panel 8. I  
16 speak against the motion. When we were in Redondo  
17 Beach at the ROC meeting we gave this subject and  
18 these manufacturers several hours of discussion.  
19 The conclusion we came to was that Panel Comment  
20 8-45a and the substantiation on that comment said  
21 the panel believes additional testing is needed to  
22 satisfy the panel's concerns that the nonhomogeneous  
23 product is equal to the products currently covered

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1 in Article 352 and is suitable for the use permitted  
2 throughout the NEC. Supporting data showed testing  
3 was not completed.

4 Now we talked to the manufacturer. He  
5 told us 90 percent of the applications for that  
6 product were underground or direct burial. This  
7 comment 8-45a was a compromise. We rewrote what was  
8 in the code to allow those applications. To send me  
9 2 weeks ago an overnight UPS telling me that now  
10 we've passed the test, to me isn't substantiation.  
11 I don't have a problem with the product at all, but  
12 I don't think this overnight letter 2 weeks ago  
13 fulfills what the code asks for.

14 Thank you, Mr. Chairman.

15 MR. CLARY: Thank you. Microphone

16 No. 5.

17 MR. HIRSCHLER: Thank you, Mr.

18 Chairman. Marcel o Hirschler, GBH International  
19 speaking in support of the motion. I am really  
20 conflicted here because I think David Kendall in his  
21 comment on 8-45a negative got it exactly right. The  
22 panel should never have started getting into this to  
23 accept a new product by getting into the details.

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1 Most of this stuff should be standard action, not  
2 code action.

3 But that's exactly why I'm in support  
4 of the motion for one simple reason. I don't think  
5 it is appropriate in the code to start talking about  
6 the material homogeneous, foaming agents, all that.  
7 That should go to the appropriate standard. When  
8 the standard approves the product then the code  
9 should then come and approve the product for the use  
10 accepted in the standard for performance.

11 So I don't like this kind of language.  
12 I think this kind of language totally inappropriate  
13 for a code. Thank you.

14 MR. CLARY: Thank you.

15 Microphone No. 4.

16 MR. WORLEY: Tom Worley with CANTEX  
17 and I'm here to support the motion. With reference  
18 to the flammability issue brought up, this product  
19 in addition to being subjected to all the UL 651  
20 regime of test was also subjected to AS10 E84, flame  
21 spread and smoke development and tunnel test, and  
22 this was done by southwest research institute in San  
23 Antonio Texas which is a nationally recognized

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1 testing Laboratory.

2 The results of that test indicate that  
3 there is no significant difference between the plant  
4 building and smoke development between the  
5 cellular-core product and the standard solid wall  
6 conduit. The product has been under test for about  
7 two years now from the first time we approached UL  
8 about listing this product. They looked at the  
9 process. They looked at the product itself.  
10 Determined that it was probably listable to UL 651  
11 for use under 352 applications. We went through  
12 testing for about a year, year and a half on this  
13 stuff. Finally, everything was completed. And we  
14 have been UL listed on this product. As far as fire  
15 stop systems, there are fire stop systems for this  
16 product. For cellular-core conduit. The fire issue  
17 and in our opinion has been investigated. Sunlight

18 resistance was completed. That was the last test  
19 that we were lacking when we made our presentation  
20 to Code-Making Panel No. 8. And in view of the fact  
21 that this testing was completed, we now ask that  
22 that restriction be lifted from our listing. Thank  
23 you.

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1 MR. CLARY: Thank you.

2 Microphone No. 5.

3 MR. MORGAN: Thank you, Mr. Chairman.  
4 John Morgan with CANTEX. I'm speaking in support of  
5 the motion also. In regard to fill bending, fill  
6 bending is not a requirement of UL 651. The CANTEX  
7 Fote-Duct cellular-core has passed all UL 651 tests  
8 as a safe product.

9 We CANTEX, we recommend that whenever  
10 possible that you would use a manufactured bend in  
11 an installation. However, we do recommend that  
12 field bending is a common practice in the electrical  
13 field. Early on Code-Making Panel 8 requested field  
14 bending test for our cellular-core conduit, 3  
15 through 6 inch. The product was tested. The result  
16 was that in actuality it performed better than our  
17 solid core PVC. We have displayed the video evidence  
18 of the field bending, of the product on the  
19 exhibition floor for the last three days at booth

20 270. Thank you very much.

21 MR. CLARY: Thank you.

22 Microphone No. 4.

23 MR. KOVACIK: John Kovacik Underwriter

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1 Laboratories and I speak in support of the motion.  
2 The previous speaker covered the point that I wanted  
3 to raise regarding the issue of bending test being  
4 required for the conduit. So in summary I would say  
5 that the CANTEX product has met all the requirements  
6 that would be applied under UL 651 that would also  
7 be applied to any other PVC conduit submitted and  
8 covered by that standard.

9 MR. CLARY: Thank you.

10 Microphone No. 3.

11 MS. HORTON: Pat Horton representing  
12 myself, give me a chance to get something off my  
13 chest. I have been working in the NEC.

14 MR. CLARY: For or against.

15 MS. HORTON: Against. I've been in the  
16 NEC process since 1981. Diligently. And over the  
17 years I have seen a decrease in things that used to  
18 be required. I heard some things here today that  
19 really brought this forth to me and I want to say  
20 something because it used to be if you wanted to put  
21 a new product into the code you came in on time with

22 test reports that you needed and all the information  
23 that you needed, and if you didn't have it all, you

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1 at least had it by the comment period. I remember  
2 one young lady went three code cycles before she got  
3 the product in because it keep being something else.  
4 I did not know when I stepped up here that they had  
5 done bending tests because that had not been brought  
6 up. I knew that on the floor they were  
7 demonstrating it and did appear to be some  
8 difficulty with it and it seems to be a concern of a  
9 number of people.

10 Just because it meets 651 is not  
11 necessarily a reason for accepting it if there are  
12 some concerns of people. What happens is generally  
13 that the code approves something -- UL fact-finding  
14 investigation comes in. People used to think that  
15 meant you got accepted into the code. That's what  
16 you did in order to get accepted into the code.  
17 That was not true. I have seen many panels go  
18 through UL fact finding investigation and say I  
19 don't like this. I don't like this. And I don't  
20 lying this so. I have a concern here. So they have  
21 to go back and do more testing or they put caveats  
22 in and exceptions and don't allow certain uses.

23 When you come in then and you do get  
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1 into the code with the uses that they picked out of  
2 the UL fact finding report UL usually writes and  
3 standard if the standard wasn't already written.  
4 They look at all the things that have to go in that  
5 standard based on what the NEC allows. Many times I  
6 have heard UL say, We have to change the code  
7 because now the NEC does something.

8 It's not necessarily always the case  
9 that the standard comes before the NEC. Many times  
10 the NEC and what these panels decide comes before  
11 the standard.

12 So I got that off my chest, cleared the  
13 record, and I'm still opposed because I don't think  
14 that they followed in a timely manner and I urge you  
15 to vote against the motion.

16 MR. CLARY: Thank you.

17 Microphone No. 6.

18 THE FLOOR: Thank you, Mr. Chairman.  
19 Move the previous motion.

20 MR. CLARY: The previous motion has  
21 been moved. This is a nondebatable motion. On  
22 favor of moving the motion please signify by hand  
23 up.

1 All against. Same sign. The motion  
2 passes. We'll now move immediately to the motion on  
3 the floor which is to reject an identifiable part in  
4 Comment 70-8-45a. All in favor of the motion  
5 signify by raising your hands.

6 All opposed. The motion passes.

7 Microphone No 4.

8 MR. WESCHLER: Mr. Chairman, on 70-35  
9 Dave Weschler representing the designated  
10 representative for American Chemistry Council for  
11 Mike Walls withdraws our NITMAM.

12 MR. CLARY: Thank you. 70-35 is not  
13 being moved.

14 Next is 70-37 Log number 317. 70-37,  
15 Log 317.

16 Microphone No. 4.

17 MR. McNEIL: My name is Mike McNeil  
18 representing Mike Walls, American Chemistry Council.

19 MR. CLARY: Proceed.

20 MR. McNEIL: And I would move to reject  
21 Comment 70-8-87.

22 MR. CLARY: Do we have a second? I  
23 have a second. Please proceed.

1                   MR. McNEIL: On note 9 Chapter 9, Table  
2 1, the wording was changed from conduit fill raceway  
3 fill. Table 1 applies to conduit and tubing in  
4 every place and the term conduit -- is used. I  
5 think this was just a mistake in terminology. Thank  
6 you.

7                   MR. CLARY: Thank you. Mr. Carpenter.

8                   MR. CARPENTER: Call on Code-Making  
9 Panel 8 chairman Julian Burns.

10                  MR. BURNS: Thank you, Mr. Chairman.  
11 This was discussed ad nauseum so to speak. But I  
12 just want to shed some light. The term raceway is  
13 defined in Article 200, I mean article 100. It's  
14 been a long day. However you will not find a  
15 definition for conduit. Therefore based on the  
16 action the panel took, I stand in opposition of  
17 this.

18                  MR. CLARY: Thank you. Microphone No.  
19 1.

20                  MR. PEMBLE: For the record my name is  
21 Gary Pemble. I represent IEBW. I am on Code Panel  
22 8. I stand in support of 317 to reject 8-87. Note  
23 9, Chapter 9, Table 1 applies to only conduit and

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1 tubing. Both conduit and tubing are a subset of the  
2 raceways. Raceways include but not limited to rigid  
3 metal conduit, rigid nonmetallic conduit,  
4 intermediate metal conduit, liquid tight flexible  
5 conduit, flexible metallic tubing, flexible metal  
6 conduit, electrical nonmetallic tubing, electrical  
7 medical excuse me metallic tubing under floor  
8 raceways, cellular concrete floor raceways, cellular  
9 metal floor raceways, surface raceways, wire  
10 raceways and busways.

11 Changing Note 9 to raceway will mislead  
12 users and lead to possible misinterpretations and  
13 confusion in the field.

14 MR. CLARY: Thank you.  
15 Microphone No. 3.

16 MR. LOYD: Dick Lloyd, Panel 8,  
17 speaking for myself. When we go into Chapter 9 --

18 MR. CLARY: In favor or against.

19 MR. LOYD: Against the motion. When we  
20 go into Table 9, we have Table 4 and 5 which is used  
21 both in cabinet cutout boxes, junction boxes, wire  
22 ways, a lot of different things. We say raceway at  
23 that point which would include more than the ground

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1 raceway but if you need to go to Tables 4 or 5,

2 there is some new language in the code that says  
3 that you only go to Chapter 9 by reference.  
4 Somebody that really knows the code other than me  
5 could tell you what section that is, but it's a new  
6 section in this code. So throughout the code it  
7 will reference you to go to Chapter 9. And to get  
8 those diameters of the conductors you go to Table 5.  
9 And to get the square inches you go to Table 4. And  
10 to get circular mills you go to Table 8. So I'm not  
11 sure raceway is completely the right word, but might  
12 be better than conduit.

13 MR. CLARY: Thank you. Microphone No.  
14 4.

15 MR. POLLLO: Richard Pollo speaking on  
16 behalf of myself, speaking in support of this  
17 motion. It appears we have heard from the IBEW that  
18 while all conduits are raceways all raceways are not  
19 conduits. So it appears to me that we have an  
20 unsubstantiated proposal put forward here, a comment  
21 put forward here to clean up the language and in  
22 fact what we're doing is potentially changing the  
23 rules. So I urge you to support rejecting this

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1 comment. Thank you.

2 MR. CLARY: Thank you. Seeing no one  
3 else at the mike we move to a vote, on Log No. 317

4 which is to reject comment 70-8-87. All in favor of  
5 the motion please signify by raising your hands.  
6 Thank you.

7 All opposed. The motion passes.  
8 Panel 9 And this completes action on Panel 8.  
9 We now move to Panel 9. Item 70-38, Log 370.  
10 70-38, Log 370. It appears that motion is not being  
11 pursued. That completes action on Panel No. 9.

12 Panel 10 We move to Panel No. 10. 70-39, Log  
13 410. Microphone No. 4.

14 MR. MANCHE: Alan Manche from Square D  
15 Company. I would like to make a motion to return to  
16 proposal 70-10-56 and Comment 70-10-27.

17 MR. CLARY: Thank you. Do we have a  
18 second? We have a second. Please proceed.

19 MR. MANCHE: This proposal and this  
20 comment before us actually looks to permit us to  
21 round up the over current device when we have  
22 conductor ampacity over 800 amps, and when we're  
23 looking to have an over current devices over 800

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1 amps, what that does is in essence reduce the amount  
2 of copper that is at the terminals of the equipment  
3 when we move over 800 amps. As a manufacturer, the  
4 issue that that creates is a thermal issue within  
5 the electrical equipment. And so what we're

6 concerned about is when you remove the heatsink we  
7 ultimately end up with thermal issues from the fuses  
8 from the over current protective devices in the  
9 equipment and ultimately do we have the appropriate  
10 coordination of thermal ratings for the insulation  
11 materials within the gear.

12 One of the things that I want to point  
13 out is that we have absolutely no substantiation  
14 presented to Code Panel 10 that supported reducing  
15 the amount of copper at the terminals for this  
16 proposal or comment. Absolutely none. No  
17 fact-finding report, no information printed to the  
18 committee that would say yeah we can remove this  
19 copper and everything will operate fine. We won't  
20 have overheating of the blades of the switch so that  
21 they'll stick. We won't have any of these types of  
22 failures that could occur if we have an overheating  
23 problem within the equipment.

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1 So basically we're concerned here that  
2 your UL listing of the equipment doesn't address  
3 this, we're basically permitting the thermal rise to  
4 go higher on the equipment. We're concerned with  
5 failure. One of the things we did do is that we ran  
6 a test after the comment stage and we saw that  
7 basically this comment passed. Square D actually

8 was able to put together a quick team, put together  
9 a switchboard of equipment that we were able to find  
10 parts for over the holidays, Christmas holiday, and  
11 run a thermal test. We discovered just on that  
12 switchboard that we saw temperature rises of at  
13 least 2 percent. Higher than what we would see  
14 normally for that equipment. We have no idea what  
15 this means for the worst case condition. We didn't  
16 have enough time to run any test to demonstrate  
17 those type of specifics. But if you are going to  
18 try to doing something like this you need a  
19 fact-finding report, you need more information to  
20 make a decision on impacting the thermal conditions  
21 of the equipment. Thank you.

22 MR. CLARY: Mr. Carpenter.

23 MR. CARPENTER: I defer to Code-Making

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1 Panel 10 chair James Dollard.

2 MR. CLARY: Microphone No. 1.

3 MR. DOLLARD: Thank you, Mr. Chairman.

4 I'm Jim Dollard, chairman of Code-Making Panel  
5 No. 10. I would like to inform the body that as the  
6 proposer pointed out, the documentation that you  
7 have on the handout is in error. What we're looking  
8 at here is Proposal 10-56 and Comment 10-27, and I  
9 support the actions of the panel as chairman and

10 oppose the motion on the floor.

11 For the information of the body, I  
12 would like to let everybody know we have dealt with  
13 this issue in the general area of Article 240 as  
14 well as in part 8 which is supervising industrial  
15 installations which is where 240.91 is, and both the  
16 proposal and the comments stage the vote was 9 to 3.  
17 Thank you, Mr. Chairman.

18 MR. CLARY: Thank you. Microphone No.  
19 6.

20 MR. FREDERICKS: Carl Fredericks with  
21 Dow Chemical. I also represent ACC on Code Panel 10  
22 and I'm also speaking against the motion.

23 One comment that I heard Mr. Lansing

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1 make, there was no substantiation presented for this  
2 proposal and in fact there was extensive  
3 substantiation presented over several cycles. At  
4 one time this proposal was passing in the general  
5 part of the code, and at that time representatives  
6 of the electrical industry suggested that instead it  
7 might work better in the supervised industrial part  
8 of the code which later it was proposed for and  
9 successfully passed. This proposal was extensively  
10 substantiated and as Mr. Dollard commented, it was  
11 accepted by the panel in extensive deliberation.

12 Continuing on with some of the  
13 comments, first off I think there is a  
14 misunderstanding in Mr. Manche's comments that the  
15 proposal allows for overloading of the conductors,  
16 and I think that is what his tests tested. And it  
17 shouldn't be a mystery to anyone that if you  
18 increase the current 5 percent you will increase the  
19 temperature rise 10 percent. That's one of these  
20 ampacity issues that we don't need to test but  
21 somehow it was tested here.

22 This proposal is not to allow  
23 overloading of conductors, and nowhere does it do

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1 that. Nowhere in the code is conductor overloading  
2 allowed and this proposal doesn't have that.

3 Another thing that needed to be  
4 understood is the 240-91 would not be the first  
5 place in the NEC where conductors do not have an  
6 overload protection from the overcurrent device.  
7 There are extensive places in the code today where  
8 that is already allowed. A couple of examples I  
9 would like to bring to the attention of the member  
10 here. First off if you'll take a look at 240.12.  
11 That is another code paragraph that applies to  
12 specific industrial setting. And where 240.12  
13 applies overload protection is permitted by

14 monitoring only. There is no overload protection by  
15 overcurrent devices in 240.12. And that has been in  
16 the code as long as I have been involved in the  
17 process. I got involved in the process around '89  
18 and it was a long-standing code provision then. And  
19 to my knowledge it has never had an issue with it or  
20 neither has it been all the years I have been here  
21 has it ever been challenged in the code process.

22 Second, I request members to take a  
23 look at 240.101 for high voltage conductor that is

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1 another very long-standing part of the code, and  
2 their fuse ratings are permitted and long-term trip  
3 settings are permitted to be up to 6 times the  
4 ampacity of the conductor. I'm wondering why  
5 somebody didn't over the holidays run a test if  
6 conductors were running at 6 times their ampacity if  
7 equipment might get overheated. I think I can tell  
8 you pretty definitively that it would.

9 So I don't understand why with these  
10 long-standing code provisions that allow the same  
11 kind of overcurrent device sizing and more that what  
12 were proposed here debated over three cycles in the  
13 panel and passed by the full panel, I don't  
14 understand why these provisions do not require any  
15 extra testing and then all of a sudden the new

16 provision here allowing the overcurrent device to be  
17 5 percent over the long-term rating of the over -- 5  
18 percent --

19 MR. CLARY: One minute.

20 MR. FREDERICKS: -- the long time  
21 setting of the overcurrent device to be 5 percent  
22 over the ampacity conductor why that need a test and  
23 why much greater currents in the code now do not

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1 need a test.

2 To summarize, I don't think it's a  
3 valid motion and I urge the body to support the  
4 action of Panel 10 and to reject the motion. Thank  
5 you.

6 MR. CLARY: Thank you. Microphone No.  
7 4.

8 MR. KIMBLIN: Mr. Chairman, Clyde  
9 Kimblin, Eaton Electrical. I would like to speak  
10 for the motion. First of all there are concerns  
11 with the components and covered by Mr. Manche. We  
12 are dealing with a fundamental situation of  
13 protecting conductors above the ampacity. For  
14 example, a thousand amp over current protective  
15 device would be called on to protect conductors  
16 rated 950 amps. Dealing with this at any current  
17 above 800 amps. We consider this in Code-Making

18 Panel No. 10 in the general rule and decided this  
19 would be an unsafe situation in the general rules.  
20 It has been moved to the supervising industrial  
21 installations. And the panel statement says it is a  
22 common practice in supervised industrial  
23 installations to monitor conductors for overload

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1 and/or design such that conductors cannot be  
2 overloaded in normal conditions. Where conductors  
3 are monitored for overload action of the overcurrent  
4 device it not needed to protect conductors against  
5 overheating by overload condition.

6 My concern is with the words it is a  
7 common practice. I personally am not satisfied that  
8 in all industrial situations you will always monitor  
9 the conductors and not have a dangerous overcurrent  
10 protective situation. It is not always done. It is  
11 common practice, it is not for sure. It was not  
12 accepted in the general situation. I don't believe  
13 it should be accepted in the industrial situation.  
14 Thank you.

15 MR. CLARY: Thank you. Microphone No.  
16 3.

17 MR. STAUFFER: Brooke Stauffer, chair  
18 of the NFPA Electrical Section. I speak in favor of  
19 this motion. At our meeting yesterday the

20 Electrical Section voted to support this motion. We  
21 recommend an affirmative vote on Motion No. 39.  
22 MR. CLARY: Thank you. Microphone No.  
23 4.

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1 MR. BURNS: Thank you, Mr. Chairman.  
2 Julien Burns representing myself and Quality Power  
3 Solutions. I'm a certified Level 3 tomographer. I  
4 have been in practice for over 15 years. I have  
5 seen misapplication --  
6 MR. CLARY: For or against the motion.  
7 MR. BURNS: I am for the motion. I  
8 have been doing infrared tomography for over 15  
9 years and I've seen the applications where  
10 conductors were misapplied. In the overheating does  
11 apply it not only affects the insulation on the  
12 conductors and it begins to fail prematurely, it  
13 also begins to fail the equipment it is connected  
14 to. So I think that it is my opinion that this  
15 audience ought to support the NITMAM.  
16 MR. CLARY: Thank you. Microphone No.  
17 6.  
18 MR. FREDERICKS: Carl Fredericks  
19 representing ACC and I am speaking against the  
20 motion. I haven't heard any comments so far  
21 addressing 240.12 and 240.101. Mr. Kimblin asked

22 the question where is it common practice. The  
23 conductors are monitored against overload or

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1 designed such as they can't be overload. I would  
2 encourage anyone with that question to read 240.12  
3 and 240.101 and to look at cases where those are  
4 applied in the code. Further, I guess there is also  
5 some question about where else is there beyond those  
6 2 parts of the code where else is there successful  
7 experience with this type of installation. And  
8 early on in the start of this proposal, it was  
9 originally, I believe, brought up by the utility  
10 industry who reported that they had excellent  
11 experience with multiple sets of 500 KC all operated  
12 at 400 amps, in other words 3 sets for 1200 amps 4  
13 sets for 1600 amps. With that successful experience  
14 over many years, they supported the proposal and  
15 that helped form the proposal. And they have had  
16 successful experience with that.

17 Further, I think there is also some  
18 understanding about ampacity in general in this  
19 room, and I think there is a feeling that any time  
20 you apply a conductor above a 310.16 ampacity that  
21 that is automatically going to overheat the  
22 equipment. I think also there are existing valid  
23 ampacities that can be applied under the code that

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1 400 amps and above 400 amps for 500 KC metal  
2 conductor, and I think there is a misunderstanding  
3 about that as well.

4 So once again I suggest to the  
5 membership that we should reject this motion and  
6 support the Panel 10 action on 240.91. Thank you  
7 again.

8 MR. CLARY: Thank you. Microphone No.  
9 4.

10 MR. KOVACIK: Jack Kovacik, Underwriter  
11 Laboratories. I speak in support of the motion. UL  
12 voted against the panel action for a number of  
13 reasons, but primarily because we had a concern  
14 about how listed products would perform using these  
15 new sizing rules. Again there has been no data, no  
16 work done to substantiate the reduction and  
17 ampacity. Thank you.

18 MR. CLARY: Microphone No. 4.

19 MR. PAULEY: Jim Pauley, Square D  
20 Company, speaking in favor of the motion. Ladies  
21 and gentlemen, I know it's late in the day, but I  
22 ask you to indulge and listen closely to this debate  
23 that is going on. This is not about conductor

1 overloading. It's not about what 240.100 says.  
2 It's not about 240.12 says. Sure there are cases in  
3 motor loads where you can have conductors that are  
4 sized or size over current device. Nobody is  
5 debating that. We are talking in this case about  
6 how the equipment performs with respect to the  
7 loading that it has. What this would say is I can  
8 take the 1,200 amp switchboard that would normally  
9 be loaded, forget hundred percent ratings, don't  
10 confuse it with all that. Let's take it, load it to  
11 normal 80 percent and when you do that you need  
12 1,200 amps worth of conductors. Period. That's how  
13 we test it. That's how we evaluate it. That's how  
14 the equipment is built.

15           What this proposal will do is to say  
16 you can use less than 1,200 amps worth of conductors  
17 provided it's within 5 percent. Not a complicated  
18 physics rule. You make the conductor smaller. The  
19 temperature is going to go up in the equipment.  
20 Just because it's in a supervised industrial  
21 location does not mean that the physics change. So  
22 the equipment is going to run hotter. All  
23 Mr. Manche was trying to say was the tests that were

1 run is that we proved the equipment runs hotter and  
2 in this case it was at least running 10 percent  
3 hotter.

4                   So it's not about how the equipment is  
5 burning up. It's about how the equipment is  
6 required to perform, and that is what the product  
7 standard set parameter-wise to have to go do. So  
8 essentially what this says is I can take a product  
9 and apply it in a way that it's not evaluated in a  
10 way -- to apply it in a way that it hasn't been  
11 evaluated for.

12                   So it is really not about conductor  
13 overload and it's not about that. It's about what  
14 size conductors I need to use to supply a piece of  
15 equipment and how it's evaluated.

16                   The last thing I'll mention it was  
17 mentioned by evaluation of using 500 KC mills for  
18 400 amps. For those of you doing this for a few  
19 code cycles and those of you on Panel 6, as I recall  
20 a few cycles ago, Panel 6 got that very proposal.  
21 Let's change the ampacity of 500 KC mill copper to  
22 400 amps. Guess what Panel 6 said. No. It's a  
23 380 amp conductor.

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1                   So true we have been down this path in  
2 multiple ways. I don't disagree. And all the way  
3 up to this point we have arrived at the right  
4 answer. We're just about to take a fork in the road  
5 that is going to take us down a wrong answer, and I  
6 urge you to support the motion that is on the floor.

7                   MR. CLARY: Thank you. Microphone No.  
8 3.

9                   THE FLOOR: Call the question.

10                  MR. CLARY: The question has been  
11 called. It's an undebatable motion. All in favor  
12 of the motion please raise your hands.

13                  All opposed. The motion passes. Now  
14 we immediately go to the motion on the floor, which  
15 is to return a portion of a report in the form of a  
16 proposal and comment, and again to clarify it's  
17 comment 70-10-27 and proposal 10-70-56. All in  
18 favor of the motion please signify by raising your  
19 hands. Thank you.

20                  And all opposed. The motion fails.  
21 Correction. The motion passes. I do apologize.  
22 Just making certain you were aware.

23                  It is now 6:05, 18:05. We're going to

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1 take a ten minute break primarily for our  
2 stenographer. Please be ready to go at 6:15.

3 (Recess)

4 Panel 11 MR. CLARY: On the record. There were  
5 no NITMAMS certified for Panel 11 so we're moving on  
6 to Panel 12, 70-40, Log No 387. Log 387.

7 Panel 12 If we can please clear the aisles  
8 around the microphones please. House will come to  
9 order. Again, 7-40 Log No. 387. Microphone No. 1.

10 MR. HARTWELL: Thank you, Mr. Chairman.  
11 Fred Hartwell, Hartwell Electrical Services,  
12 incorporated. I move to accept an identifiable part  
13 of Comment 70-12-88 specifically to accept the first  
14 option as stated in the comment which is to reject  
15 proposal 70-12-127. Thank you.

16 MR. CLARY: Do we have a second?

17 THE FLOOR: Second.

18 MR. CLARY: We have a second. Motion  
19 is to accept an identifiable part in comment  
20 70-12-88. The identifiable part is to accept the  
21 first option as stated in the comment which is to  
22 reject proposal 70-12-127.

23 Mr. Hartwell please proceed.

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1 MR. HARTWELL: Thank you, Mr. Chairman.  
2 This corrects an error. The proposal  
3 was to remove a final sentence in this part which  
4 this sentence is not very well worded. I think we

5 have to concede that. But what it addresses in  
6 these 60-volt-to-ground systems, it addresses the  
7 cord and plug connections on the systems. They're  
8 typically 120-volt, 60 volt to ground, and when this  
9 first went into the code it did not go in as Article  
10 647. It started out as a part of Article 530. And  
11 when it first came in, it came in as a clearly  
12 worded rule which was when you are going to use a  
13 cord and plug connection you had to have a unique  
14 configuration. Because there was no configuration  
15 at the time, there had to be a transition rule. And  
16 the transition language at the time was a very  
17 clearly worded permissive exception that said if you  
18 didn't have the unique configuration you could use a  
19 conventional 120-volt configuration in areas that  
20 were only accessible to qualified persons. The  
21 problem here is these systems are almost entirely  
22 used with cord and plug connected equipment. And by  
23 taking the action that the panel took and removing

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1 any mention of the qualified use only and the  
2 conventional configuration, you're down to the  
3 unique configuration, the unique configuration has  
4 never been created by NEMA. So the from practical  
5 effect is Article 647 become virtually unusable for  
6 the necessary 3 years. That is not what Panel 12

7 intended. That is not what anybody intended. And  
8 the best thing is to simply do no harm, keep the  
9 2005 text, and then work on what this should be for  
10 2011.

11 We cannot have that, the Panel 12  
12 action stand, unfortunately, in this case. Thank  
13 you.

14 MR. CLARY: Thank you.

15 Mr. Carpenter.

16 MR. CARPENTER: Yes. I would like to  
17 defer to Code-Making Panel 12 chair Timothy  
18 Croushore.

19 MR. CROUSHORE: Thank you, Mr.  
20 Chairman. Timothy Croushore, I am the chairman of  
21 Code-Making Panel No. 12. The action on this  
22 comment is on Page 392 of the report on comments.  
23 Code-Making Panel No. 12 when we first read this

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1 comment we were confused as to what the  
2 recommendation was. Actually the recommendation was  
3 two-fold: To either rejection or to accept the  
4 implicit second option. We looked around the room  
5 and no one knew exactly what the commenter was  
6 wanting to do. So we basically replied back to the  
7 rules and regulations, regulations governing  
8 committee projects because the comment did not offer

9 a clear recommended action. It gave us an option  
10 and not a recommended action.

11 I stand in support of the panel action  
12 at this time, which was to reject the comment.  
13 Thank you.

14 MR. CLARY: Thank you. Microphone  
15 No 4.

16 MR. WILLIAMS: Noel Williams speaking  
17 on behalf of myself speaking in favor of the motion.  
18 When I first read this I have to admit that my first  
19 thought was the panel is requiring something that  
20 does not exist. And I thought that normally when  
21 the panel wants something that doesn't exist, they  
22 put an effective date on there so there is some time  
23 to create that product.

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1 In this case Mr. Hartwell has said  
2 since this product does not exist, we are  
3 essentially making the article unusable. Nobody  
4 will be able to do this because this receptacle type  
5 isn't there. And I think the other issue is that  
6 the basic tenant of the article is that we will only  
7 use this when we have qualified people, and it's  
8 those qualified, that need for qualified people is  
9 because we are using these special types of, special  
10 system where we don't want unqualified people to

11 misuse it for perhaps power tools or lighting or  
12 something like that. And so, I think because this  
13 is just not going to work and makes it unusable for  
14 the next 3 years, we really wouldn't have much  
15 choice but to try to put it back into a usable form  
16 by accepting this proposal, this comment.

17 MR CLARY: Thank you. Seeing the  
18 microphones are clear, we'll move to the vote which  
19 is again to accept an identifiable part of Comment  
20 70-12-88. All in favor of the motion signify by  
21 raising their hands. Thank you.

22 All opposed. Try this once again. All  
23 in favor of the motion please raise your hands.

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1 Thank you.

2 All opposed. The motion passes. That  
3 concludes our actions on Panel No. 12.

4 Panel 13 We now move to Panel No. 13, 70-41 Log  
5 No. 331.

6 Looks like Microphone No. 5.

7 MR. BRUNSSSEN: Mr. Chairman, Jim  
8 Brunssen, employed by Telcordia Technologies,  
9 Incorporated. I am the submitter of the NITMAM, and  
10 I would move to reject comment 70-13-21 which is  
11 located in the ROC on Page 70-301.

12 MR. CLARY: Thank you. Do we have a  
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13 second?

14 THE FLOOR: Second.

15 MR. CLARY: We have a second. Please  
16 proceed.

17 MR. BRUNSEN: I would move to reject  
18 the comment 13-21 for the following five reasons.  
19 Panel 13 in accepting in principle Comment 13-21  
20 completely reverse their action on proposal 13-16  
21 without the benefit of public review. The panel  
22 action was based on a single comment received from  
23 the submitter of the original proposal.

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1 The second item, panel 13 provided in  
2 my pain inadequate substantiation for the new  
3 requirement and no substantiation for the assigned  
4 level of 30 volts. The panel statement a disconnect  
5 is necessary for maintenance of battery systems over  
6 30 volts, in my opinion does not constitute adequate  
7 substantiation. The assignment of the 30 volt  
8 threshold did not receive the benefit of public  
9 review.

10 Thirdly, the concern for isolation of  
11 stationary battery for shock hazard is flawed since  
12 comment 13-21 addresses only all-ungrounded  
13 conductors. This would not protect the technician  
14 from electrical shock hazard or from hazards

15 associated with a ground fault while maintaining the  
16 battery system.

17 Fourth, the proposed text of 40-80.5  
18 will serve to confused reader or -- regarding the  
19 term disconnecting means. Article 100 defines  
20 disconnecting means as a device or group of devices  
21 or other means by which the conductors of the  
22 circuit can be disconnected from their source of  
23 supply. Clearly the definition implies a switch or

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1 similar device. Stationary batteries are typically  
2 connected via voltage connections.

3 And finally, the 30 vote threshold  
4 level imposed by Panel 13 is in conflict with  
5 Article 690 solar photovoltaic systems where 690.  
6 71e and f require disconnecting means for battery  
7 circuits of more than 48 volts nominal. Hence there  
8 is now a correlation issue between 690.71e and f,  
9 and 480.5 new.

10 MR CLARY: Thank you.

11 Mr. Carpenter.

12 MR. CARPENTER: I'll defer Code-Making  
13 Panel chair 13, Thomas Wood.

14 MR. CLARY: Microphone No. 1.

15 MR. WOOD: Thank you. Tom Wood. I am  
16 the chairman of Panel 13. Panel 13 my remarks will

17 be short hopefully. Panel 13 spent a great deal of  
18 time on all of the items for Panel 13. As regards  
19 Item 41, the panel believes that disconnect is  
20 required. It was accepted in principle by a vote of  
21 11 to 3. So again I would hope that you would vote  
22 with the panel's action, thank you.

23 MR. CLARY: Thank you. Microphone No.

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1 4.

2 MR. STRANIERO: George Straniero,  
3 AFC Cable Systems speaking on behalf of NEMA. NEMA  
4 supports the panel action and recommends rejection  
5 of the motion on the floor. Thank you.

6 MR. CLARY: Thank you. Microphone No.

7 5.

8 MR. LaBRAKE: Neil LaBrake,  
9 representing Edison Electric Institute and I support  
10 Mr. Brunssen's comment, his motion to reject comment  
11 13-21 on new 480.5 in the ROC. Edison Electric  
12 Institute's position is referenced by  
13 Mr. Hornberger's explanation of negative to accept  
14 Comment 13-21 in principle in the ROC. And by Panel  
15 13's statement to reject proposal 13-16 in the ROP  
16 on Page 498. We fully support Mr. Brunssen's motion  
17 statement and offer the following additional points.  
18 Comment 13-21 was submitted to accept proposal 13-16

19 which was rejected by Panel 13 and the report on  
20 proposals by a vote of 11 to 3. Panel 13 rejected  
21 comment 13-21 because there was no substantiation  
22 for requiring a disconnect for batteries of all  
23 voltages and current levels and because there were

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1 no requirements specified in the proposal for the  
2 disconnect construction or ratings. Panel 13 then  
3 reversed its action in the report on comments and  
4 accepted Comment 13-21 in principle without any  
5 additional substantiation.

6 On behalf of the electric utility  
7 industry as chair of the electric light and power  
8 group at Edison Electric Institute I respectfully  
9 request that the general assembly and NFPA  
10 reconsider the proposed action and reject Comment  
11 13-21 and reject proposal 13-16. There are other  
12 methods of providing disconnecting means without the  
13 installation of a single disconnect device. The  
14 text proposed in new 480.5 is not clear as to the  
15 number of disconnects allowed. There is no  
16 substantiation for the need of a single disconnect  
17 device or need for it to be inside of the battery.  
18 Thank you for your attention.

19 MR. CLARY: Thank you.

20 Microphone No. 2.  
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21 MR. JOHNSTON: Thank you, Mr. Chairman.  
22 Mike Johnston, IAEI. I rise in opposition to the  
23 motion. The action by Panel 13 provides consistency

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1 with ongoing current practices in industry. Their  
2 actions in the panel hearings put language in the  
3 code that is reflective of what is already going on  
4 in the industry. This introduces rules into the  
5 NEC that relate to disconnecting means for  
6 batteries. Panel 10 acted on similar rules related  
7 to conductors for batteries. This helps to that end  
8 to put rules related to disconnecting means and  
9 conductors for batteries that didn't exist prior to  
10 this action. Thank you.

11 MR CLARY: Microphone No. 5.

12 MR. McCLURE: Steve McClure from  
13 A B C M G E and I'm speaking in support of the floor  
14 motion to reject comment 13-21 and to reject the  
15 original proposal. The proposal undoubtedly has  
16 good intentions. But it's wording has potential for  
17 unintended consequences. The proposal would add a  
18 requirement for disconnecting means on batteries  
19 over 30 volts, and this is flawed at a couple of  
20 levels. At first it brought to light that I'm not  
21 quite sure where this is going to be applied. The  
22 implication is that it is for standalone battery

23 systems, but in fact it doesn't say that. So what

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1 is to stop it from being applied to systems that had  
2 integrated batteries in them. Are we going to  
3 apply this to small UPS systems, that are over 30  
4 volt battery systems. Are we going to apply this to  
5 emergency lighting systems? That have 3 12-volt  
6 batteries in them? I don't think so. If we come to  
7 the conclusion that we have to do that then we're  
8 going to force some radical changes on products that  
9 today do not have that capability and no  
10 demonstrated problem. But more to the point, where  
11 did the 30 volts come from? As was pointed out,  
12 this came up later in the cycle where there was no  
13 opportunity for people to challenge that. For many,  
14 many, decades the threshold has been 50 volts. I  
15 point out that even on the preceding paragraph in  
16 the same chapter, 480.4 it talks about 50 volts and  
17 suddenly it starts talking about 30 volts. I don't  
18 know where this came from, why it's there. It's  
19 inappropriate to be here. If we're going to  
20 introduce a new level, I would send this back to the  
21 committee, have them look at it, put it out for  
22 public review where everybody has a chance to  
23 understand the technical basis for why they came up

1 with 30 volts, and then bring it back on the next  
2 cycle.

3 So I encourage you to accept the motion  
4 that is on the floor and reject the proposal.

5 MR. CLARY: Thank you. Microphone No.  
6 4.

7 MR. WILBURSON: Robert Wilburson  
8 representing myself. I call for the question.

9 MR. CLARY: The question has been  
10 called. Nondebatable motion. All in favor to call  
11 the question, please signify by raising your hand.  
12 Thank you.

13 All opposed. The motion carries. We  
14 now move immediately to the motion on the floor  
15 which is to reject Comment 70-13-21. All in favor  
16 of that motion please signify by raising your hand.

17 Thank you. All opposed. Motion fails.  
18 Next, 409, 70-42.

19 MR. MANCHE: Alan Manche, Square D  
20 Company, I would like to make a motion to return  
21 Comment 13-156 and proposal 13-118.

22 MR. CLARY: Do we have a second?

23 THE FLOOR: Second.

1                   MR. CLARY: The motion again is to  
2 return a portion of a report in the form of a  
3 proposal and related comment 70-13-156 and proposal  
4 70-13-118. Please proceed.

5                   MR. MANCHE: This proposal and comment  
6 had great intentions, in Article 700, to establish  
7 some additional language for the separation of  
8 circuits and equipment and some other areas here  
9 where we have emergency systems. The significant  
10 challenge here really becomes the language uses, the  
11 language in there uses separate uses different  
12 language than we find in say Article 695 for fire  
13 parts. And many of us understand the challenges  
14 that we often have with the language even in 695 for  
15 fire pumps. This language even goes to something  
16 different than that. And so as a manufacturer I  
17 started looking at this language, and based on what  
18 it says, in order to get separate sections or  
19 separate separations on, it looks like I ultimately  
20 am required to move to switch gear. And it really  
21 depends on how the interpretation is done. So if  
22 I'm an engineer or trying to engineer a facility or  
23 health care facility in various parts of the

1 country, it may land in one state interpreted one  
2 way, land in a second state being interpreted  
3 another, third once again in another manner. My  
4 real challenge here is what do you really want us to  
5 build here as a manufacturer? I'm concerned that  
6 the language that we put in here really creates an  
7 enforcement issue, a complication associated with  
8 engineering the product and manufacturing the right  
9 product to ensure that we have the requirements that  
10 we need to be code compliant. Understand that  
11 returning this language takes it back to the 2005  
12 language. That language has been in there for over  
13 20 years. The only change that has taken place has  
14 been the exceptions have been changed to positive  
15 language. So in essence we've done fine for  
16 20 years. We have all had challenges with the  
17 separation and the discussion associated with that.  
18 But in effect we've lived with that language and  
19 done a good job with it for over 20 years.

20           The one example that I'll give you that  
21 I think creates a challenge here: If I have a fire  
22 pump and an emergency system all put together here  
23 in a switchboard assembly, I end up with a fire pump

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1 tap with no separation, a service disconnect and  
2 then beside it I end up with some kind of metal, I  
3 could have a metal separator or switchgear. So in  
4 effect, I have a more stringent requirement on my  
5 emergency and legal required stuff than I do my fire  
6 pump. And that just doesn't make sense to me, but  
7 what I would like is language that will help make  
8 sure that the industry proceeds appropriately and  
9 provides the correct separation, and I don't think  
10 this does this.

11 MR. CLARY: Thank you.

12 Mr. Carpenter.

13 MR. CARPENTER: I defer to Code-Making  
14 Panel 13 chair Tommy Woods.

15 MR. CLARY: Microphone No. 1.

16 MR. WOOD: Tom Wood Chairman of  
17 Code-Making Panel No. 13. I rise in opposition to  
18 this motion. This was a result of a dictate by a  
19 technical correlating committee to try and solve a  
20 problem that has existed in the industry for the 20  
21 years that we're talking about. We debated this  
22 thing yesterday at the Electrical Section. It  
23 turned out that the Electrical Section voted in

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1 favor of that. And I am in favor of the defeat of  
2 this motion. Thank you.

3 MR. CLARY: Thank you.

4 Microphone No. 4.

5 MR. NASH: Hugh Nash, and I'm a member  
6 of Panel 15. We I am licensed to practice  
7 engineering in 35 states and I have designed  
8 hospitals in at least 35 states. Typically you have  
9 a generator with a single circuit breaker feeding an  
10 essential system panel, and that panel in turn feeds  
11 multiple transfer switches. I would venture to say  
12 that 99 percent of the hospitals in the United  
13 States and the hospitals in all 35 states that I  
14 have worked in have accepted that design for I would  
15 say more like 32 years, not 20 years.

16 I understand that this was, the impetus  
17 behind this was one state North Carolina I think  
18 that required multiple breakers on the generator.  
19 And my question is this: If we're doing fine doing  
20 what we're doing, why require separation in  
21 essential system panels into other 49 states because  
22 one state has a poor interpretation of the code?

23 This is totally impractical. It is

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1 impossible with parallel generators. There is no  
2 way to do it. Absolutely none. You are going to  
3 have individual circuit breakers on the generators.  
4 You are going to have circuit breakers in the

5 distribution panel but you cannot separate it at the  
6 generator if you're going to parallel generator. So  
7 it's impractical, unnecessary, and I am in favor of  
8 Alan's motion. Thank you.

9 MR. CLARY: Thank you.

10 Microphone No. 3.

11 MR. SHANNON: Am I wrong on this, but I  
12 mean it's my understanding --

13 MR CLARY: Name and organization,  
14 please.

15 MR. SHANNON: John Shannon. My  
16 organization is KC Technologies, but I'm speaking  
17 for myself. Generally with one generator --

18 MR. CLARY: In favor or against the  
19 motion.

20 MR. SHANNON: I can't really say which  
21 way I'm going to vote now. But it's my  
22 understanding that on fire pumps that you always  
23 have had to have a separate vertical section when

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1 you feed it from a switchboard or a switchgear  
2 really, it amounts to. That's my understanding of  
3 the code requirement. The double breaker on the  
4 generator I have always done when I have a single  
5 generator, but I agree with the guy that with a  
6 parallel generator this gets to be a little

7 difficult because you end you having to provide two  
8 separate gears and two separate gears to parallel  
9 the same two generators.

10 But I would like some clarification on  
11 this not being a requirement for the fire pump to  
12 have separate sections.

13 MR. CLARY: Thank you.

14 Microphone No. 4.

15 MR. PAULEY: Jim Pauley, Square D  
16 Company. I speak in support of the motion. It is  
17 worth, and the Panel 13 chair mentioned it briefly,  
18 but it is worth to talk about the history of how we  
19 got here because I think it is important that you  
20 understand that before you let the code wade into  
21 these waters with this language.

22 As was indicated prior to this we  
23 didn't have language that dealt with it that said

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1 you separate the circuits. What happened last code  
2 cycle, Panel 13 through a rejected comment wrote a  
3 panel statement, in the panel statement that said we  
4 require that you separate the emergency systems all  
5 the way back to the generator terminals. That's  
6 what their panel statement said. Now as was stated  
7 just a few minutes ago, that is typically not the  
8 case in 99 percent of the installations out there

9 that are designed. Usually get to the transfer  
10 switch and the separation takes place.

11 So they wrote the panel statement. It  
12 came to the correlating committee, and the  
13 correlating committee gets letters from the chairs  
14 of NFPA 99 from the chairs of NFPA 13, from the  
15 health care section, from all said, this can't be  
16 right, what these guys have said.

17 So we said, the correlating committee  
18 said we disagree with the panel statement. We don't  
19 believe that the panel statement accurately reflects  
20 what the code says. So, we put that note in. So  
21 we're going to establish a task group to go off and  
22 work on this for this code cycle.

23 So we did. They established the task

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1 group. It was a mix of different groups not only  
2 from Panel 13 but from others out of it. This was a  
3 correlating task group which meant their work had to  
4 report back through the correlating committee so  
5 ultimately the expectation was the correlating  
6 committee would send a proposal in the name of the  
7 TCC and trying to correlate this among all these  
8 documents to try to get something done.

9 We got the first report from the task  
10 group at the correlating committee. It had so many

11 issues associated with it, the correlating committee  
12 went back and said you have a lot of language  
13 problems with what you're doing, not clear what is  
14 trying to be said. You need to go clean this up and  
15 come back to us with something to submit.

16 The task group on their own elected not  
17 to do that. They simply elected, as a matter of  
18 fact, the correlating committee never heard from the  
19 task group again, and they simply submitted the work  
20 in the name of the task group chair, out of this.  
21 So the issue got created by a panel statement. The  
22 correlating committee never got the resolution that  
23 we were looking for out of this, and what was

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1 established, and you got a proposal that has  
2 language in it that the correlating committee  
3 already said this is got problems associated with  
4 it.

5 So that is sort of what you are faced  
6 with today, and what is not clear about this is it's  
7 really still not clear what your expectation is in  
8 the code of what you want this equipment to be. It  
9 says barriers. We asked the question is it metal  
10 barriers? Is it plastic barriers? Is it metal clad  
11 switchgear because you can't put those barriers in a  
12 UL 891 switchboard and do it among all the sections.

13 This drives a whole series of things that I'm just  
14 not really sure it is worthwhile wading into in  
15 trying to fix a problem we still haven't really  
16 fixed.

17 I would urge you to support the motion  
18 on the floor.

19 MR. CLARY: Thank you.

20 Microphone No. 2.

21 MR. HILBERT: Thank you, Mr. Chairman.

22 As much as I respect the submitters of the NITMAM, I  
23 raise in opposition to the motion on the floor. My

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1 name is Mark Hilbert. I'm chief electrical  
2 inspector for the State of New Hampshire. As an  
3 electrical inspector for the state I've dealt with  
4 many varying interpretations of what 709 B means  
5 where it states the wiring from the emergency system  
6 must be kept entirely independent of all the other  
7 wiring from the source or from the source  
8 distribution overcurrent protection to the load.

9 I believe that proposal 13-118 which  
10 saw a tremendous amount of work by the submitters  
11 goes a long way towards clarifying this requirement  
12 in defining what that language means. I have weekly  
13 conversations with installers, with designers,  
14 inspectors, related to the separation requirements

15 and what that language means. And I disagree that  
16 we have been very good very well off for the last  
17 20 years.

18 This proposal which passed the feed  
19 ballot by the vote of 12 to 1, in my opinion this  
20 provides a much clearer path for the enforcement  
21 community to follow with regards to that separation  
22 and for that and for those reasons I ask you not to  
23 return it. I also want to make it clear that the

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1 Electrical Section did not hold to support this  
2 proposal yesterday or this motion on the floor.

3 If there is a need to address  
4 situations that are not currently included in the  
5 new language or if there is a need to adjust that  
6 language to some degree, I suggest that we do it in  
7 the 2011 vote cycle and not by returning proposal  
8 13-118. Thank you, Mr. Chair.

9 MR. CLARY: Thank you.

10 Microphone No. 4.

11 MR. CHILTON: First thing I would like  
12 to do is establish I'm from North Carolina and the  
13 comment made --

14 MR. CLARY: Your name and organization.

15 MR. CHILTON: Ron Chilton from the  
16 State of North Carolina, also on Code-Making Panel

17 13 and we did a lot of work on this issue. And the  
18 gentleman made the statement that came --

19 MR. CLARY: Are you for or against the  
20 motion?

21 MR. CHILTON: I am against the motion.

22 MR. CLARY: Thank you.

23 MR. CHILTON: This came as a result

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1 from a poor interpretation in the State of North  
2 Carolina, so I want to clarify that issue, since he  
3 brought it to light.

4 An interpretation some people didn't  
5 like. We gave them several options and they didn't  
6 like either one of them. Now let me explain. A  
7 serious problem does exist with what they want to do  
8 because they wanted to put legally required  
9 emergency systems in a common panel board with  
10 legally required standby and optional systems. We  
11 said no that is not a proper installation because  
12 separation is required.

13 Now, we went about discussing options  
14 and again they appealed to several interpretations.  
15 It's been suggested that this clarification, and it  
16 is just a clarification, this isn't separation,  
17 isn't something that is new in the code in 709. The  
18 separation is required there. They suggest that you

19 only need separate branch circuits or separate  
20 circuits downstream in the transfer switch.

21 The intent in Panel 13 with this code,  
22 this revision to the code for clarification, again  
23 is just for that. And I have heard some people say

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1 this language is not perfect.

2 MR. CLARY: Well, I am going to suggest  
3 if we waited for all of our code cycles to come out  
4 with perfect language our code would considerably  
5 smaller. I don't any anybody here today can agree  
6 we came up with any suggestion or any change of the  
7 code that was absolutely perfect. But we're trying,  
8 in essence, to correct the problem and I think this  
9 goes a long way toward correcting that problem.

10 It was also suggested that language has  
11 been there for over 20 years, and it has, and for  
12 20 years there has been a problem of interpretation  
13 of what separation is. Now if the code, if we mean  
14 for the code to intend that there is no separation  
15 required, why are we here discussing this? The code  
16 does require separation. As I said this is a  
17 serious problem. And again, I am going to reiterate  
18 that this was something that was brought about from  
19 a task group that was appointed by the correlating  
20 committee. I think that some people have some

21 misconceptions about how that originated, and we  
22 were talking about this today and I said, you know,  
23 when we made that interpretation in North Carolina

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1 we wrote it down and we circulated it and said these  
2 are the options you can use. Well they didn't like  
3 any of them, as I said. But when the code panel  
4 came out with a task report or faced with that  
5 report, I pulled out those options and doggone if  
6 they didn't almost word for word period for period  
7 indicate exactly what the task group came up with,  
8 and the task groups here, most of them, I wasn't on  
9 that task.

10 So I speak in opposition to this  
11 motion.

12 MR. CLARY: Thank you. Microphone No.  
13 3.

14 MR. HIRSCHLER: Marcelo Hirschler, GBH  
15 International. I call the question.

16 MR. CLARY: Question has been called.  
17 Nondebateable. All in favor of the motion signify  
18 by saying aye. Or hands up, please.

19 Thank you. All opposed. The motion  
20 carries. Now we vote directly to the motion on the  
21 floor which is to return a portion of a report to  
22 form a proposal and related comments. Comment is

23 70-13-156 proposal 70-13-118. All in favor of the

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1 motion please signify by raising your hands. Thank  
2 you.

3 All opposed. The motion fails.  
4 70-43, Log No. 407. I believe  
5 Microphone No. 4.

6 MR. DUNCAN: I am Jim Duncan  
7 representing Sparling Electrical Engineering firm.  
8 I am the authorized representative of Jim Degnan. I  
9 make a motion to accept Comment 13-187.

10 MR CLARY: Thank you. Do we have a  
11 second?

12 THE FLOOR: Second.

13 MR CLARY: We have a second. Please  
14 proceed.

15 MR. DUNCAN: Thank you. This comment  
16 clarifies and in my mind improves selective  
17 coordination in the band where there are outages.  
18 This is above the instantaneous range. It's above  
19 .1 second. It clarifies selective coordination in  
20 the area that we actually have data, that we have  
21 manufacturers' data about what happens to fuses and  
22 circuit breakers. It clarifies selective  
23 coordination so all of us that are designing these

1 systems can use the most appropriate device, the  
2 newest fuse, the newest circuit breaker or  
3 combination of those devices. It clarifies  
4 selective coordination so that we have learned from  
5 this. We have been doing it for a couple of years,  
6 that we do not have unintended consequences. And  
7 the unintended consequences is without this we're  
8 finding that we're having to at the branch circuit  
9 level turn off instantaneous trip to be able to  
10 achieve perfect coordination. This means you have  
11 severe arc fault problems, safety problems at panel  
12 boards, not something that we're used to, not  
13 something that electricians would think about  
14 wearing protective gear. Some will say that us  
15 engineers don't want to do selective coordination.  
16 But this is not the truth. By adding this this is  
17 where there is the value. This is where we have  
18 data to do it right. This is where we can sit down  
19 with authority having jurisdiction, where we can  
20 work with manufacturers, work with electricians and  
21 owners, to achieve selective coordination. It is at  
22 the point where we're not compromising safety for  
23 electricians. The vote was close. By accepting

1 this comment we'll give the chance of the panel to  
2 reconsider this. Thank you.

3 MR. CLARY: Thank you. Mr. Carpenter.

4 MR. CARPENTER: I defer to Code-Making  
5 Panel 13 chair Tom Wood.

6 MR. WOOD: Tom Wood Panel 13 chair. At  
7 yesterday's meeting we combined both item 43 and  
8 item 44 because they deal with exactly the same  
9 conditions.

10 MR. CLARY: Can you suspend for a  
11 second? Volume on Mike No. 1, please.

12 MR. WOOD: At yesterday's Electrical  
13 Section meeting we did combine items 43 and 44  
14 because they deal with exactly the same problem.  
15 They are the same proposals. Is it acceptable to do  
16 that today? That is the question.

17 MR. CLARY: Repeat the question, sir.

18 MR. WOOD: At yesterday's technical  
19 electrical section we combined both items 43 and 44  
20 for our discussions and voted on them as one  
21 proposal. Is that possible today?

22 MR. CLARY: That's up to the maker of  
23 the motion. But we'll stave the action on this

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1 particular motion and then after that we'll then  
2 move on to 408.

3 MR. WOOD: Okay. I guess I won't  
4 understand where we're going with that.

5 MR. CLARY: Right now you are speaking  
6 on Log No. 407.

7 MR. WOOD: That's correct.

8 MR. CLARY: We are going to take action  
9 on that. Once that action is completed we're going  
10 to take action on Log 408.

11 MR. WOOD: Okay.

12 MR. CLARY: Thank you.

13 MR. WOOD: I'm opposed to action  
14 requested on Item 43. As he said the panel was a  
15 very close vote. It was 6 to 7 against action. So  
16 based on the action of the panel, I'm opposed to  
17 this motion.

18 MR. CLARY: Thank you.

19 Microphone No. 2.

20 MR. OCKULY: Mr. Chairman, Ladies and  
21 gentlemen, good evening. My name is George Ockuly.  
22 I represent Cooper Busman and I am a member of  
23 Code-Making Panel No. Number 10 which deals with

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1 overcurrent protection. There are a number of  
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2 issues and problems with moving to accept this  
3 change to the code panel's action, but I'll select  
4 several and be very brief.

5           First of all when we talk about  
6 selective coordination, it deals with overcurrents  
7 and I respectfully refer you to the definitions in  
8 Article 100 which covers overcurrents and, oh, by  
9 the way, that covers overloads, short circuits, and  
10 ground faults. It doesn't try to build a box around  
11 it at .01 seconds. As the proposer would have us  
12 believe .01seconds is a point at which we should  
13 begin selective coordination. One tenth of a second  
14 is 6 cycles. That's an eternity in electrical  
15 parlance.

16           I would also like to bring to this  
17 membership's attention part of the substantiation  
18 that was submitted with this comment, and I quote,  
19 to design a system to fully coordinate under those  
20 circumstances requires burdensome evaluations and  
21 cost, with a very small chance of return on  
22 investment. Return on investment, ROI,  
23 a financial term and accounting term.

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1           Ladies and gentlemen, I submit to you  
2 when we start looking at accounting and finance,  
3 life safety is doomed.

4 MR. CLARY: Just to be certain. Are  
5 you opposed to the motion?

6 MR. OCKULY: Yes.

7 MR. CLARY: Thank you.

8 Microphone No. 1.

9 MR. ERICKSON: Thank you Mr. Chairman.  
10 My name is Doug Erickson and I work with the  
11 American Society for Health Care Engineering and  
12 American Hospital Association, and I stand to speak  
13 in favor of the motion.

14 Mr. Chairman, the NFPA health care  
15 section voted in its meeting the other day to  
16 support this motion. We feel that Mr. Duncan has  
17 clearly pointed out in Comment 187 that there is no  
18 published criteria for time current curves. In such  
19 criterion is not available with the exception of  
20 unregulated manufacturers' testing what are code  
21 officials going to use to evaluate the engineering  
22 analysis of the design, and how are we as owners  
23 going to know if we're getting what we are paying

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1 for.

2 I just heard ROI, return on  
3 investment. One of the things that the NFPA has  
4 always required is a cost benefit analysis as we  
5 move into new criteria. Cost benefit is not just

6 R O I. Cost benefit looks at the cost versus the  
7 gain in safety. If you require us to continue to  
8 put more and more money into an analysis, more and  
9 more money into our systems, we as owners of health  
10 care facilities are going to be passing that along  
11 to you through your health insurance.

12 What is the return on investment versus  
13 the cost benefit analysis? We have to remember  
14 that. I also want to point out that when you look  
15 at the vote for the ROP, it was 11 affirmative and 2  
16 negative. For the ROC it was 6 affirmative and 7  
17 negative. That is certainly not consensus. It is  
18 definitely a major change in the way the committee  
19 feels about this particular comment and proposal.  
20 11 to 2 to 6 to 7, something must have changed an  
21 awful lot of mind there.

22 The other thing I want to point out, if  
23 you look throughout this entire document with the

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1 TCC and their statements about close votes of 7 to 6  
2 and 6 to 7, they always go back and say this is not  
3 consensus. And we either want to reject or we want  
4 to accept.

5 Therefore, I want to challenge this  
6 assembly with the whole fact that we are not  
7 receiving true consensus by the fact that this

8 technical or this panel has not reached consensus.  
9 Please, don't put this through.

10 MR. CLARY: Thank you. Microphone No.  
11 6 please.

12 MR. LARSEN: Thank you, Mr. Chairman.  
13 My name is Ed Larsen with the Square D Company. I  
14 support the motion to accept Comment 13-187. This  
15 comment failed to achieve a two-third majority in  
16 Panel 13 by a vote of 6 to 7. There is no doubt  
17 that selective coordination in emergency power  
18 systems is important; however, requiring total  
19 selective coordination in the NEC removes the  
20 flexibility the engineering community needs to  
21 optimize system designs as far as practicable. Each  
22 of the IEEE color books that address this topic and  
23 NFPA 110 recognize the total selective coordination

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1 may not always be possible.

2 The present code language mandating  
3 total selective coordination may not be achievable  
4 in the following situations: When fuses or circuit  
5 breakers of different manufacturers are installed in  
6 the same system; when fuses and circuit breakers are  
7 installed in the same system; in health care  
8 facilities where ground fault protection for  
9 equipment is prohibited in certain portions of the

10 system; and in existing buildings where a new system  
11 must meet the 2008 NEC but it's being fed from  
12 existing equipment. In fact this problem has been  
13 addressed by an emergency ruling in the State of  
14 Washington negating the requirement for selective  
15 coordination in such situations. Requiring  
16 selective coordination down to a 10th of a second  
17 has worked well in health care facilities in the  
18 State of Florida for years.

19 This motion will restore the  
20 flexibility that engineers need to design safe and  
21 reliable systems. I urge your support of the  
22 motion.

23 MR. CLARY: Thank you.

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1 Microphone No. 4, please.

2 MR. LIFFORT: My name is Kevin Liffort.  
3 I'm with Eaton Electrical, and I'm here to speak in  
4 favor of motion. I'd just like to point out a  
5 couple of things. Number 1, as was pointed out by  
6 Sparling, here is a company, one of the largest  
7 design engineering firms in the country who have  
8 been designing these electrical systems, and they  
9 pointed out several issues that they are facing  
10 every day. They design emergency systems. They  
11 design legally required standby systems and health

12 care systems, and they identified these issues.

13 We are trying to respond to the needs  
14 of our customers and listening to the concerns that  
15 have been addressed. In addition we're not against  
16 selective coordination. In general, selective  
17 coordination is a very good idea. What we are  
18 saying is what happened with the words in 2005 took  
19 out any flexibility from these design engineers who  
20 are professionally trained to make decisions where  
21 you have to balance protection of equipment and  
22 protection of people against the coordination.

23 As far as being able to coordinate

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1 across an entire range, if volt fault occurs only  
2 after a system shutdown when someone has been in  
3 there bolting something together. So again in these  
4 instances maybe it's better to sacrifice somewhat on  
5 the selective coordination aspect in gaining on the  
6 personnel and equipment protection.

7 Furthermore, we support the code-making  
8 panel's intent. They want to keep the power on and  
9 increase reliability. And this motion allows both  
10 of these things to be achieved, allows the engineers  
11 to evaluate each aspect of that particular design in  
12 saying what is the best way to make sure that the  
13 powers does stay on.

14 We believe that the objectives of  
15 having sensible selective coordination are met  
16 through the motion and would urge you to support it.

17 MR. CLARY: Thank you. Microphone No.  
18 2, please.

19 MR. STAFFORD: Todd Stafford with the  
20 IBEW, also Code-Making Panel 13 principal member  
21 speaking in opposition to the motion. Limiting  
22 selective coordination requirements to .1 seconds  
23 and longer will eliminate an important requirement

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1 of selective coordination; namely, short circuit  
2 faults. Short circuits do occur and have greater  
3 potential for catastrophic results. Overload and  
4 short circuit faults have to be considered together  
5 for true selective coordination. CMP 13 has  
6 supported true selective coordination and has stated  
7 during the ROP and ROC processes that, quote, the  
8 instantaneous portion of the time current curve is  
9 no less important than the long time portion. End  
10 quote.

11 Present day applications to achieve  
12 selective coordination such as zone selective  
13 interlocking or reduction maintenance switches and  
14 current limiting overcurrent devices provide effect  
15 methods to obtain selective coordination and to

16 reduce arc class hazards. Critical systems by their  
17 implied definition demand this type of study and  
18 coordination. As a consulting engineer that has a  
19 vested concern for hazards involving the  
20 installation, maintenance, and training personnel as  
21 well as selective coordination, selective  
22 coordination can be obtained through several methods  
23 and applications. Selective coordination is a

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1 safety concern that can be obtained through proper  
2 design. Thank you.

3 MR CLARY: Thank you. Microphone No.  
4 1.

5 MR. SAPORITA: Good afternoon. Vince  
6 Saporita, Bussman. Speaking against the motion. We  
7 need to remember here where selective coordination  
8 is required in the National Electric Code. It's  
9 required in only a very few places, in a very  
10 limited amount of locations. And it's required in  
11 those locations where continuity of service is  
12 paramount. Where lives are at stake. We're talking  
13 about life safety. It's required in basically three  
14 areas, three different code panels have some  
15 jurisdiction about selective coordination.

16 What is selective coordination first.  
17 Selective coordination is the isolation of a short

18 circuit or overload or ground fault to the lowest  
19 point in the system to the point where it occurs.  
20 So that you don't take out a feeder or so you don't  
21 take out a main and knock out a big portion of a  
22 building.  
23 Panel 12 has required selective

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1 coordination for elevators since 1993. Their  
2 experience with the requirement led them to defeat  
3 all attempts to reduce or eliminate the requirements  
4 for selective coordination as they existed, and  
5 their vote was 11 to 0. That is very significant.

6 Now you heard before the vote on  
7 Panel 13 was 6 or 7 or 7 to 6. You didn't hear the  
8 whole story. Let me tell you the rest. Panel 13 by  
9 a vote of 11 to 2 very strongly supported selective  
10 coordination by adding a simplifying clarification  
11 exception to comments 13-185 and 13-238. You can  
12 look that up in the ROC. 185 and 238.

13 Panel 20, Panel 20 was selected to  
14 specifically develop requirements for copper  
15 systems, critical operations power systems. These  
16 are power systems that the local legislature can say  
17 we want to be operational no matter what happens.  
18 These are like 911 kind of buildings that you always  
19 want up and running. They could be police stations,

20 they could be hospitals, they could be a gas  
21 station, if you wanted to make sure that you had  
22 enough gas stations if you should have something  
23 terrible happen in the city. But Panel 20, there

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1 were four attempts in Panel 20 to either eliminate  
2 or water down selective coordination. In three of  
3 the four they voted 16 to 0 not to accept anything.  
4 They didn't want to eliminate it. They didn't want  
5 to change it. And the other one was 15 to 1. Again  
6 that is significant.

7                   What this motion is attempting to do,  
8 folks, is to water down, is to limit the  
9 requirements for elective coordination, to overload  
10 only. What they're saying is we don't care about  
11 short circuit. We don't care about ground fault.  
12 We only care if you have selective coordination on  
13 overloads, and that is a reduction in life safety.  
14 I urge you to defeat this motion. Thank you.

15                   MR. CLARY: Thank you.

16                   Microphone No. 3, please.

17                   MR. DOLLARD: Thank you, Mr. Chairman.

18 Jim Dollard with IBEW Local 98 in Philadelphia, and  
19 I rise in opposition to the motion on the floor. I  
20 would like to first address a couple of comments  
21 that were made here today but preface those with the

22 previous speakers' points that we're talking about  
23 emergency systems. We are talking about legally

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1 required standby systems. We are talking about the  
2 systems that we are going to rely on to get people  
3 out of a building in a disaster, in a fire, in a  
4 hurricane. Where we need those elevators to get the  
5 handicap out of a high rise building we don't want  
6 to look back and say that we didn't coordinate the  
7 system. We wanted flexibility. We wanted to  
8 satisfy the needs of our customers who are more  
9 interested in a cookie cutter design that maybe a  
10 little bit cheaper. I don't think it is going to be  
11 any more expensive. It's going to be a little more  
12 work for the engineer to come up with that system.

13 And I also have a problem with the  
14 statement made that selective coordination is going  
15 to make exposures incident energy levels higher and  
16 it's going to be worse for the electrical worker.  
17 I'm safety coordinator in Philadelphia representing  
18 4,500 members, and every day of the week I'm on jobs  
19 where we have overcurrent devices may be set at 12  
20 cycle. Why are they set at 12 cycles? For  
21 coordination. Arc reduction maintenance switches,  
22 zone selective interlocking. We can make those  
23 systems safe and we can provide selective

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1 coordination so that we guarantee that we localize  
2 the fault and we get people out of the building.

3 I don't believe that this is sensible,  
4 and I don't believe that .1 seconds anybody in the  
5 electrical industry would agree that we're going to  
6 achieve a level of selective coordination. As was  
7 mentioned earlier that is an eternity in the  
8 electrical world. 6 cycles is a long time. I urge  
9 you please reject this motion on the floor. Thank  
10 you.

11 MR. CLARY: Thank you.

12 Microphone No. 5, please.

13 MR. NASBY: Thank you. Jim Nasby,  
14 Master Control Systems.

15 MR. CLARY: Microphone No. 5, please.

16 MR. VALDEZ: Marcello Valdez with  
17 General Electric, and I rise in support of this  
18 motion. I believe that the existing code goes too  
19 far to solve a problem it doesn't really exist. As  
20 one of the previous speakers spoke, a volt fault  
21 requires to be bolted and those do not happen very  
22 accidentally during normal operations of a system.  
23 They can happen if you cross wires or something on

1 start up. That number is calculated for the purpose  
2 of making sure the equipment can withstand that  
3 level of fault during those instances.

4           The alleged purpose of this requirement  
5 is to increase the reliability of power distribution  
6 systems. That is a very noble goal. If that is the  
7 case, we should require some sort of reliability  
8 analysis and mandate that reliability. Increasing  
9 the selectivity to bolted faulted values will not  
10 have a positive effect on reliability. In fact it  
11 may have a negative effect on reliability if the  
12 generator cannot sustain those levels of fault and  
13 shut itself down to protect itself. If that  
14 coordination of the face protection gets in the way  
15 of the ground fault protection, now your device  
16 coordinated one to one, your system is actually less  
17 coordinated.

18           The required performance for some kind  
19 of devices is very hard, very difficult to  
20 ascertain. As a manufacturer I can tell you that  
21 the testing for this is not really defined. And I  
22 don't know that the way we test this device is  
23 exactly the same way my competitors test the device,

1 may be similar but may not be the same. There is no  
2 method in the standards so that when I tell the  
3 potential client that our devices are selective, it  
4 means the same thing when somebody else says they  
5 are selective.

6                   The .1 second requirement which sounds  
7 extremely slow is not there because of the time  
8 element. It's there because it limits the magnitude  
9 of the faults for any particular circuit at which  
10 the activity is achieved. This has been used in the  
11 State of Florida for many years. Very successfully.  
12 I am not aware of any complaint by the inspection  
13 authorities or hospital or organization that this is  
14 insufficient for their purposes. In fact, as far as  
15 I know the State of Florida plans to continue using  
16 that requirement.

17                   This proposal this code inclusion 2005  
18 actually has done the industry a great favor. I  
19 think all of the manufacturers know a lot more about  
20 the devices now than they did a couple of years ago.  
21 And it may be a couple of 2, 3 years achieving  
22 selective coordination and reliabilities is easier  
23 to do.

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1                   I would submit that this .1 second  
2 requirement could be a very good interim step. So  
3 that by the 2011 comes along we can write a more  
4 comprehensive requirement and more complete and more  
5 correct fashion than the simple requirement that is  
6 if there now, which is very, very difficult to  
7 achieve and I think we have negative consequences.

8                   And the last point is it cannot be  
9 questioned that by choosing devices that are larger  
10 more expensive, excuse me, larger, selected for the  
11 purpose of being selected not to match the circuit  
12 requirements of the load requirements, installation  
13 are bigger and slower. This will create a safety  
14 hazard based on arc flashing which is well known to  
15 this organization. When we look at potential  
16 solutions such as some selective interlocking, I am  
17 not aware that all devices, especially fuses, have  
18 this capability and when you get to large devices  
19 that were chosen only for their selectivity purposes  
20 you end up with very dangerous conditions. Thank  
21 you.

22                   MR. CLARY: Microphone No. 4, please.

23                   MR. WEBER: I yield to Microphone

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1 No. 2.

2 MR CLARY: Microphone No. 2.

3 MR. OCKULY: George Okuly, Cooper  
4 Bussman speaking again against the motion. There  
5 seems to be a general amount of ignorance relative  
6 to proper overcurrent protection. Let me share a  
7 few thoughts. If you look at the changes that will  
8 come into the 2008 National Electric Code, it  
9 defines a branch circuit overload device a device  
10 capable of providing protection for service feeder  
11 and branch circuit and equipment over the full range  
12 of overcurrent between its rated current and its  
13 interrupting rating.

14 I've heard some statements about people  
15 are not sure of how their devices are working or the  
16 time current curves. If that is the case, I would  
17 suggest if you are working with that type of  
18 individual, find something who does know what their  
19 time current curves are and how they operate because  
20 this is not quantum physics. This information is  
21 quantified by the manufacturer.

22 I point out also that this item was  
23 debated yesterday in the Electrical Section and it

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1 did not receive the support of the Electrical  
2 Section. It went down to defeat. So I would  
3 strongly urge the membership to recognize that when

4 you have selective coordination it is over the full  
5 range of faults, and anyone who says that a bolted  
6 fault only occurs during the construction stage  
7 better have their head tapped for echos for the  
8 following reason: We had a debate in Panel 10  
9 several cycles ago where someone was saying oh,  
10 bolted faults don't occur after the system is  
11 energized. That is a true fallacy. Let me give you  
12 an example. The Friday afternoon and there is work  
13 being done on some air frame circuit breakers. The  
14 breakers are racked out and the maintenance is  
15 performed but guess what? They forgot to take the  
16 safety grounding straps off before they racked in  
17 the breaker. What did you have? You had a bolted  
18 fault. So don't tell me that bolted faults only  
19 occur during the initial installation. And oh, by  
20 the way, anyone who is familiar with the performance  
21 of electricity under fault conditions ought to  
22 recognize that an arcing fault quickly can propagate  
23 into a three phase fault which is the equivalent of

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1 a bolted fault.

2 So again, I speak in opposition to this  
3 and remind you that the Electrical Section did  
4 defeat this NITMAM yesterday.

5 MR. CLARY: Thank you.

6 THE FLOOR: Mr. Chairman, in yielding,  
7 am I next, point of order?

8 MR. CLARY: Yes. Microphone No. 4  
9 recognized.

10 MR. WEBER: Thank you, Mr. Chairman.  
11 Ray Weber representing myself, I call for the  
12 question.

13 MR. CLARY: The question has been  
14 called. This is nondebatable. All in favor signify  
15 by raising your hands.

16 All opposed. Motion carries. Now  
17 we'll immediately go to the motion on the floor  
18 which is to accept Comment 70-13-187. All in favor  
19 of the motion, please signify by raising your hands.

20 Opposed. The motion fails.

21 Since motion Log 408 is similar I will  
22 be limiting debate to 2 minutes on Log No. 408.

23 MR. DUNCAN: Mr. Chairman, Jim Duncan

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1 from Sparling Electrical engineer authorized  
2 representative of Jim Degnan. I make a motion to  
3 approve Comment 13-233?

4 MR. CLARY: Thank you. Do I have a  
5 second? I have a second. Motion again to accept  
6 Comment 70-13-233. Proceed, again 2 minutes.

7 MR. DUNCAN: In respect for everyone's

8 time, this is the same issue we just voted on. I  
9 have no further comment.

10 MR. CLARY: Thank you. Mr. Carpenter.

11 MR. CARPENTER: I think Code-Making  
12 Panel chair 13 Tom Wood probably will say the same  
13 thing, but I will defer to him.

14 MR. WOOD: Tom Wood, Panel 13, I would  
15 say the same thing. So let us move on.

16 MR. CLARY: Thank you. Microphone No.  
17 6, two minutes.

18 MR. NASBY: Master Control Systems,  
19 principal on Code-Making Panel 13. I'm speaking  
20 strictly for myself. I'd like to clear the air on a  
21 couple of issues I've heard here. Number 1 is the  
22 issue of volted fault. Anyone who has worked on  
23 fire pumps for any length of time knows that in fact

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1 you can and do have volted faults and in the fire  
2 pump motor because the fire pump controller is not  
3 allowed to protect the motor at any current level  
4 less than 300 percent, and there is two sources of  
5 short circuit, one is when winding is fault and the  
6 other is that it's common for the wiring in the  
7 motor junction box to develop a fault of some point.

8 Now fire pump controllers on average  
9 are rated a short circuit current within current

10 rating of hundred thousand amps. They're available.  
11 We build them. Everyone builds them up to 150  
12 thousand or 200 thousand amps available. So short  
13 circuits is an issue, and since --

14 MR. CLARY: One minute.

15 MR. NASBY: Thank you -- is the largest  
16 volt is very possible for that to take up the rest  
17 of your emergency system. I do want to clarify the  
18 fact that the requirement for selective coordination  
19 is in the code now. I also want to indicate that at  
20 least a couple of large cities have been enforcing  
21 this requirement under different words. They don't  
22 call it this exact term. For a number of years one  
23 I have first hand experience is the City of Chicago.

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1 I understand that New York also requires this. I am  
2 certainly speaking in opposition.

3 MR. CLARY: 20 seconds concluding  
4 remarks.

5 MR. NASBY: Sure thing. I'm certainly  
6 speaking in opposition to this, and since I use  
7 circuit breakers to achieve these high wind stand  
8 ratings. It can be done. There is techniques to do  
9 it.

10 MR. CLARY: Microphone No. 3, please.

11 MR. WILSON: My name is Robert Wilson,

12 representing myself, call for the question.

13 MR. CLARY: The question has been  
14 called, undebatable. All in favor signify by  
15 raising your hands. Thank you.

16 All opposed. Motion carries. We now  
17 immediately move to the motion on the floor,  
18 Log 408 to accept Comment 70-13-233. All in favor  
19 please signify by raising your hands. Thank you.

20 All opposed. Motion fails.

21 We move to Log 342 again, go back to  
22 5-minute discussion. Microphone No. 5.

23 MR. LaBRAKE: Neil LaBrake representing

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1 Edison Electrical Institute and the submitter of  
2 this NITMAM. I hereby withdraw my motion from the  
3 assembly and let the record stand in the ROC and  
4 ROP. Thank you.

5 MR. CLARY: Thank you. That completes  
6 our action on Panel 13. We now move to Panel 14.

7 Panel 14 On this we have related motions Log 330  
8 and 340, Motions 70-46 and 70-47 (Logs 330 and 340),  
9 while different in the means they employ seek to  
10 achieve the same action. Specifically, both  
11 motions, if successful would maintain previous  
12 edition text for sections 510.10(B) (1)(7). Both  
13 motions have been certified as proper. So as to

14 eliminate multiple debates on the same proposed  
15 action, the following procedures regarding the  
16 orderly and efficient consideration of the subject  
17 presented by the related motions will be in effect  
18 at the technical sessions. Once any one of the two  
19 motions is made and seconded, the other will no  
20 longer be in order and the single motion on the  
21 floor will serve as a representative motion for  
22 purposes of debate in a vote on proposed action.  
23 All persons wishing to participate in debate on the

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1 proposed action should, therefore, do so during the  
2 presentation of the representative motion.

3 Log 330 or 340 may come to the floor.

4 MR. LOYD: Richard Loyd. I'm the maker  
5 of Motion 14-9 and I wish to withdraw. The motion  
6 has been withdrawn. Thank you.

7 MS. THOMPSON: Mr. Chairman, Elaine  
8 Thompson LA Tubing Conduit designated representative  
9 for Joe Dodds and I withdraw my motion as well.

10 MR. CLARY: Thank you. Both motions  
11 have been withdrawn. We move to Log 415.  
12 Microphone No. 4.

13 MR. NORAOKO: Steve Norako, EGS Electric  
14 Group, submitter of this NITMAM. Making a motion to  
15 accept proposal 70-14-53.

16 MR. CLARY: Thank you. Do we have a  
17 second?

18 MR. CLARY: We have a second. Please  
19 proceed.

20 MR. NORAKO: This motion refers to  
21 NEC section 501-140 flexible cords class 1 division  
22 1 and division 2. Under this section permits  
23 flexible cord for electrical submersible pumps and

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1 wet pits. It also allows that flexible cord to be  
2 within a suitable raceway, and this is where there  
3 is some confusion. It does not clearly address the  
4 possible mitigation of the gases in the wet pit  
5 through the raceway and into the location of the  
6 power source. Also, the installation procedures  
7 that are described in 501-140 also do not address  
8 the potential problem.

9 This unsafe condition can be easily  
10 addressed by requiring the raceway to be sealed to  
11 limit the gas migration. The concern is only to  
12 minimize the passage of gases and vapors and not the  
13 passage of flames. Thus this seal is not required  
14 to be explosion proof. This section is a topic,  
15 this is what I found, of much confusion and  
16 misunderstanding. What I've seen in speaking with  
17 contractors, inspectors, engineers is that

18 installations will vary from having no steel at all,  
19 some agencies will require silicone sealant some  
20 right up to explosion proof seals. Basically  
21 without this change, pumps within wet pits continue  
22 to be installed in unsafe manners. There needs to  
23 be a seal basically. It does not have to be

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1 explosion proof.

2 MR CLARY: Thank you. Mr. Carpenter.

3 MR. CARPENTER: I defer to Code-Making  
4 Panel 14 chair Donald Cook.

5 MR. CLARY: Microphone No. 4.

6 MR. COOK: Donny Cook chair of CMP 14.  
7 The panel discussed the proposal 14-53 and Comment  
8 14-21 extensively. CMP 14 was able to identify a  
9 number of designs for the wiring of wet wells which  
10 are generally classed as a Class 1 Division 1 Grid D  
11 location by NFPA 820. The concern for the selection  
12 of wiring methods physical protection of cords and  
13 seals are adequately addressed in Article 501. If  
14 the concern that exists is related to the  
15 installation of explosion proof seals, alternate  
16 means of protection for the cords could be  
17 considered.

18 I would urge you to not support this  
19 motion. The panel addressed the issue completely, I

20 believe.

21 MR. CLARY: Thank you. Microphone No.

22 4.

23 MR. NORA KO: I would like to make

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1 another comment here. Again, Steve Norako, EGS. I

2 understand --

3 MR. CLARY: For or against?

4 MR. NORA KO: I am for the motion. I do

5 understand that the panel did vote against this, but

6 I do urge that something needs to be added because

7 from what I found there is an awful lot of confusion

8 here, and that pumps in a well in wet pits are not

9 being installed properly, not being sealed.

10 Something needs to be done. If you want to insist

11 in explosion proof seal be required, that's where I

12 kind of disagree. I don't think an explosion proof

13 seal is necessary. I think all you are concerned

14 about is the migration of gas. You have addressed

15 the explosion requirements via the wiring method the

16 portable cord. Typically when those things are

17 wired they're wired by the manufacturer of the pump

18 so they have a seal right at the pump motor. So

19 that's the wiring method. Explosive proof sealing

20 of the wiring method has been addressed there.

21 This raceway is basically an easy means

22 to remove the cord for servicing and also provides a  
23 degree of protection for it. Thus that conduit

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1 should only be required to be sealed to limit  
2 passage of gases, kind of on a little funny note  
3 here. I do work for a company that makes explosion  
4 proof seals and if you want to insist on explosive  
5 proof seals you could rapidly become my very best  
6 friend.

7 MR. CLARY: Thank you. Microphone No.  
8 2 please.

9 MR. SIMMONS: John Simmons representing  
10 IBEW, I am on Code-Making Panel 14. Part of my life  
11 I spent inspecting for the electrical for the City  
12 of Fort Lauderdale, Florida. There was no real  
13 confusion about doing sewage lift stations and those  
14 sort of locations. The area was classified Class 1  
15 Division 1. The code already requires that there be  
16 a seal, explosion proof seal at that boundary and we  
17 had no problem getting that and I vote to reject the  
18 proposal.

19 MR. CLARY: Thank you. Seeing the  
20 microphone vacant, we'll move to the vote which is  
21 to accept Proposal 70-14-53. All in favor please  
22 signify by raising your hands.

23 All opposed. The motion fails.

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1                   Also, to move things along from this  
2 point on, the maker of the motion will be allowed  
3 5 minutes. Everyone else 2 minutes. So the maker  
4 of the motion from this point on 5 minutes, everyone  
5 else 2 minutes.

6                   Next up is Log No. 320. Microphone No.  
7 4.

8                   MR. WECHSLER: Thank you, Mr. Chairman.  
9 Dave Wechsler, American Chemistry Council, duly  
10 recognized as a representative for Michael Walls,  
11 American Chemistry Council, move to accept Comment  
12 70-14-25.

13                   MR. CLARY: Thank you. Do we have a  
14 second? We have a second. Please proceed.

15                   MR. WECHSLER: Thank you. I will try  
16 to be brief given the late hour. There was an issue  
17 raised and also a member of CMP 14. There was an  
18 issue raised in this code panel series dealing with  
19 Class 2 locations. Class 2 locations are  
20 combustible dust. For many years in the code we had  
21 words in the code dealing with enclosures. The  
22 words reflected were tight metal enclosures that  
23 shall be designed to minimize the entrance of dust,

1 and those words existed for a long period of time,  
2 and as many of you know when we read the words over  
3 and over we become somewhat glued over to them. We  
4 don't see them the way other people do. And it's  
5 pointed out that really that is the same words that  
6 mean dust tight. So what we did we tried to go  
7 through and correct dust tight and went through and  
8 we said in the proposal stage we did one thing we  
9 reversed ourselves in the comment stage and what we  
10 did was we said we wanted to phase dust tight in and  
11 not require instantaneously. We wanted to give  
12 users in industry a transition point.

13 This particular condition had a  
14 condition dealing with isolation switches and the  
15 enclosure which those isolation switches were  
16 provided, and the language got totally messed up in  
17 how the course of action went forward. Let me  
18 explain what the switch is. This switch is a very  
19 important piece of protection for dealing with  
20 processing operations. As many of you may or may  
21 not be aware, when dealing with dust operations, the  
22 dust operations tends to build up blockages and so  
23 when those things happen the equipment needs to be

1 stopped and the blockages need to be removed. They  
2 are all procedures for doing this. But one of the  
3 safeguards we have is we just don't want to turn the  
4 equipment off using the control system. We want to  
5 have a capability of effectively isolating the feed  
6 so it's no new transfer and this is what the switch  
7 is doing. It's not the correct terminology and that  
8 is what is causing some of the problem. We don't  
9 want to eliminate this capability, but we need to go  
10 back in and fix the language. And so what this  
11 proposal is trying to do is effectively return the  
12 existing language, the current code, and allow us in  
13 the next code cycle to repair it and in fact even if  
14 we put the correction in there would be an  
15 implementation date of the next code cycle anyway,  
16 so nothing is lost. Just a simple matter of we have  
17 to fix this up. That's is what this is all about.

18 We can spend a lot of time debating and  
19 stuff. We need to keep this in the code because  
20 it's very important piece of equipment for personnel  
21 safety. It is not a transfer. It is not a hot  
22 load. It's just a switch to provide an open gap so  
23 if somebody sticks their hand in there before they

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1 do that they're not going to hit that button to get  
2 that equipment starting. That's what we are talking  
3 about.

4 MR. CLARY: Thank you. Mr. Carpenter.

5 MR. CARPENTER: I'd like to refer to  
6 Code-Making Panel No. 14 chair Donald Cook.

7 MR. CLARY: Thank you. Microphone No.  
8 4.

9 MR. COOK: Donny Cook, chair panel 14.  
10 And I agree with Dave's comments that proposal 14-63  
11 was submitted to require a revision of the text  
12 that's used to describe a dust tight enclosure and  
13 now in fact it says dust tight enclosure or will say  
14 that.

15 I guess the panel's position and maybe  
16 the confusion is in doing that the switch that  
17 Mr. Wechsler has described that type switch got  
18 deleted out of the list. I think most of Panel 14's  
19 position was that switches needed to be in a dust  
20 tight enclosure, and it didn't make any difference  
21 what type they were. So I don't think anybody else  
22 believed that it was that significant to use those  
23 words. And maybe we didn't understand the way

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1 things are done --

2 MR. CLARY: One minute.  
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3 MR. COOK: -- in Mr. Wechsler's  
4 factory, but I don't think anybody wants to do away  
5 with the switch. They just want the switch  
6 enclosures to be dust tight and that's what the  
7 panel believed their actions takes care of.

8 MR CLARY: Thank you. Seeing no one at  
9 the mike we move to the motion on Log No. 320 to  
10 accept Comment 70-14-25. All in favor signify by  
11 raising your hand.

12 All opposed? The motion fails. This  
13 completes action on Panel 14.

14 THE FLOOR: Point of information, Mr.  
15 Chair, Microphone No. 1.

16 MR. CLARY: Please proceed.

17 THE FLOOR: I would like a  
18 clarification on the announcement that the chair  
19 just made. Is the intent of the chair to provide a  
20 benefit to the maker of the motion and limiting all  
21 other discussion whether you are in agreement or in  
22 opposition to that to 2 minutes?

23 MR. CLARY: Yes.

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1 THE FLOOR: I don't think your rules  
2 allows that. You are giving a bias to the maker of  
3 the motion. I know you can set time restrictions  
4 but your biasing the debate.

5 MR CLARY: We're sticking with our  
6 ruling, allowing the maker of the motion to explain  
7 his position, but after that we're limiting it to  
8 2 minutes for the further debate.

9 THE FLOOR: Is it in order for me to  
10 make a motion for everyone should have five minutes  
11 like before?

12 MR. CLARY: No. That motion is not in  
13 order.

14 Panel 15 Again moving to Panel 15, Log No. 406.  
15 Microphone No. 4.

16 MR. DUNCAN: My name is Jim Duncan  
17 representing Sparling Electrical Engineers, and I am  
18 the author of this NITMAM. I make a motion to  
19 accept Comment 15-35.

20 MR. CLARY: Do we have a second? We  
21 have a second. Please proceed.

22 MR. DUNCAN: Thank you. I am IEEE  
23 principal on Code Panel 15, Sparling, and our

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1 engineering and myself personally we are currently  
2 designing 35 health care facilities throughout the  
3 United States. This particular comment was accepted  
4 by the panel but missed the 2 thirds muster, and I  
5 ask you to consider accepting this. The panel can  
6 take another look at this.

7                   This particular comment validates the  
8 panel's long time position that Article 700 applies  
9 to the life safety system of hospitals and hospitals  
10 have a lot of different electrical systems. But  
11 Article 700 applies to the life safety and this  
12 clarifies that linkage. It eliminates some  
13 confusion that inspectors, electricians, engineers,  
14 have between Article 700 and 517 because each of  
15 those articles unfortunately use a different  
16 definition for the word emergency. Our panel has  
17 asked the Standard Council to clarify that with you  
18 today. There are different definitions and that is  
19 confusing. Some will say that this clarification is  
20 a problem because it removes testing requirements  
21 identification for hospitals in the life-critical  
22 branch. This is just not a problem. What is in  
23 Article 700 is milk toast compared to the

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1 requirements in NFPA 99 NFPA 110 and the joint  
2 commission, no hospital can open no hospital can  
3 operate without testing generators at least monthly  
4 required by those standards, Article 700 just says  
5 generators shall be tested. It doesn't give any  
6 definition. So that is not a concern. I ask you to  
7 accept Comment 15-35. Thank you.

8                   MR. CLARY: Thank you. Mr. Carpenter.  
                    Page 238

9 MR. CARPENTER: I defer to Code-Making  
10 Panel 15 chair Donald Tal ka.

11 MR CLARY: Which mike are you at sir?

12 THE FLOOR: He is not here.

13 MR. TALKA: It appears he is not here.

14 MR. CLARY: He is not here. He is in  
15 Italy.

16 MR. TALKA: That is a good place to be.  
17 I wish I was in Italy.

18 I have no statement to make other than  
19 what the Code-Making Panel did. It did not accept  
20 that motion on the lack of a two-thirds majority  
21 vote.

22 MR. CLARY: Thank you. Microphone No.  
23 5.

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1 MR. NASH: I'm Hugh Nash, a member of  
2 Panel 15. I've done work in 35 states on health  
3 care facilities including North Carolina and New  
4 Hampshire. As Mr. Duncan said, the emergency system  
5 in a hospital consists of critical branch and the  
6 life safety branch. The critical branch covers as  
7 much as 40 percent of the hospital and includes  
8 loads like microwave ovens, refrigerators, pneumatic  
9 tube systems, x-ray machines, and other loads  
10 necessary for hospital operation. The critical

11 branch is in no way shape or form identical to  
12 similar to or analogous to the emergency system in a  
13 commercial building. We are dealing with a  
14 nomenclature issue. By happenstance the health care  
15 people named the emergency system as two different  
16 branches and this was done in 1971 and so to simply  
17 by accident does it with article 700 apply the  
18 critical branch of the hospital.

19 MR. CLARY: One minute.

20 MR. NASH: IEEE has endorsed our  
21 position. The health care section has endorsed our  
22 position. This is an onerous requirement. 40  
23 percent of 4,000 hospitals in the United States

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1 would essentially be required to install fuses. And  
2 if I'm on the operating table, I don't want somebody  
3 looking around for a fuse. Thank you.

4 MR. CLARY: Thank you. Microphone  
5 No. 6.

6 MR. LIPSTER: Thank you, Mr. Chairman.  
7 Steve Lipster, IBEW member of Code-Making Panel 15  
8 as well. Brothers and sisters can you hear me?  
9 Brothers and sister can you hear me?

10 THE FLOOR: Yes.

11 MR. LIPSTER: Don't misunderstand this.  
12 This motion is an attempt, a sneaky one, to remove

13 selective coordination from where it really belongs,  
14 in hospitals. Critical branch consists of many  
15 critical areas as the name suggests. We're looking  
16 at isolated power systems in surgery suites, patient  
17 care areas, infant care areas, nurse call systems,  
18 telephone equipment rooms, I have a list here of 50  
19 here and unfortunately the time won't let me go  
20 through. Very important area, very critical  
21 circuits.

22 Removing the requirements for Article  
23 700 in these situations is going to remove the

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1 selective requirement, selective coordination  
2 requirement, which is really the desire here. It's  
3 also going to take a lot of other things away from  
4 these important services. The equipment will no  
5 longer have to be approved for emergency systems.  
6 The witness testing periodic testing requirement of  
7 code will be gone.

8 MR. CLARY: One minute.

9 MR. LIPSTER: Battery system testing  
10 and maintenance requirements will be gone. Load  
11 testing requirement will be gone. Transfer  
12 equipment specification will be gone. Audible and  
13 visual signals will be gone. Physical separation of  
14 conductors will be gone. The 10 second rule no

15 longer applies. And emergency task elimination all  
16 gone. NFPA 99 is a standard not a code. It is not  
17 enforceable by the authorities having jurisdiction.  
18 Electrical inspector cannot cite a job for a  
19 violation of NFPA 99.

20 Ladies and gentlemen, it is called a  
21 critical branch for a reason. Keep these  
22 requirements in National Electric Program. Thank  
23 you, Mr. Chairman.

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1 MR. CLARY: Thank you. Microphone No.  
2 2, please.

3 MR. JOHNSTON: Thank you, Mr. Chairman.  
4 Mike Johnston. I rise in opposition to the motion  
5 for many of the reasons previously stated. Nothing  
6 is gained by accepting this proposal. As a matter  
7 of fact much is lost. The gentleman before me  
8 indicated that the correlation between 517 and 700  
9 is necessary for that branch of the emergency  
10 system. The sections mentioned 704, 706, 708, 709  
11 712 B 5 with the generators won't start in ten  
12 seconds you need auxiliary power source. The  
13 enforcement community can't get there, the design  
14 community can't get there, if they don't have the  
15 tie to 700. And 727 which is the inspiration for  
16 this proposal. Much is lost. We need to keep the

17 tie in there. If they want to remove that  
18 requirement then concentrate on just that  
19 requirement or move all the items in 700 over into  
20 517 so we don't lose the ability to enforce those  
21 requirements that are needed for the critical branch  
22 of that emergency system.

23 MR. CLARY: One minute.

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1 MR. JOHNSTON: I speak for the  
2 negative ballot that was presented at the comment  
3 voting stage by the IAEI representative representing  
4 enforcement to preserve that section of code.

5 MR. CLARY: Thank you. Microphone No.  
6 1, please.

7 MR. ERICKSON: Thank you, Mr. Chairman.  
8 Douglas Erickson with the American Society for  
9 Health Care Engineering, American Hospital  
10 Association, and I rise to speak in favor of the  
11 motion. First of all I don't like the antics of  
12 IBEW. Brothers and sisters can you hear me. Get  
13 them all riled up why don't you. How many people  
14 have been to the health care facility lately? I can  
15 say the same thing, brothers and sisters. How many  
16 of you have been to health care? We're not out to  
17 harm you, out to hurt you. Please, electric  
18 section, don't just say because you heard this

19 yesterday you are going to vote and raise your hand.  
20 I want to tell you what is the truth.

21 First of all let me give you some  
22 background information. Myself, 28 years on the old  
23 panel 17 and now the panel 15. I'm the immediate

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1 past chair of 110, 10 years of service. I'm also  
2 the current chairman of 99. We're not out to remove  
3 these requirements. In 99, in 110 and in Article  
4 517 the ten seconds are there, the testings  
5 requirements are there. Everything is still there.  
6 And this had nothing to do with selective  
7 coordination. This was an attempt of this panel to  
8 put some clarification in this document.

9 Let me read to you what the chairman  
10 did say in his negative ballot.

11 MR. CLARY: One minute.

12 MR. ERICKSON: Don't give me one minute  
13 because I think that was an inappropriate rule  
14 because it's getting late in the day. Just because  
15 we are coming up later on in the afternoon doesn't  
16 mean ours is not as more as the others.

17 Let me quote the chairman. One thing  
18 the panel did agree on was that there needs to be a  
19 clear path establishing which documents own the  
20 responsibility of the individual part of the code

21 that is NFPA 70-99-01, etc. Until such time as the  
22 responsibility has been made clear it is desirable  
23 not to take an action on this significant code

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1 change.

2 That is the comment of the chair. All  
3 right? I don't think we have an issue here. It is  
4 a coordination issue between the various  
5 organization or the various codes of the NFPA and  
6 this is a family of codes remember. Not one against  
7 the other.

8 And the other thing I would like to  
9 mention is kind of a sore that we have been put  
10 into. Panel 15 is made up of 5 health care  
11 representatives and we got 7 representatives that  
12 represent carnivals, theaters, circuses, TV studios,  
13 places of assembly. When you look at this vote of 7  
14 affirmative and five negative, remember we had  
15 health care people, five votes and we had TV  
16 studios, tents, theaters, places of assembly,  
17 carnivals, etc.

18 I urge you to go with the panel  
19 decision of 7 to 5 which although is not consensus  
20 it is definitely something that we need to take into  
21 consideration.

22 Thank you, Mr. Chairman.  
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MR. CLARY: Thank you. Microphone

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1 No. 3 please.

2 MR. KOVACIK: John Kovacik,  
3 Underwriters Laboratories. I speak in opposition to  
4 the motion. You all voted against the panel action  
5 and at the expense of sounding repetitive, I would  
6 like to read an excerpt from our substantiation of  
7 our negative ballot.

8 Again the panel debated long and hard  
9 on this item due to the significance of the result  
10 of the action as well as its controversial nature.  
11 One thing the panel did agree on was that there  
12 needs to be a clear path established regarding which  
13 document owns the responsibility of the involved  
14 part of the code. That is in NFPA 70, NFPA 99,  
15 NFPA 101, etc. Until such time as that  
16 responsibility has been made clear it is desirable  
17 not to take action on this significant proposed code  
18 revision. Once the responsibility has been  
19 confirmed, the lead document will take proper action  
20 and other documents will follow suit. Changing the  
21 NEC now allows the risk of creating more confusion  
22 and setting the stage for years of unintended  
23 actions in design and installation of and within

1 health care facilities. Thank you.

2 MR. CLARY: Microphone No. 2, please.

3 MR. OCKULY: George Ockuly,  
4 representing myself. I want to point out that this  
5 item was debated -- I'm speaking against the motion.  
6 This item was debated at the Electrical Section  
7 yesterday, and it lost. I realize we have a battle  
8 of the sections here, health care and electrical. I  
9 will say if I need an IV I'll be in following the  
10 rules of the hospital section but if I'm looking for  
11 a safe reliable electric system I am going to  
12 following the rules of the Electrical Section.

13 MR. CLARY: Thank you. Microphone No.  
14 6.

15 MR. WISEMAN: Jim Wiseman from Square D  
16 Company representing myself as submitter of the  
17 comment. I speak in support of the amending motion.  
18 I'm member of both Code Panel 15 and of the electric  
19 systems section committee of NFPA 99. And with the  
20 wording emergency being used differently in Article  
21 517 and NFPA 99 that it is in article 700 of NEC it  
22 is important to be able to tell the difference. My  
23 comment was made simply to attempt to help clarify

1 that picture. Others have made the claim that it is  
2 always been the intent of the requirements Article  
3 700 apply to critical branch as well as life safety  
4 branch.

5 In my research, I could not find that.  
6 As recently as 2002 cycle the Code-Making Panel in  
7 panel statement said that the requirements of  
8 Article 700 are only to the life safety branch.  
9 With the code as it is today, those requirements are  
10 being applied both to the life safety branch and to  
11 the critical branch and can easily be interpreted as  
12 applying to the equipment branch. This is clearly  
13 unintentional. And this is not just about selective  
14 coordination.

15 MR. CLARY: One minute.

16 MR. WISEMAN: I urge your support of  
17 the amending motion.

18 MR. CLARY: Microphone No. 1.

19 MR. ERICKSON: Thank you, Mr. Chairman  
20 Doug Erickson once again American Society for Health  
21 Care Engineering speaking in support of the motion.  
22 I believe when you take a look at what is in the  
23 current code we're not asking for anything different

1 than what is there. We're actually adding something  
2 new. So when Mr. Talka and the UL representative  
3 talked, they're asking not to change the code, not  
4 to add the language, to send this off to the  
5 standard council and let's find out which standard  
6 or which code truly takes the lead on the  
7 performance criteria within health care facilities.

8 I also want to take exception to the  
9 fact that the IV you go to the hospital, the  
10 electrical you go to Electrical Section. We have  
11 very knowledgeable people in health care facilities  
12 that know electrical systems backwards and forwards.  
13 We have very knowledgeable design engineers that  
14 design our systems. It's not us against them.  
15 We're all out for the same thing. The best health  
16 care we can possibly provide in the safest facility  
17 that we can provide.

18 Once again we can't have this conflict.  
19 We need to come to a resolution here. And that  
20 resolution needs to be sent off to the Standards  
21 Council and we need to come to a meeting of minds.  
22 Thank you very much.

23 MR. CLARY: Thank you. Microphone No.

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1 4, please.

2 THE FLOOR: Call the question.

3 MR. CLARY: The question has been  
4 called, nondebateable. All in favor signify by  
5 raising your hand.

6 All opposed. Motion carries.

7 Now we 'll immediately move to the  
8 motion on the floor which is to accept Comment  
9 70-15-35. All in favor signify by raising your  
10 hands.

11 Opposed. Motion fails.

12 At this time I will turn the chair over  
13 to Mr. Mike Newman, member of the Standards Council,  
14 and again, thank you for the extreme honor and  
15 privilege being your presiding officer for the past  
16 several hours.

17 (Applause.)

18 Panel 16 MR. NEWMAN: I can finally say good  
19 evening ladies and gentlemen. Again it is my  
20 distinct pleasure and privilege of being a member of  
21 your Standards Council. And to move things along  
22 we're going to start right off with Panel 16, and  
23 the first motion in Panel 16 is a group amending

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1 motion 70-51. Motions identified by Log numbers 322  
2 through 329 taken together seek to delete the term

3 listed in four different sections of the code as  
4 noted. The motions themselves should be consulted  
5 for description of the precise action sought. All 8  
6 motions have been certified as proper. In addition  
7 with the agreement of the authorized maker of the  
8 motions, these motions are being considered as  
9 dependent motions which will be debated and voted on  
10 by the assembly as a single up or down motion. See  
11 NFPA technical meeting convention rules 2-3.  
12 Accordingly, the following procedure will be in  
13 effect for these motions at this technical session.  
14 The 8 dependent motions will be grouped into a  
15 single group amending motion identified as motion  
16 70-51 which, once made by the authorized person,  
17 will effectively place all 8 dependent motions on  
18 the floor for debate and vote for a single up or  
19 down motion.

20 Microphone No. 1.

21 MR. McNEIVE: Good evening. I'm Tim  
22 McNeive submitter of these motions and I ask in  
23 combining these the motion will need to be in two

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1 parts but as you say acted as one. Part 1 of the  
2 motion is to accept an identifiable part of comments  
3 16-30, 16-111, 16-112, 16-214, and 16-295 the  
4 specific identifiable part in each instance is to

5 accept the deletion of the word "listed" thereby  
6 removing the new requirement for listed straps  
7 hangers, staples, cable ties, and other such devices  
8 used to support optical fiber cables and cables in  
9 communication circuits, community antenna  
10 television, and radio distribution systems, and  
11 network powered broadband communication systems in  
12 Articles 770, 800, 820, 830 respectively.

13 Second part of the motion is to accept  
14 comments 16-29, 16-213 and 16-294 which also would  
15 remove the word "listed" as a requirement for these  
16 support devices in articles 770, 820 and 830  
17 respectively.

18  
19 MR. NEWMAN: We now have the group  
20 amending motion 70-51 in two parts, the first part,  
21 do I have a second? Having a second? I'm sorry.  
22 Mr. Carpenter.

23 I'm sorry. My apology. You've

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1 restated this as all one group.

2 MR. McNEIVED: Yes.

3 MR. NEWMAN: All one group, group  
4 amending motion 70-51. Do I have a second?

5 THE FLOOR: Second.

6 MR. NEWMAN: I have a second.

7 Mr. Carpenter.

8 MR. McNEIVE: Excuse me. I haven't  
9 done my substantiation yet. NEC articles under the  
10 scope of code-making panels 3, 7, 8 and 12 address  
11 the fault requirements for many power and control  
12 cables and raceways used in electrical  
13 installations. None of these systems are required  
14 to be supported by listed hardware. During the 2008  
15 NEC cycle code-making panels 3 and 12 accepted the  
16 addition of cable ties in section 725.8 and 760.8  
17 without the requirement for listing of these or  
18 other support hardware. Although there have been  
19 proposals in previous code cycles that would require  
20 listed hardware, these panels have consistently  
21 voted against such proposals and continue to respect  
22 the judgment of the AHJ to approve the  
23 installation without reported incident. None of the

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1 recorded proposals or comments addressed by CMP 16  
2 or the panel statements include 1 word of  
3 substantiation to the cause for requirement for  
4 listed support hardware in Article 770, 800, 820 or  
5 830. Requirement for listed straps, hangers,  
6 staples, cable ties, and other support devices used  
7 to support these systems is therefore completely  
8 unsubstantiated, is unnecessarily costly and

9 onnerous to manufacturers of the product and will  
10 unnecessarily increase the cost of installations  
11 without substantiated benefit to safety. Many of  
12 the same hardware products manufactured and used for  
13 support of electrical conduit and cables are also  
14 used commonly to support the cable systems in  
15 articles 730, 800, 820 and 830. These products have  
16 been approved by the A H J for many years againg  
17 without reported incident. The C M P 16 actions  
18 should not be permitted without substantiation and  
19 certainly at least some substantiation is needed to  
20 warrant lack of coordination on these subject  
21 products with the historical position of code-making  
22 panels 3, 7, 8, and 12. Thank you.

23 MR. NEWMAN: Mr. Carpenter.

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1 MR. CARPENTER: I defer to code-making  
2 panel 16 chair, Stanley Kahn.

3 MR. KAHN: Thank you, Mr. Chairman. As  
4 with many items that have come before Panel 16, this  
5 particular item was debated extensively both in the  
6 ROP and ROC stage. I can report that the vote in  
7 favor of retaining the listing was 13 to 2, and all  
8 the information is in the ROC and is not necessary  
9 to elaborate any further. .

10 MR. NEWMAN: Microphone No. 4

11 please.

12 MR. STRANIERO: George Straniero, AFC  
13 Cable Systems speaking on behalf of NEMA. NEMA does  
14 not support the committee and recommends acceptance  
15 of the motion on the floor. Thank you. .

16 MR. NEWMAN: Microphone No. 3.

17 MR. STAUFFER: Brooke Stauffer, chair  
18 of NFPA Electrical Section speaking in favor of this  
19 motion. At our meeting yesterday the Electrical  
20 Section voted to support this motion. We recommend  
21 an affirmative vote on amending motion 511.

22 MR. NEWMAN: Any further comment?  
23 Seeing none we will move to a vote. All those in

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1 favor of group amending motion 70-51 please signify  
2 by a show of hands.

3 All those against please signify by a  
4 show of hands. The motion passes.

5 I would now like to move on to  
6 certified amending motion 52. Actually these are  
7 related motions. Motion 70-52, 70-53, and 70-54  
8 logs 403, 301, and 412. While different in the  
9 means they employ seek to achieve the same action.  
10 The following procedure regarding the orderly and  
11 efficient consideration of the subject presented by  
12 the related motions will be in effect of this

13 technical session. Once one of the three motions is  
14 made and seconded the others will no longer be in  
15 order and the single motion on the floor will serve  
16 as the representative motion for purposes of debate  
17 and vote on the proposed action. All persons  
18 wishing to participate in the debate on the proposed  
19 action should therefore do so during the  
20 presentation of the representative motion.

21 I would also like to point out at the  
22 bottom of Page 17 the notes on the Standards Council  
23 decisions concerning these motions and also point

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1 out that these motions have been certified as proper  
2 and certified as amending motions.

3 MR. OHDE: Good evening, Mr. Chairman.  
4 I am the submitter of one of these motions right  
5 here. Mine is 54.

6 MR. NEWMAN: Yes.

7 MR. OHDE: And I represent the IBEW and  
8 I would like to have accept on comment 70-16-62.

9 MR. NEWMAN: We have a motion on  
10 comment 70-16-62. We have a second.

11 MR. OHDE: Thank you, Mr. Chairman.  
12 Again Harold Ohde, I'm a representative IBEW on  
13 code-making panel 16 is the principal number. And I  
14 speak in favor of acceptance this comment, and what

15 this comment does is ask for the deletion of the  
16 fine print note of 77-154(A). There has been  
17 several Standards Council decisions and I would just  
18 like to briefly explain to everybody here what they  
19 are all about.

20 Standards Council decision D number  
21 0603 which was dated 3-22-2006 the submitter had  
22 asked for clarification whether any NEC project  
23 could delete the fine print note after

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1 77-154(A) 800.154(A) and 820.154(A). The Standard  
2 Council decision stated that clarification is  
3 appropriate and responded that the NEC project would  
4 not, would not violate a previous Standards Council  
5 decision by deleting the fine print note at issue.  
6 The previous Standards Council decision clearly  
7 stated and recognizes 2002 edition of NEC project as  
8 status quo. These fine print notes were not part of  
9 the 2002 NEC edition. I would like to add at the  
10 same time that they were added in the 2005 edition.

11 A second Standards Council decision  
12 number 06-19 dated July 28, 2006, considered an  
13 appeal and this appeal asked the Standards Council  
14 to overturn the previous decision to allow CMP 16 to  
15 delete the fine print note reference in the NFPA 13.  
16 I would like to point out that this was denied and

17 the Standards Council decision stated that the fine  
18 print note are not helpful reference to NFPA which  
19 they were not. NFPA 13 which they were not a  
20 helpful reference, or engender confusion and did  
21 engender confusion among everybody in the industry.  
22 The NEC project should have the ability to delete  
23 them. Nothing in the Standards Council status quo

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1 directive would prohibit this.

2 I would also like to add that that same  
3 Standards Council decision stated that the deletion  
4 of the fine print note would provide for the  
5 consistency within the NEC itself. The fine print  
6 note at issue appeared in some relevant NEC article  
7 such as 770, 800, 820 but while at the same time was  
8 not in Article 725 and 760. Which happens to be  
9 under the purview of CMP 3. CMP 3 rejected these  
10 addition of these fine print notes and these  
11 articles.

12 Finally, this Standards Council  
13 decision also stated if these fine print notes are  
14 in any way problematic, and they are, they should be  
15 deleted, restoring the NEC in this regard on to the  
16 status quo regarding plenum cable issues represented  
17 by the 2002 NEC of the NEC.

18 Thank you very much.

19 MR. NEWMAN: Thank you, Mr. Carpenter.  
20 MR. CARPENTER: I'd like to defer to  
21 Code-Making Panel 16 chair Stanley Kahn.  
22 MR. NEWMAN: Microphone No. 1, please.  
23 MR. KAHN: Thank you, Mr. Chairman.

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1 Needless to say there was extensive debate on this  
2 subject, been going on for a long time. The panel  
3 came to the conclusion that the addition of the fine  
4 print note with reference to the 2007 edition of  
5 NFPA 13 was informative.

6 MR. NEWMAN: Thank you. Any further  
7 debate?

8 Microphone No. 3, please.

9 MR. STAUFFER: Brooke Stauffer, chair  
10 of the Electrical Section. At its meeting yesterday  
11 the section voted to support these three motions.  
12 We recommend affirmative votes.

13 MR. NEWMAN: Microphone No. 4, please.

14 MR. HIRSCHLER: Marcelo Hirschler, GBH  
15 International representing American Fire Safety  
16 Council in support of the motion. I am one of the  
17 submitters of one of the three. I think mine is 53.  
18 If you want to look at it, Page 70-518 of the ROC  
19 and I want to point out a couple of things here just  
20 so that to clarify. The fine print note that is

21 intended to be deleted or requested to be deleted is  
22 a fine print note follows immediately the  
23 description of cables and listing of cables, and it

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1 says C 8141 of NFPA 13 installation of sprinkler  
2 systems for requirement for sprinklers in concealed  
3 spaces containing explosive combustibles.

4 It's very interesting because if you  
5 now go to the new edition of NFPA 13 and you look  
6 for the appropriate section it says that, concealed  
7 spaces of noncombustible and limited combustible  
8 construction with limited access not permitting  
9 occupancy of storage --

10 MR. NEWMAN: One minute.

11 MR. HIRSHCLER: -- shall not require  
12 sprinkler protection. The space shall be considered  
13 a concealed space even small openings such as those  
14 used for as return air for plenum. It goes on to  
15 say, minor quantities of combustible materials such  
16 as but not limited to cabling, et cetera et cetera,  
17 should not typically be viewed as requiring  
18 sprinklers. For example, not being the intent of  
19 this section to require sprinklers and due to the  
20 present usual amount of cabling within the space.

21 So clearly what NFPA 13 has said is  
22 that the plenum spaces do not require sprinklers in

23 the presence of cabling. However, the section has

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1 been used and is continuing to be used in order to  
2 give the impression to some people that --

3 MR. NEWMAN: Please conclude.

4 MR. HIRSCHLER: -- sprinklers are  
5 required if you do not use plenum cables. I urge  
6 the members to support the motion.

7 MR. NEWMAN: Thank you. Microphone  
8 No. 2.

9 MR. CARPEL: Carpel Associates,  
10 consultant to the Society of Plastic Industries. I  
11 rise in opposition to the motion. I encourage you  
12 to support the panel action. What you heard was  
13 that this note should be deleted if it is  
14 problematic or it is confusing. According to our  
15 panel by the vote of 12 to 3 they don't see the  
16 problem.

17 Now you just heard a comment that  
18 clearly NFPA 13 does not require sprinklers in these  
19 spaces. That is not what 13 said and not the  
20 language that Marcelo read to you. It says many of  
21 these spaces don't require sprinklers but there may  
22 be a sprinkler requirement. So here is the issue.  
23 This is merely a pointer. It merely tells us that

1 in the selection of cable for the amount of cable  
2 that we are going to put in a concealed space there  
3 may be, may be a requirement in NFPA 13 to sprinkler  
4 that space.

5 Now in the panel discussion what we  
6 heard from some of the people opposed to this fine  
7 print note was we don't want that in our code  
8 because we want to be able to put the cable in and  
9 then let the sprinkler industry worry about the  
10 problem. That is not the way you apply a family of  
11 code. That is not the way you enforce a family of  
12 codes. All this is is a piece of information. If  
13 there is a problem, if people are abusing the  
14 language it's the language in NFPA not the fine  
15 print note. Fine print doesn't require anything.  
16 The fine print note merely says there may be a  
17 requirement.

18 The Standards Council decided that this  
19 fine print note should be in the 2005 edition. I  
20 would encourage you to support your panel and not  
21 accept this motion. .

22 MR. NEWMAN: Thank you. Microphone No.  
23 1, please.

1                   MR. DOLLARD: Jim Dollard with the IEBW  
2 with Local 98 in Philadelphia, and I rise in support  
3 of the motion on the floor. As a matter of fact I  
4 had a NITMAM in here myself. I would like to point  
5 out to the body that the Electrical Section did  
6 support the motion on the floor as Mr. Stauffer just  
7 pointed out. I would also point out to the body  
8 that there is three separate groups once we get  
9 through one we'll quickly go through the others.

10                   As you heard the first speaker state,  
11 Standards Council made a statement and it says if  
12 the fine print note is in any way problematic they  
13 should be deleted. They are problematic. These  
14 fine print notes are used as part of a propaganda  
15 campaign to manipulation the NFPA family of code and  
16 standards. I have right here the NFPA field guide  
17 from the CFRA which exists for one reason, to  
18 promote the floral polymer product which you would  
19 have divide. A tremendous increase in cost of --

20                   MR. NEWMAN: One minute.

21                   MR. DOLLARD: With no safety benefit.  
22 Thank you, Mr. Chairman.

23                   MR. NEWMAN: Thank you.

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1 VOICE: This issue affects everyone in  
2 the room. You may think you don't make cable you  
3 don't install cable. This issue is at the crux of  
4 NFPA 70. We're under attack. We are not under  
5 attack from another code organization. We're under  
6 attack from within. And where we allow an  
7 informational fine print note to be turned around,  
8 manipulate the NFPA family of code and standard, it  
9 hurts every one of us.

10 I urge you to support the motion on the  
11 floor. Thank you, Mr. Chairman.

12 MR. NEWMAN: Thank you. Microphone  
13 No. 1.

14 MR. ISMAN: Thank you, Mr. Chairman.  
15 Ken Isman, National Fire Sprinkler Association in  
16 support of the motion on the floor. The fine print  
17 note is a problem and it is confusing and the  
18 sprinkler industry would just rather see it deleted  
19 from NEC. In the State of Massachusetts, the state  
20 you're in right now, it's been so confusing and so  
21 much of a problem the state building codes  
22 organization here had to issue a state wide  
23 moratorium on the requirements for sprinklers in

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2 this fine print note and forcing the doubling of  
3 costs of sprinkler systems in one-story nursing  
4 homes that we're trying to get sprinklered. But by  
5 forcing people to put sprinklers up in the plenum  
6 spaces just because there was some cable that was  
7 slightly less than combustible or combustible type  
8 cable, just because of this fine print note. We are  
9 having problems with this fine print note. It is  
10 being abused as a fine print note, and it is  
11 inappropriate when it's referenced to the 2007  
12 edition of NFPA 13. The 2007 edition of NFPA 13  
13 makes it clear that the decision as to whether or  
14 not to sprinker a concealed space is based on what  
15 that space is made out of. The structural members  
16 that make up that space not some cables that might  
17 be in that space.

18 MR. NEWMAN: 1 minute please. Thank  
19 you. Microphone No. 3 please.

20 MR. LETCH: Bill Letch, Sherman  
21 Engineering. I call the question.

22 MR. NEWMAN: We have a motion to call  
23 the question. This is a nondebatable motion. All

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1 those in favor please signify the vote by raising  
2 their hands.

3 All those opposed please raise your  
Page 265

4 hands. The motion passes. We'll now move on to the  
5 main motion. We are voting on motion 70-54 Log No.  
6 412 which is to accept comments 70-16-62. All those  
7 in favor please signify by raising your hands.

8 All those opposed. The motion passes.

9 But now we move on to related motions  
10 70-55, 70-56 and 70-57 which I will remind you are  
11 similar issue to what was just passed.

12 Microphone No. 4.

13 MR. OHDE: I am Harold Ohde and I am  
14 one of the submitters of the NITMAM and you are  
15 correct that these are similar issues and we just  
16 discussed just different code section. It's now  
17 800.154 A, the fine print note, and I am asking for  
18 the support of comment 70-16-150.

19 THE FLOOR: Second.

20 MR. NEWMAN: We have a motion to accept  
21 Comment 70-16-150. I have a second. Mr. Carpenter.

22 Excuse me. Discussion please.

23 Microphone No. 1.

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1 MR. OHDE: Just to accept the comment.

2 MR. CARPENTER: Thank you. I'm sure  
3 Stanley Kahn will have the same comment, but I will  
4 defer to Code-Making Panel 16 chair Stanley Kahn.

5 MR. KAHN: Absolutely the same comment.  
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6 MR. NEWMAN: Thank you. Microphone  
7 No. 3, please.

8 MR. STAUFFER: Brooke Stauffer, chair  
9 of NFPA Electrical Section at its meeting yesterday  
10 the section voted to support these motions. We  
11 recommend affirmative votes. Thank you.

12 MR. NEWMAN: Any further discussion?  
13 Seeing none we move to a vote on certified amending  
14 motion 70-57, Log No. 413, which calls to accept  
15 Comment 70-16-150. All those in favor please  
16 signify by raising your hands.

17 All those opposed. The motion passes.

18 MR. NEWMAN: We'll move on to certified  
19 amending motion 70-58, 70-59 and 70-60. Again, I  
20 would remind you that these are similar motions to  
21 those previously passed. Microphone No. 1, please.

22 MR. OHDE: Thank you, Mr. Chairman.  
23 Good evening. Harold C. Ohde representing IBEW and

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1 I make a motion to accept comment 70-16-257.

2 MR. NEWMAN: We have a motion to accept  
3 Comment 70-16-227. Do I have a second?

4 THE FLOOR: Second.

5 MR. NEWMAN: We have a second.

6 Microphone No. 1, please.

7 MR. OHDE: Mr. Chairman this is very  
Page 267

8 similar to what we discussed in 770 and 800 code  
9 section changes to 82154 A. Thank you very much.

10 MR. NEWMAN: Mr. Carpenter.

11 MR. CARPENTER: I defer to Stanley  
12 Kahn, the chair of Code-Making Panel 16. He is  
13 waiving his hand that he has the same comments.

14 MR. NEWMAN: No further comment.  
15 Microphone No. 3, please.

16 MR. STAUFFER: Brooke Stauffer, chair  
17 of the Electrical Section. I also have the same  
18 comment at its meeting yesterday the section voted  
19 to support these proposals. We recommend  
20 affirmative votes.

21 MR. NEWMAN: Seeing no further  
22 discussion, we will move on to a vote. This is  
23 comment certified amending motion 70-60, Log No.

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1 414 to accept Comment 70-16-257. All in favor  
2 please signify by raising your hand.

3 Those opposed. The motion passes.

4 Panel 17 Continuing on, that concludes the  
5 action on Panel 16, moving on to Panel 17. First  
6 certified amending motion is 70-61 Log No. 333 which  
7 is to return a portion of report in form of a  
8 proposal and related comments 70-17-92 and proposal  
9 70-17-114a.

10 Microphone No. 5 please.

11 MR. ROBINSON: Thank you, Mr. Chairman.

12 I am Wayne Robinson representing myself regarding  
13 this 680.26 requirement FOR bonding of pools,  
14 looking at this new 680.26.

15 MR. NEWMAN: Could you repeat your  
16 motion, please.

17 MR. ROBINSON: My motion is to return  
18 this to committee.

19 MR. NEWMAN: Proceed.

20 MR. ROBINSON: Do you need a second on  
21 that?

22 MR. NEWMAN: Second please.

23 THE FLOOR: Second.

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1 MR. ROBINSON: 680.26 in the last code  
2 cycle 680.26 C provided clear requirements for  
3 bonding pools and pool decks. Now, one of the big  
4 issues that arose was whether or not we could use  
5 the grid, use either a grid system of copper or the  
6 wire mesh. Now if the wire mesh is applied properly  
7 and pulled into the concrete, there is not really an  
8 issue. But if it's not, it is not looked at during  
9 installation then it should be copper. This is not  
10 addressed in the new requirements.

11 A couple of other things not covered in  
Page 269

12 these new requirements is vinylized steel frames  
13 that was not tested. You have got new fiber  
14 reinforced pools with no structural steel. There is  
15 3 and a half million pools in this country and I  
16 think this new requirements are confusing as an  
17 inspection authority with over 900,000 people in my  
18 area, I am concerned that the interpretations,  
19 they're interwoven, not separate like nonconductive  
20 pools, and nonconductive pool parameter or  
21 conductive pools and conductive pool parameters.  
22 That is the way this should read. It doesn't read  
23 that way. It reads very confusing. And I don't

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1 think that the testing, I have to actually question  
2 the testing results whether on by a listed or  
3 national recognized testing laboratory, are we doing  
4 individual testing throughout the country by  
5 individual pool manufacturers and are we listening  
6 to pool manufacturers testing data? Where is this  
7 data coming from?

8 A lot of things are being  
9 misinterpreted also is when you have structural  
10 reinforcing steel, the State of Florida now is only  
11 requiring one wire and that is in direct conflict  
12 with the new requirement that if you had structural  
13 reinforcing steel that you should have a bond grid.

14 But no they have decided to go ahead and pass this  
15 bill. Already been through the legislation, waiting  
16 to be signed by the governor, and it's actually  
17 giving you one wire on conductive pool services, and  
18 I think this is in direct conflict with what the new  
19 Code Panel 17 has put forth.

20 So the best thing to do until we get --  
21 there is 8 different pools types. We're only  
22 addressing three different pool types. So we need  
23 to get this together. We need to get together on

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1 this and come up with a good code. This is not a  
2 good code right now and is going to cause a lot of  
3 problems. I have got all across the country people  
4 enforcing this already under different standards.  
5 It's not good code. I hope that you reject this.  
6 Send it back to panel. We have got a good code in  
7 2005 that we can live with until we get this  
8 resolved. Thank you.

9 MR. NEWMAN: Thank you, Mr. Carpenter.

10 MR. CARPENTER: I defer to Code-Making  
11 Panel 17 chair Don Johnson.

12 MR. NEWMAN: Microphone No. 1, please.

13 VOICE: Thank you, Mr. Chairman. I  
14 rise to reject this motion 61. For the benefit of  
15 those present this was debated at the Electrical

16 Section yesterday and was soundly rejected. I know  
17 I only have 2 minutes. This was a rewrite of  
18 Article 626 and it in effect has made a much better  
19 and clearer code result many of the problems with  
20 the 2005 bonding grid. In the State of Florida, I'm  
21 from the State of Florida, and gave some review and  
22 discussion forums on this article to the inspection  
23 community and also to industry. As a result of that

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1 meeting and others, the feedback from all of the  
2 inspection community that this was a very clear and  
3 specific and enforceable method to resolve all of  
4 the issues of the bonding grid out of the 2005  
5 causing much difficulty throughout the country.  
6 This resulted in a fast action by the State of  
7 Florida since they just adopted the 2005, to provide  
8 the legislation that was referred to to accept the  
9 2008 single grounding number 8 grid wire to resolve  
10 all of the issues. So the panel statement on this  
11 particular article was the revised text more clearly  
12 presents the requirements and meets the intent. It  
13 was voted on 11 affirmative --

14 MR. NEWMAN: 20 seconds.

15 VOICE: 10 affirmative 1 no return. I  
16 request that all vote to reject this. Thank you.

17 MR. NEWMAN: Thank you. Microphone 3  
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18 please.

19 MR. WILKINSON: Robert Wilkinson,  
20 representing myself. I call for the question.

21 MR. NEWMAN: We have a motion to call  
22 for the question. This is a nondebatable motion.  
23 Would all those in favor signify by raising your

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1 hand.

2 All those opposed. The motion passes.  
3 We'll now move on to the main motion. The main  
4 motion is 70-61 Log 333 which is to return a portion  
5 of a report in the form of a proposal and related  
6 comments 70-17-92, as well as proposal 70-17-114a.

7 All those in favor please signify by  
8 raising your hand.

9 Those opposed. Pretty straightforward.  
10 The motion fails.

11 We'll now move on to the second motion  
12 in Panel 17 which is motion 70-62 Log No. 296.  
13 Microphone No. 4, please.

14 MR. FITZLOFF: Mr. Chairman, Jeff  
15 Fitzloff, with electrical bureau chief for the State  
16 of Idaho, Division of Building Safety. I move to  
17 accept Comment 70-17-97.

18 MR. NEWMAN: We have a second to accept  
19 Comment 70-17-97. Please proceed. Microphone No. 4  
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20 please.

21 MR. FITZLOFF: The Code-Making Panel 17  
22 members have done extensive work on 680.26. This  
23 was in response to TIA that was introduced after the

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1 release of 2005 NEC. The panel did address issues  
2 of bonding and the potential plain on nonconductive  
3 pool shells. My comment does not change the work  
4 that the panel had done in that area. The issue I  
5 have is when it comes to the perimeter decks. Paved  
6 surfaces could have a potential of voltage on the  
7 different crossum. But if we look at 680.42 part 4  
8 of this article, hot tubs and spas refers back to  
9 parts 1 and 2 which is installation instructions and  
10 the bonding. If a wooden deck is on a second floor  
11 where you have a hot tub placed on it, the installer  
12 would need to install equal potential grid under  
13 this deck. It's very difficult to explain the need  
14 for potential bonding grid under a wooden deck  
15 8 feet in the air. Also, some swimming pools are  
16 only partially submerged in the earth. Those also  
17 have plastic or wooden deck around them that have no  
18 contact with the earth and no possibly of becoming  
19 energized. It would be very difficult to explain  
20 equal potential grid. Thank you.

21 MR. NEWMAN: Thank you. Mr. Carpenter.  
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22 MR. CARPENTER: I would like to defer  
23 to Code-Making Panel 17 chair Don Jonnson.

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1 MR. JOHNSON: Thank you. I rise to  
2 make the motion to reject this certified motion  
3 Number 62. Again, this motion was brought up and  
4 discussed and debated at the Electrical Section  
5 yesterday, was resoundingly defeated. And I'll more  
6 brief on the reasons for the perimeter surface,  
7 perimeter surface, I'm reading the panel statement,  
8 the conductivity of a perimeter surface is not  
9 dependent entirely on the material. Whether another  
10 condition can impact the conductivity. It's  
11 different than a nonconductive pool shell that  
12 separates with say a fiberglass barrier between the  
13 water and the earth. It's a whole different  
14 environment and different situation.

15 So I ask that you defeat this motion.

16 MR. NEWMAN: Any further discussion?  
17 Seeing none we move to a vote. The current motion  
18 is NFPA 70-62 which is to accept comment 70-17-97.  
19 All those in favor signify by raising your hand.

20 All those opposed. The motion fails.  
21 This concludes the actions this evening on Panel 17.

22 Panel 18 We'll now move to Panel 18. The first  
23 item this evening for Panel 18 is certified amending

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1 motion 70-63, Log No. 378.

2 Microphone No. 4, please.

3 MS. RADE: Thank you, Mr. Chairman.

4 Debra Rade, and I am here today representing

5 nonmetallic cover plate manufacturers and

6 specifically Taymac Corporation at the submitter of

7 certified amending motion Number 63 which is return

8 a portion of a report in the form of a proposal and

9 related comments specifically ROC 189. If

10 successful exception No. 2 will remain in the 2008

11 edition of the NEC. And I so move.

12 MR. NEWMAN: Do I have a second?

13 Please proceed.

14 MS. RADE: Thank you. For those of you

15 who do not know me I have been working in the

16 interest of public safety for more than 25 years.

17 Most of that time was working as an officer of

18 Underwriter Laboratories, and I am a member of NFPA

19 in my own name. It is late in the day, and I will

20 try to speed through the relevant information but I

21 do think it's important we cover it.

22 So why am I here today. I'm here

23 because product safety and fairness means a lot to

1 me. I'm here representing nonmetallic cover plate,  
2 one millimeter thick that has been in the  
3 marketplace for nearly 12 years without a single  
4 reported field incident. Ironically this is a very  
5 simple and safe product that has a mighty trade  
6 organization against it, and you need to ask  
7 yourself why and you need to care why.

8 I am here today to ask you to do the  
9 right thing for safety, the NEC, the NFPA and in the  
10 interest of fairness. In general we all prefer to  
11 support the Code-Making Panel whenever we can and  
12 when it is the right thing to do. Code development  
13 is, however, sometimes fraught with self interest  
14 and sometimes you need to be alert to this for the  
15 protection of the NEC, and this is one of those  
16 times. How can you tell? You can tell because of  
17 the flip-flop. I will attempt to cover in our  
18 limited time in nontechnical terms some of the  
19 salient points in the hope you will vote and do the  
20 right thing with regard to this issue.

21 The first thing you have to ask is what  
22 really is best for safety. The safety system works  
23 best when each component knows its responsibilities

1 and does them well. From my perspective safety  
2 triangle is composed of code making, standards  
3 development, listing of products which includes  
4 testing and certification. You need not be confused  
5 herewith your responsibilities. You are not being  
6 asked to certify or list nonmetallic cover plates 1  
7 millimeter thick. You are being asked to allow such  
8 copper plates to continue to be eligible for listing  
9 and to do so based on standards developed or to be  
10 developed in the future. You're asked to do it  
11 based on testing and certification and with a  
12 knowledge that similar types of products have been  
13 and continue to be listed by UL and by ETL. And you  
14 can do so in good faith based on the product  
15 categories very strong safety history.

16 I ask you do you believe in the value  
17 of testing and certification? I do. Do you really  
18 think it best in the interest of safety for the NFPA  
19 to delete exception number 2? It's not. With  
20 millions of currently listed nonmetallic cover  
21 plates in the market and with a continuing demand  
22 for them, do you think it would be in the best  
23 interest of safety for these products to be sold

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1 without a listing? Wouldn't it be better for safety  
2 to leave exception number 2 in the NEC to encourage  
3 continued development of standards based on facts  
4 and to have a listing organization who can monitor  
5 the manufacturing of these plates to ensure that  
6 they meet requirements. So for instance if never  
7 thicker than 1 millimeter. You are going to answer  
8 that question with your vote in a few minutes.  
9 Don't send away product that has maintained a  
10 listing in every year. It simply is not the right  
11 thing to do.

12 Why do I say exception number 2 and  
13 retaining it is best for the integrity of the NFPA  
14 and the NEC? Code development of facts each and  
15 every one of us for some of us represents safety in  
16 our homes and in our workplace. For some of us it  
17 represents a level playing field for business so  
18 that we can earn a fair living. When the code  
19 development passes it off it has very real  
20 consequences. The competitive --

21 MR. NEWMAN: One minute.

22 MS. RADE: -- marketplace have no place  
23 in the code. It simply not good to flip-flop NEC

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1 provisions. The 2005 NEC incorporated exception

2 number 2 based on a technical fact finding report.  
3 Flip-flopping in the 2008 edition should be an  
4 embarrassment to the integrity of the NEC in the  
5 absence of any new substantiation on the code cycle  
6 or something developing in the field. Yet the  
7 proponent of deleting exception number 2 have raised  
8 no new technical data and no new field information  
9 has been available either. The only new information  
10 has been a technical data report, a second fact  
11 finding report submitted to the Code-Making Panel.  
12 You must distinguish between the myth and reality  
13 and the reality are a trade organization whose  
14 stated mission is to promote the competitiveness of  
15 its member companies, has proposed deleting  
16 exception number 2. The trade organization can and  
17 do actively promote safety when there is a  
18 controversy like this you need to consider --

19 MR. Newman: Please conclude.

20 MS. RADE: So I just want to emphasize  
21 again there has never been a single safety issue  
22 with regard to the product and that they always have  
23 been listed and it's not good enough and not right

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1 enough to just vote with a crowd. Yesterday the  
2 majority of people in the Electrical Section voted  
3 in opposition to our motion and to those people I

4 say you still have the chance to do the right thing.  
5 Vote your conscience not your trade association.  
6 Doing the right thing takes guts and this city is  
7 very inspiring one that calls out for it by virtue  
8 of every step on the Freedom Trail. Please support  
9 this motion to retain exception number 2 with your  
10 vote. Thank you.

11 MR. NEWMAN: Mr. Carpenter.

12 MR. CARPENTER: Yes, I defer to  
13 Code-Making Panel 18 chair Michael Ber. Microphone  
14 No. 3.

15 MR. BER: Mr. Chairman, fellow NFPA  
16 members, I'm sure you are glad to see me up here.  
17 Michael Ber, I am the chairman of Code-Making Panel  
18 18. I represent the Independent Electrical  
19 Contractor Association and I am from the huge state  
20 of Texas. The panel chose to remove this exception  
21 only done through the fantastic and diligent work  
22 that Code-Making Panel No. 18 always indulges in.  
23 During the ROP section we requested, I quote,

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1 further technical justification and substantiation  
2 of the issue be provided. In the ROC the panel did  
3 an extensive and complete review of the technical  
4 information and data that was submitted. There were  
5 two comments that we reviewed. One was a four one

6 was against. The votes were 10 to 2 and 11 to 1.  
7 As the lady mentioned, the Electrical Section chose  
8 not to support this I guess this is a proposal, and  
9 I urge you all to support the panel's action. Thank  
10 you.

11 MR. NEWMAN: Thank you. Any further  
12 comment? Seeing none, we'll move to a vote. The  
13 motion is NFPA certified amending motion 70-63 Log  
14 No. 378. Return a portion of report in the form of  
15 a proposal and related comment 70-18-9 proposal  
16 70-18-19.

17 All those in favor please signify by  
18 raising your hands. All those opposed please  
19 signify by raising your hand. The motion fails.

20 I would now like to move on to the next  
21 amending motions 70-64 and 70-65. These are related  
22 motions and if you read quickly through the related  
23 motions note on Page 21, motion 70-64 and 65 while

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1 different in the means they employ both seek to  
2 achieve the same action. Specifically, if  
3 successful both would retain exception number 2 to  
4 section 406.4(D).

5 I won't read the rest. These are  
6 similar to the motion that was just previously acted  
7 on.

8 Microphone No. 4 please.

9 MS. RADE: Thank you again, Mr.

10 Chairman. I'm here this time as a designated of  
11 representative of Robert Miller who was here  
12 yesterday to meet with the Electrical Section and  
13 was called away on an urgent matter. His motion our  
14 motion combined are certified amending motion 64 and  
15 65 which if successful would result in exception 2  
16 remaining in the 2008 edition of the NEC and I so  
17 move.

18 THE FLOOR: Second.

19 MS. RADE: Thank you very much sir.

20 MR. NEWMAN: Thank you. Do I have a  
21 second. I have a second. Please proceed.

22 Microphone No. 4.

23 MS. RADE: Because of the time of the

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1 day I will avoid repeating any information from the  
2 previous motion but will incorporate all that  
3 information by reference. I should indicate that  
4 Mr. Miller who submitted this motion as a former  
5 vice-president of Underwriter Laboratories, a PE  
6 with extensive expertise in plastics and electric  
7 products and he was going to be here to tell you to  
8 do the right thing for safety and to vote for these  
9 motions.

10 With regard to the information that he  
11 was going to provide was primarily technical, and he  
12 wanted to remind everyone nonmetallic cover plates 1  
13 millimeter thick are renovation product update the  
14 appearance of receptacles. They can also be used in  
15 new installations and provide a safety opportunity  
16 to inspect existing receptacles for damage or  
17 improper installation. We should note that  
18 exception number 2 was originally coupled with  
19 exception number 1 when they were both added to the  
20 2005 NEC. Exception no. 1 will remain which allows  
21 original equipment manufacturers NEMA's permanent  
22 members to make nonmetallic cover plates of any  
23 dimension and size without any specification with

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1 regard to the thickness.  
2 So the ROC we're looking at today only  
3 deletes the exception number 2 for the company,  
4 small company in Arizona, I should mention, that is  
5 on the outside of this. With regard to the  
6 additional substantiation by chair Burke, I think  
7 it's important that the people sitting in this room  
8 today understand that the substantiation was  
9 demitted by TayMac in response to the Code-Making  
10 Panel which for my perspective they sought little or  
11 no time even reviewing it. The testing was

12 conducted at a well-known accredited lab and the  
13 cover plates met all of the 514 D performance  
14 requirements. The performance was compared with  
15 standard wall plates and there was no difference in  
16 receptacle temperature rise. Retention of plugs,  
17 receptacle end of life followed by temperature rise  
18 ground resistance or resistance to arcing.  
19 Absolutely no difference between a standard wall  
20 plate and cover plate.

21 Additionally, totally ignored by the  
22 Code-Making Panel were the many safety benefits that  
23 are provided by these nonmetallic plates. Includes

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1 providing a second layer of insulation between  
2 receptacle and user. Providing additional impact  
3 resistance to a receptacle face. Increased  
4 protection against abrupt angular plug removal  
5 damage and compared to metal wall plates clearly  
6 there it reduces shock hazard. It also eliminates  
7 gaps around the receptacle minimizing dirt, dust,  
8 and moisture intrusion into the receptacle and it  
9 reduces plug and transformer static.

10 So if Mr. Miller were here today he  
11 would say he also is asking you today to think about  
12 what you're doing and to do the right thing. There  
13 is an abundance of technical and real life data to

14 support this motion that is being ignored by this  
15 body. Please again reconsider your vote. Do not  
16 vote for a trade organization vote for safety.  
17 Thank you very much.

18 MR. NEWMAN: Mr. Carpenter.

19 MR. CARPENTER: Yes. I would like to  
20 defer to Code-Making Panel 18 Michael Ber.

21 MR. BER: Good afternoon again. I am  
22 still Mike Ber. As far as I know I am still  
23 chairman of Code Panel 18. I still represent the

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1 Independent Electrical Contractor Association and I  
2 am still from Texas. I will rely or relay in the  
3 effort to be brief, I would like to suggest that the  
4 comments that I made on the earlier proposal would  
5 also be applicable here, and I urge you to support  
6 the panel's action. .

7 MR. NEWMAN: Thank you. Seeing no  
8 further comment we'll move to a vote. This is  
9 certified amending motion 70-65 Log No. 380 motion  
10 to accept comment 70-18-10. All those in favor  
11 please signify by raising your hand. All those  
12 opposed. The motion fails.

13 We'll now move on to the last  
14 certifying amending motion of the evening. The  
15 motion is 70-66 Log No. 321.

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16 It has been withdrawn. We do not see  
17 anything so the motion 70-66 Log 321 has been  
18 withdrawn.

19 That complete the action on certified  
20 amending motions for the NEC. Is there any further  
21 action?

22 THE FLOOR: Move to adjourn.

23 MR. NEWMAN: First of all before we

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1 adjourn I would like to announce that, seeing no  
2 further action, before we adjourn, I'd like to  
3 announce the bus departure in 15 minutes from the  
4 usual location at the conclusion of this meeting.

5 With no further action, this officially  
6 concludes the 2007 annual association technical  
7 meeting. I thank you for your patience and  
8 participation and interest and support and this  
9 meeting I now declare officially closed.

10 (The proceedings adjourned  
11 at 9:00 p.m.)

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C E R T I F I C A T E

STATE OF MASSACHUSETTS )  
COUNTY OF NORFOLK ) )

The proceeding was taken before me at the said time and place and was taken down in machine shorthand writing by me;

I am a Registered Professional Reporter of the State of Massachusetts, that the said proceeding was thereafter under my direction transcribed into computer-assisted transcription, and that the foregoing transcript constitutes a full, true, and correct report to the best of my ability of the proceedings which then and there took place;

CAROL Di FAZIO  
Registered Professional Reporter

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