| *Cl* **FM** | *SC* **FM** | *P* **1** | *L* **25** | # **92** |

Grow, Robert                                    RMG Consulting

*Comment Type*  **E**        *Comment Status*  **D**                              *order*

This list does not agree in order with the January amendment number assignments by Mr. Law

*SuggestedRemedy*

Move de to be in the position of Amendment 6.  Correct "ds" to be "cs".  Either change/remove the amendment # at line 10 (either this is written as amendment 7 or you need another amendment in the list here).  I would recommend removing the number but still writing the draft as amendment 7 for now even though P802.3cz has entered WG ballot.

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #101

| *Cl* **FM** | *SC* **FM** | *P* **1** | *L* **27** | # **101** |

Zimmerman, George                    CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*  **E**        *Comment Status*  **D**                              *order*

"as amended by IEEE Std 802.3dd-202x, IEEE Std 802.3de-202x, IEEE Std 802.3ds-202x, IEEE Std 802.3db-202x, IEEE Std 802.3ck-202x, and IEEE Std 802.3cw-202x." - at least 802.3cx is missing, possibly others.  Additionally, the front matter has changed in 802.3dc D3.0 and the draft is out of date in several places.

*SuggestedRemedy*

Rather than chase the amendment order for the next few drafts, as well as possible front matter changes before 802.3dc publishes, suggest an editor's note flagging a necessary sync of the front matter prior to D2.0. :At P1 L24:
"Editor's Note (to be removed prior to initial Working Group Ballot): Front matter and Introduction text (including list and order of amendments) to be synchronized with the current draft from IEEE-SA and the revision of IEEE Std 802.3 prior to initial Working Group Ballot. "

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

| *Cl* **FM** | *SC* **FM** | *P* **1** | *L* **33** | # **93** |

Grow, Robert                                    RMG Consulting

*Comment Type*  **E**        *Comment Status*  **D**                              *bucket*

Missed one copyright year update

*SuggestedRemedy*

Update to 2022

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

| *Cl* **FM** | *SC* **FM** | *P* **3** | *L* **9** | # **94** |

Grow, Robert                                    RMG Consulting

*Comment Type*  **E**        *Comment Status*  **D**                              *order*

This is not the current text for the legal part of front matter (i.e., second paragraph), two paragraphs missing from Patents (page 5).

*SuggestedRemedy*

Update to current required front matter.

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #101

| *Cl* **FM** | *SC* **FM** | *P* **10** | *L* **39** | # **95** |

Grow, Robert                                    RMG Consulting

*Comment Type*  **E**        *Comment Status*  **D**                              *order*

Section Nine text was changed during P802.3 balloting.

*SuggestedRemedy*

Updat to current Section Nine description.

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #101

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl*  **FM**
*SC*  **FM**

Page 1 of 7
4/4/2022  12:12:42 PM

*Cl* **FM**        *SC* **FM**                    *P* **10**            *L* **50**            # 96

Grow, Robert                              RMG Consulting

*Comment Type*  **E**        *Comment Status*  **D**                                      order

This amendment list does not agree in order with the January amendment number assignments by Mr. Law

*SuggestedRemedy*

Move de to be  Amendment 6.  Renumber other amendments.

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #101

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*Cl* **FM**        *SC* **FM**                    *P* **11**            *L* **3**            # 97

Grow, Robert                              RMG Consulting

*Comment Type*  **E**        *Comment Status*  **D**                                      bucket

Dhis description does not agree with the P802.3cs/D3.2.

*SuggestedRemedy*

Update to latest P802.3cs self description.

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **FM**        *SC* **FM**                    *P* **11**            *L* **28**            # 98

Grow, Robert                              RMG Consulting

*Comment Type*  **E**        *Comment Status*  **D**                                      bucket

Dhis description does not agree with the P802.3cx/D2.3.

*SuggestedRemedy*

Update to latest P802.3cx self description.

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **1**        *SC* **1.4**                    *P* **23**            *L* **10**            # 103

Zimmerman, George                          CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*  **E**        *Comment Status*  **D**

Definition for PoDL PSE needs to be updated to be relevant to 25GBASE-T1.  Note that this was missed in 802.3ch and the revision, but the second sentence which calls out the PHYs is not only unnecessary to the definition and leaves out MultiGBASE-T1, but is misaligned with the definition of a PoDL PD.  Also, it leads to the incorrect impression that a PoDL PSE always has a PHY (A type D PoDL PSE doesn't need a PHY).  A maintenance request has been filed, but I believe 802.3cy can do this as a service to humanity within scope.

*SuggestedRemedy*

Change: 1.4.473 PoDL PSE: A device that provides power to a PoDL PD, connected via a link section consisting of
a single twisted pair. <SO> DTE powering is intended to provide a single 100BASE-T1 or 1000BASE-T1 device
with a unified interface for both the reception and transmission of data as well as the power to operate.  <SO> (See
IEEE Std 802.3, Clause 104.)

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change: 1.4.473 PoDL PSE: A device that provides power to a PoDL PD, connected via a link section consisting of
a single <strike>twisted</strike><underline>conductor</underline> pair. (See
IEEE Std 802.3, Clause 104.)

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general          *Cl* **1**          Page 2 of 7
COMMENT STATUS: D/dispatched  A/accepted  R/rejected      RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn          *SC* **1.4**          4/4/2022  12:12:42 PM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **1**  *SC* **1.4**    *P* **23**   *L* **10**   **#** 102

Zimmerman, George     CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type* **E**   *Comment Status* **D**

Definitions for 25GBASE-T1, 50GBASE-T2, and 100GBASE-T2 are missing, as well as an update to MultiGBASE-T1.  25GBASE-T1  is a member of the MultiGBASE-T1 family - an update to that definition needs to be added to the draft.

*SuggestedRemedy*

Add the following to the draft (as inserts in the appropriate places)
Insert 1.4.128a following definition for 25GBASE-T,
1.4.128a 25GBASE-T1: IEEE 802.3 Physical Layer specification for a 25 Gb/s Ethernet full duplex local area network over a single balanced pair of conductors. (See IEEE Std 802.3, Clause 165.)
Insert 1.4.175a following definition for 50GBASE-SR,
1.4.175a 50GBASE-T2: IEEE 802.3 Physical Layer specification for a 50 Gb/s Ethernet full duplex local area network over a two balanced pairs of conductors. (See IEEE Std 802.3, Clause 165.)
Insert 1.4.41a following definition for 100GBASE-SR,
1.4.41a 100GBASE-T4: IEEE 802.3 Physical Layer specification for a 50 Gb/s Ethernet full duplex local area network over a four balanced pairs of conductors. (See IEEE Std 802.3, Clause 165.)
Change 1.4.407 to add 25GBASE-T1 as follows:
1.4.407 MultiGBASE-T1: PHYs that belong to the set of specific BASE-T1 PHYs at speeds in excess of
1000 Mb/s, including 2.5GBASE-T1, 5GBASE-T1, <SO>and <SO>10GBASE-T1<UL>, and 25GBASET1<UL>. (See IEEE Std 802.3, Clause 149<UL> and Clause 165.)

*Proposed Response*   *Response Status* **W**

PROPOSED ACCEPT.

---

*Cl* **30**  *SC* **30.5.1.1.2**    *P* **26**   *L* **3**   **#** 99

Grow, Robert     RMG Consulting

*Comment Type* **E**   *Comment Status* **D**     *bucket*

P802.3 sort order for aMAUTypeList was clarified to be: 1. increasing rate, 2. Alphanumeric (see P802.3/D3.0, #i-51).  Looking at P802.3/D3.2, in process amendments 2 though 6, and P802.3cz/D2.0, this insert should be after 50GBASE-SR.

*SuggestedRemedy*

after the entry for "50GBASE-SR" as follows:

*Proposed Response*   *Response Status* **W**

PROPOSED ACCEPT.

---

*Cl* **30**  *SC* **30.5.1.1.2**    *P* **26**   *L* **8**   **#** 100

Grow, Robert     RMG Consulting

*Comment Type* **E**   *Comment Status* **D**     *bucket*

P802.3 sort order for aMAUTypeList was clarified to be: 1. increasing rate, 2. Alphanumeric (see P802.3/D3.0, #i-51).  Looking at P802.3/D3.2, in process amendments 2 though 6, and P802.3cz/D2.0, this insert should be after 100GBASE-SR10.

*SuggestedRemedy*

after the entry for "100GBASE-SR10" as follows:

*Proposed Response*   *Response Status* **W**

PROPOSED ACCEPT.

---

*Cl* **30**  *SC* **30.5.1.1.4**    *P* **26**   *L* **15**   **#** 104

Zimmerman, George     CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type* **T**   *Comment Status* **D**     *bucket*

With the direction and decisions made on coding, it appears that the MultiGBASE-T1 high BER bits will remain the same - the editors note and the text can be deleted.

*SuggestedRemedy*

Delete the editor's note and text at 30.5.1.1.4

*Proposed Response*   *Response Status* **W**

PROPOSED ACCEPT.

---

*Cl* **45**  *SC* **45.2.1**    *P* **28**   *L* **8**   **#** 105

Zimmerman, George     CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type* **T**   *Comment Status* **D**     *bucket*

It appears that the MultiGBASE-T1 registers can be used as is.  Bonding the PHYs at the RS level may require additions to the PCS status  registers, but NOT the PMA

*SuggestedRemedy*

Delete the editor's note at 45.2.1

*Proposed Response*   *Response Status* **W**

PROPOSED ACCEPT.

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general   *Cl* **45**   Page 3 of 7
COMMENT STATUS: D/dispatched  A/accepted  R/rejected  RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn   *SC* **45.2.1**   4/4/2022  12:12:42 PM
SORT ORDER: Clause, Subclause, page, line

*Cl* **45**        *SC* **45.2.1.16**              *P* **29**        *L* **24**          # 106

Zimmerman, George                    CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*   **T**        *Comment Status*  **D**

Given the architecture decisions, I do not believe there is a 100GBASE-T4 or 50GBASE-T2 PMA/PMD.  There is only a 25GBASE-T1 PMA/PMD.  While there is a 100GBASE-T4 and 50GBASE-T2 PHY Type, bonding is done above the PMA/PMD level, using the 25GBASE-T1 PMA/PMD.

*SuggestedRemedy*

Delete additions of 1.18.8, 1.18.9, and recover bits into reserved row.  Additionally delete 45.2.1.16.a, 45.2.1.16.b and renumber 45.2.16.c as 45.2.16.a

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **45**        *SC* **45.2.1.214**             *P* **30**        *L* **23**          # 107

Zimmerman, George                    CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*   **T**        *Comment Status*  **D**

Given the architecture decisions, I do not believe there is a 100GBASE-T4 or 50GBASE-T2 PMA/PMD.  There is only a 25GBASE-T1 PMA/PMD.  While there is a 100GBASE-T4 and 50GBASE-T2 PHY Type, bonding is done above the PMA/PMD level, using the 25GBASE-T1 PMA/PMD.

*SuggestedRemedy*

Delete additions for 100GBASE-T4 and 50GBASE-T2.

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **45**        *SC* **45.2.1.242**             *P* **30**        *L* **49**          # 108

Zimmerman, George                    CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*   **E**        *Comment Status*  **D**                        *bucket*

It appears that the MultiGBASE-T1 registers can be used as is.  Bonding the PHYs at the RS level may require additions to the PCS status  registers, but NOT the PMA

*SuggestedRemedy*

Delete editor's note before 45.2.1.242

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **45**        *SC* **45.2.1.242**             *P* **31**        *L* **1**           # 112

Zimmerman, George                    CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*   **T**        *Comment Status*  **D**

We need to consider how to address multiple 25GBASE-T1 PHYs in a package acting as a 50GBASE-T2 or 100GBASE-T4 PHY.  Right now the registers would all have the same address.

*SuggestedRemedy*

Insert editor's note flagging this issue.

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **45**        *SC* **45.2.1.245.1**           *P* **35**        *L* **13**          # 111

Zimmerman, George                    CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*   **T**        *Comment Status*  **D**

Given the architecture decisions, I do not believe there is a 100GBASE-T4 or 50GBASE-T2 PMA/PMD.  There is only a 25GBASE-T1 PMA/PMD.  While there is a 100GBASE-T4 and 50GBASE-T2 PHY Type, bonding is done above the PMA/PMD level, using the 25GBASE-T1 PMA/PMD.

*SuggestedRemedy*

change "25GBASE-T1, 50GBASE-T2, and 100GBASE-T4" to "25GBASE-T1 (when used separately or in a 50GBASE-T2 or 100GBASE-T4 PHY)"

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **98B**       *SC* **98B.3**                  *P* **190**       *L* **25**          # 90

Tu, Mike                             Broadcom

*Comment Type*   **T**        *Comment Status*  **D**                        *autoneg*

Add autoneg capability bits for 25G, 50G, and 100G

*SuggestedRemedy*

1. Delete row at line 26 "A6 through A8 | Reserved"

2. Add the following rows to Table 98B-1:
A6 | 25GBASE-T1 ability
A7 | 50GBASE-T2 ability
A8 | 100GBASE-T4 ability

*Proposed Response*        *Response Status*  **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #83

---

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general        *Cl* **98B**        Page 4 of 7
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn        *SC* **98B.3**       4/4/2022  12:12:42 PM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **98B**    *SC* **98B.3**      *P* **190**    *L* **26**    # 83

Wienckowski, Natalie          General Motors

*Comment Type* **T**    *Comment Status* **D**          *autoneg*

Add 25GBASE-T1, 50GBASE-T2, and 100GBASE-T4 to Annex 98B

*SuggestedRemedy*

-x- indicates to strikethrough "x"
_y_ indicates to underline "y"
| indicates the line between columns in a table

Insert new rows above "A6 through A8"
_A6 | 25GBASE-T1 ability_
_A7 | 50GBASE-T2 ability_
_A8 | 100GBASE-T4 ability_
Change row "A6 through A8" to -A6 through A8-
Update editor's instructions

*Proposed Response*    *Response Status* **W**

PROPOSED ACCEPT.

---

*Cl* **98B**    *SC* **98B.4**      *P* **190**    *L* **32**    # 91

Tu, Mike          Broadcom

*Comment Type* **T**    *Comment Status* **D**          *priority*

Add new entries for 802.3cy

*SuggestedRemedy*

1. Change line 32:
Insert the following new entries in the dashed list before the entry for 10GBASE-T1 as follows:

2. Change "-- XXX" to:
-- 100GBASE-T4
-- 50GBASE-T2
-- 25GBASE-T1

*Proposed Response*    *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

See comment #84

---

*Cl* **98B**    *SC* **98B.4**      *P* **190**    *L* **33**    # 84

Wienckowski, Natalie          General Motors

*Comment Type* **T**    *Comment Status* **D**          *priority*

Add 25GBASE-T1, 50GBASE-T2, and 100GBASE-T4 to Annex 98B

*SuggestedRemedy*

Change editor's instructions to be "Insert the following new entries in the dashed list before the entry for 10GBASE-T1 as follows:"
- 100GBASE-T4
- 50GBASE-T2
- 25GBASE-T1

*Proposed Response*    *Response Status* **W**

PROPOSED ACCEPT IN PRINCIPLE.

Change editor's instructions to be "Insert the following new entries in the dashed list before the entry for 10GBASE-T1 as follows:"
- 25GBASE-T1

---

*Cl* **165**    *SC* **165.3.2.2.17**      *P* **93**    *L* **35**    # 85

Wienckowski, Natalie          General Motors

*Comment Type* **E**    *Comment Status* **D**          *bucket*

*SuggestedRemedy*

Delete Editorial Note as this content was updated for D1.0.

*Proposed Response*    *Response Status* **W**

PROPOSED ACCEPT.

---

*Cl* **165**    *SC* **165.4.2.6**      *P* **140**    *L* **43**    # 86

Tu, Mike          Broadcom

*Comment Type* **E**    *Comment Status* **D**

In Equation 165-11, the notation of the polynomial should be $p\_S(x)$.

*SuggestedRemedy*

Change Equation 165-11 from "$p\_{MS}(x)$" … to "$p\_S(x)$…"

*Proposed Response*    *Response Status* **W**

PROPOSED ACCEPT.

Page was changed from 141 to 140

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general      *Cl* **165**    Page 5 of 7
COMMENT STATUS: D/dispatched  A/accepted  R/rejected    RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn    *SC* **165.4.2.6**    4/4/2022 12:12:42 PM
SORT ORDER: Clause, Subclause, page, line

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*Cl* **165**      *SC* **165.4.2.6**      *P* **141**      *L* **1**      # 87

Tu, Mike                                              Broadcom

*Comment Type*   **T**        *Comment Status*  **D**

For 25GBASE-T1, each bit should be repeated 20 times.

*SuggestedRemedy*

1. Delete the first 3 paragraphs on page 141 (line 1 to 8).
2. Add: "For 25GBASE-T1, the bit Sn[0] shall be mapped to the transmit symbol Tn as follows: if Sn[0] = 0 then Tn = +1 +1 … +1 (repeated 20 times), if Sn[0] = 1 then Tn = -1 -1 ... -1 (repeated 20 times)."

*Proposed Response*      *Response Status*  **W**

PROPOSED ACCEPT.

Page was changed form 142 to 141

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*Cl* **165**      *SC* **165.4.2.6.2**      *P* **142**      *L* **49**      # 88

Tu, Mike                                              Broadcom

*Comment Type*   **T**        *Comment Status*  **D**

Replace "… used to TBD." with "… used to avoid overlapping of MASTER and SLAVE SEND_S signals."

*SuggestedRemedy*

Replace "… used to TBD." with "… used to avoid overlap of MASTER and SLAVE SEND_S signals."

*Proposed Response*      *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **165**      *SC* **165.4.2.6.4**      *P* **144**      *L* **43**      # 89

Tu, Mike                                              Broadcom

*Comment Type*   **T**        *Comment Status*  **D**

In Figure 165-31, add "force_phy_type != 25G-T1" to the entry condition into state SYNC_DISABLE.

*SuggestedRemedy*

Change the entry condition from:
"… force_phy_type != 5G-T1 * force_phy_type != 10G-T1)"
to
"… force_phy_type != 5G-T1 * force_phy_type != 10G-T1 * force_phy_type != 25G-T1)"

*Proposed Response*      *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **165**      *SC* **165.5.3.4**      *P* **156**      *L* **10**      # 113

Tu, Mike                                              Broadcom

*Comment Type*   **E**        *Comment Status*  **D**                        *LATE*

The speed is 25G

*SuggestedRemedy*

Change: "… for each data rate, 2.5 Gb/s, 5 Gb/s, and 10 Gb/s, are shown ..." to "… for the 25Gb/s data rate is shown ...". In the equation (165-14) and (165-15) remove S and multiply by the fixed factor 2.5.

*Proposed Response*      *Response Status*  **W**

PROPOSED ACCEPT.

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*Cl* **165**      *SC* **165.7.1.3.2**      *P* **165**      *L* **20**      # 109

Zimmerman, George                          CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*   **T**        *Comment Status*  **D**

Equation 165-34 has typos.  There is no "r" in the metric, which is used in the equation. Checking https://www.ieee802.org/3/cy/public/30mar21/jonsson_3cy_01a_03_30_21.pdf, as well as eqn 165-35, it appears the RE_k(k) should be RE_r(k).  Also, the Pr in the description of the zero value should have a subscripted r (two places)

*SuggestedRemedy*

Change as per comment.

*Proposed Response*      *Response Status*  **W**

PROPOSED ACCEPT.

---

*Cl* **165**      *SC* **165.7.1.3.3**      *P* **165**      *L* **38**      # 110

Zimmerman, George                          CME Consulting/ADI,APL Gp,CSCO,Commscp,MRV

*Comment Type*   **E**        *Comment Status*  **D**                        *bucket*

section xxx.1 should be a cross-ref to 165.7.1.3.2

*SuggestedRemedy*

Change as per comment.

*Proposed Response*      *Response Status*  **W**

PROPOSED ACCEPT.

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TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn
SORT ORDER: Clause, Subclause, page, line

*Cl* **165**
*SC* **165.7.1.3.3**

Page 6 of 7
4/4/2022  12:12:42 PM

*Cl* **165**        *SC* **165.9**                    *P* **171**        *L* **8**            # 82

Wienckowski, Natalie                    General Motors

*Comment Type*    **E**        *Comment Status*  **D**                                        *bucket*

This content is correct.

*SuggestedRemedy*

Delete Editorial Note.

*Proposed Response*        *Response Status*   **W**

PROPOSED ACCEPT.

TYPE: TR/technical required  ER/editorial required  GR/general required  T/technical  E/editorial  G/general            *Cl*  **165**            Page 7 of 7
COMMENT STATUS: D/dispatched  A/accepted  R/rejected     RESPONSE STATUS: O/open  W/written  C/closed  Z/withdrawn            *SC*  **165.9**            4/4/2022  12:12:42 PM
SORT ORDER: Clause, Subclause, page, line