



DEPARTMENT OF DEFENSE
DEFENSE STANDARDIZATION PROGRAM OFFICE
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IN REPLY
REFER TO

DSPO

November 30, 2000

Mr. Roger Whitehouse
Technical Editor
Circuitree
PO Box 2697
Santa Clara, CA 95055

Dear Mr. Whitehouse:

I am writing in reference to the article titled "IPC Technical Review: Tell Mom the Babysitter's Dead". The article was disappointing in both tone and accuracy. The writer may have a limited understanding of why military standards or specifications are promulgated and why they are retained, cancelled, or made inactive for new design; and may not have sufficient appreciation for why a qualification requirement is included in a specification and why oversight, by a responsible Qualifying Activity (QA), is necessary.

In a letter dated July 14, 2000, the Defense Supply Center, Columbus (DSCC) provided the IPC the reasons for inactivating MIL-P-50884. The action was taken with the concurrence of the Defense Standardization Program Office. We do not take such actions lightly but rather consider the interests of all parties involved. This includes the military departments, their contractors, civil and federal agencies and even the supplier base. After reviewing all these interests, DSCC made the decision to inactivate MIL-P-50884 and reference MIL-PRF-31032 for future new designs. MIL-P-50884 will not be cancelled in the foreseeable future because it is considered a critical "end item" specification and is used in many legacy military weapons systems.

DSCC has a primary obligation and responsibility to promote standardization and to make sure the military departments are provided with high quality, reliable components that meet the needs of our warfighters. In addition, DSCC must consider the logistic supportability of the product throughout its entire life cycle and minimize overall cost for the Department of Defense (DoD) and the logistic system.

The article seems to imply that the customer should not have a role in assuring component performance, quality and reliability. The printed wiring boards (PWBs) under discussion are considered critical because they are the backbone of nearly every DoD system in the logistic support chain as well as for new designs. Any failure is not only costly but could endanger military personnel. The use of a properly managed and enforced qualification program by the DoD is considered a valuable tool to assure that the product does indeed

meet the specified performance, quality and reliability requirements. The DoD will continue to maintain a level of surveillance that we deem appropriate to protect the warfighter. Any less would be irresponsible.

Also, I should point out that Acquisition Reform allows the military departments and equipment contractors a great deal of flexibility and the freedom to choose whatever specifications and standards they deem necessary to meet their system performance, quality and reliability envelope. This includes using a military specification or standard as well as an industry document. No one, including DSCC, mandates that the military departments, equipment contractors or suppliers participate in or use the military specifications, standards or their associated Qualified Parts Lists (QPLs). If any of these industry partners do not feel the program provides any value, they can opt out. It is interesting to note, that none of the 50+ qualified manufacturers on QPL-50884 have requested removal.

The article suggests that since DSCC only audits once every three years, that translates into them allowing or condoning poor product quality the rest of the time. The qualification requirements in the subject documents include periodic testing and any company that has a serious product failure at any time must immediately stop production and notify DSCC. We depend on trustworthy contractors to monitor their own performance and honestly admit to product failures. This system has worked pretty well for a long time. DSCC would require a complete corrective action plan as well as a possible product recall and/or GIDEP Alert before any product shipment was permitted. DSCC takes their responsibility to assure product quality and reliability very seriously. DSCC also is very instrumental in providing expert technical advice to the military departments, their equipment contractors, and federal and civil agencies, as the problem is resolved. The DoD qualification program is designed to be a cost-effective tool to assure all requirements are met in the least intrusive manner possible.

The phrase "babysitting", seems to me to be disingenuous because rather than babysitting we are talking about a customer's right and obligation to make sure that products going into critical weapons systems meet the performance, quality and reliability requirements. The men and women who are engaged in qualification activities perform a valuable cost-effective service for both the DoD and taxpayers. According to DSCC statistics, over the past two years the qualification group has reviewed and rejected over 17 percent of the MIL-P-50884 three-year re-qualification reports sent to them for review and approval. In addition, 3 percent of the monthly Group B data for MIL-P-50884 and 18 percent of the MIL-PRF-55110 Group B reports were rejected and corrective actions are required. During the last five years, DSCC qualification audits have detected and required corrective actions on over 486 major deficiencies from MIL-P-50884 and MIL-PRF-55110 QPL manufacturers. These deficiencies resulted in 23 companies losing their laboratory suitability and 21 companies being required to stop shipping

product until appropriate corrective actions were reviewed and implemented. There were also GIDEP alerts issued and referrals to the government legal and law enforcement officials to investigate fraudulent activity. This data seems to contradict the impression given in the article that there are no failures and therefore only the vendors and their immediate customers should be concerned or involved in the quality of PWB's shipped.

The cost figures used in the article are overstated. Commercial laboratory data shows that the cost of qualification to a specific type of PWB in MIL-P-50884 was not higher than \$2500. Further, the article makes no mention of the cost that would be associated with a 6013 Type 3 qualification, if it is used.

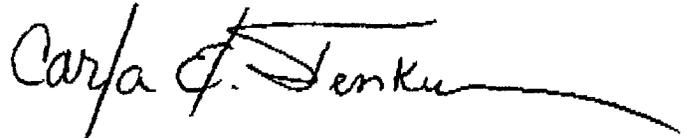
I would also like to point out a few other errors/clarifications on statements made in the article:

1. MIL-STD-2000 was reviewed or cancelled by the Defense Standardization Council. IPC's J-STD -001 is now used.
2. MIL-STD-275 was cancelled and IPC-D-275 was adopted. Later DSCC adopted IPC-2221 and IPC-2223 to replace IPC-D-275 and MIL-STD-2118. In addition, the military specifications have used TM-650 test methods for many years.
3. QQ-S-571, MIL-F-14256 and MIL-S-13949 were all specifications for materials. It was concluded that these were not end-items and consequently, they were cancelled. The board manufacturers were given flexibility to use any materials and specifications they deemed appropriate as long as the PWB performance requirements of the military PWB specification were met. In other words there was no need to reference a particular material requirement because the PWB manufacturer must meet the end item specifications. Also, IPC-4101 is not the only specification for laminate materials. In fact, there are other non-Government standards for laminates. For example, IEC-61249 and NEMA LI-1 are laminate specifications promulgated by other standards groups. Dictating a specific industry specification is contrary to Acquisition Reform.
4. The article says "Let's face it, DSCC is in the business of making money". DSCC does not charge fees for getting listed on the applicable QPL nor do they charge for the requirement documents. The DSCC specifications and QPL/QMLs are free to download off their web site at [http:// www.dsccols.com/offices/sourcing_and_qualification/](http://www.dsccols.com/offices/sourcing_and_qualification/)

5. The article says "Following the publication of IPC-6013, DSCC released Amendment 5 to MIL-P-50884C, declaring it inactive and calling out MIL-PRF-31032 (flex slash sheet) for new designs after February 1999." Actually MIL-PRF-31032/4 for multilayer rigid-flex products wasn't even dated until December 31, 1999 and, yes, there are three suppliers who have become certified and qualified to it but since it's only 10 months old more companies are expected to qualify in 2001. Seven companies are in the pipeline.
6. The statement that "I know which one Admiral Perry would pick" needs further research. Admiral Perry was a naval hero at the turn of the century, not the Secretary of Defense.

In conclusion, the working relationship that has been forged over the years between IPC and DSCC seems to be ill served by the tenor of this article. DSCC has tried to bring innovative approaches into the DoD component level standardization program. These continued innovations require a partnership between DoD and all segments of the industrial community.

Sincerely,

A handwritten signature in black ink that reads "Carla F. Jenkins". The signature is written in a cursive style with a long horizontal flourish extending to the right.

CARLA JENKINS
STAFF SPECIALIST