

Consolidated Power Supply

March 4, 1994

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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: Response to a Notice of Nonconformance

Reference: Docket No. 99901263, NRC Inspection Report
No. 99901263/93-01, Dated 2/10/94,

This correspondence is issued to address those areas identified as nonconforming in the referenced document where a response was requested. Also, additional statements and/or explanations have been included to elaborate on other areas of the inspection report where such was felt necessary.

Consolidated Power Supply (CPS) would like to note that the inspection team conducted their activities in a professional manner, and were obviously knowledgeable in the areas pertinent to the scope of the inspection. Every effort was made by the inspection team to explain all areas that were questionable and provided the employees of CPS with the opportunity to respond to such. It is not often that our company sees the scrutiny of the quality program as was demonstrated during the referenced inspection.

Please find a response to each nonconformance which has been reviewed and endorsed by the current management of CPS, as follows:

Nonconformance 99901263/93-01-01: Inadequate critical characteristics and verifications to ensure that A-216 cast steel flanges and reducers supplied to Bechtel Constructors met the customer's procurement document requirements.

CPS Response: During the inspection several areas of discussion occurred regarding the testing and test results on the A-216 materials. CPS performed a chemical analysis of each piece procured from the manufacturer, Glover Machine, which shipped to CPS directly. Upon investigating the activities that originally occurred, a problem with the remelt furnace was found to be the

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cause for the low carbon readings. Discussions with CPS laboratory personnel revealed that the check valve for maintaining sufficient pressure within the furnace failed and atmosphere was drawn into the chamber during the remelt process. The check valve is designed to maintain an argon atmosphere during the remelt process, maintaining a slight internal pressurization to prevent the drawing in of outside air that could contaminate the remelt chamber. This resulted in an unacceptable melt practice during the forming of the button from the machined filings obtained from each fitting. The low carbon reading was brought to the attention of the CPS Quality Assurance Department by the Laboratory Supervisor, in addition to contacting the manufacturer of what could have caused the low carbon readings.

After investigation of the possibilities, it was concluded that the remelt furnace had failed and the check valve was repaired prior to performance of further remelt activities. One area that was checked during the initial investigation was the possibility of contaminating the filings with the cleaning agents that were used prior to the remelt process. This was ruled out as a possibility during initial investigations and during the NRC inspection.

The test results reflected in the inspection report were from tests performed on February 18, 1993. Review of the Bechtel purchase order file reflects that other Glover Machine fittings were tested on February 24, 1993 and March 5, 1993, for the same job. In one case, a fitting from one of the same heats (R604) tested on February 18, 1993 was received on a back order from Glover Machine and tested on March 5, 1993. The results were in line with the Glover Machine test report, with a carbon result of 0.252. Several other fittings were tested on February 24, 1993, which also reflected acceptable results. CPS carbon readings ranged from 0.220 to 0.248, with Glover Machine reporting a 0.25. Other applicable elements were also found to be in line with the Glover Machine test reports. This information supports the corrective actions taken to address the malfunction of the remelt furnace. As a note, Jordan Machine, qualified for traceability by CPS, was used for obtaining the filings for the remelt specimens in all cases. There is no reason to believe that any fraudulent activities occurred during any phase of the manufacturing, procurement, material handling, or qualification process of the fittings.

The area of insufficient determination of critical characteristics is not being disputed by CPS. The cause of not performing testing activities other than chemical analysis was based on an incorrect



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technical evaluation of the material specification. It is agreed that additional physical testing is required for dedication of A-216 material, and in this case would have provided beneficial information that could have alleviated the concern of determining the acceptability of the material. As commercial grade dedication is viewed by CPS as an industry wide problem, our interpretation request letter of March 18, 1993 was issued based on needed guidance. If guidance such as that provided in the NRC response letter had been conveyed prior to our request, CPS would not have a deficiency such as this at the present time. The response letter from the NRC was somewhat more conservative than expected, however, it provides some definite guidelines for at least one method of dedication that is acceptable.

It is noted that the CPS dedication program was accepted by a joint licensee audit team in 1992, in addition to other customers procuring non-ASME Code safety related materials. Unless more timely information with some sense of consistency is provided to the manufacturing and supply industry by end users it is a never ending self-imposed research effort to keep abreast of current requirements. Of course, then CPS would only be as good as the end users who provide information on industry topics. We do make extra efforts in order to continue to stay current on industry requirements and philosophies as the requirements known today have been conveyed to CPS only upon our request for assistance. There appears to be a major lack of consistency and communication in the industry based on what methods of dedication are currently being accepted by end users, but that is somewhat out of the scope of the subject inspection report and this response.

The CPS critical characteristics for A-216 have been revised and implemented into the program on January 20, 1994. The dedication plan now calls for complete physical testing in accordance with the material specification. This will require a source surveillance and/or audit of the manufacturer of the fittings prior to or during the next procurement and dedication activities to establish heat/lot traceability to allow one piece per melt to be tested to the applicable chemical and physical testing requirements.

As conveyed in the inspection report, the inspectors question whether or not the Glover Machine test report is reflective of the material supplied with that test report. Based on CPS procuring directly from the manufacturer, the conclusion of the internal investigation indicating a malfunction in the remelt furnace, and the additional testing performed after the suspect test results



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were recorded, CPS has no reason to believe that the material is not representative of the test reports provided.

In addition to the necessary revisions of a few CPS dedication plans, CPS Procedure SP-701 has been revised to indicate review of any special requirements or limitations reflected on a dedication plan that are found out of the acceptable range of results. This includes the evaluation of chemical test results when the material specification reflects only minimum or only maximum values. Also, SP-701 now reflects guidance for the selection of critical characteristics. Any requirement identified in a specification that is not performed during the dedication process is also controlled, with justification for not performing a test, inspection, marking requirement, etc., being documented on the Technical Evaluation document that supports each Form 701. The revision to SP-701 was initiated into the CPS program on January 18, 1994.

In response to testing performed that could question the adequacy of the manufacturer's test report supplied with the material, CPS now has very few dedication plans that do not require all requirements of the applicable specifications to be validated by inspection, testing, etc. Those that do not require all specific testing requirements to be performed requires an alternate method to be employed to provide assurance that the material meets the applicable requirements. Based on the above, chemical analysis results that may be suspicious will be supported by physical testing, hydrostatic testing, and other methods of material validation.

As stated before, there will likely be occasions when the qualification testing conducted by CPS will question the certification documents provided with the material supplied by our commercial subcontractors. It will not be a normal practice to reflect a statement of suspect material certification on the CPS certification documents when a questionable situation arises. Included in the process is the review by the CPS Quality Engineer, who will assess the situation and provide a written justification of why the material is acceptable or other measures that may be required. CPS feels that material supplied to our customers that has been adequately inspected and tested should not cause concern as the applicable specification requirements have been validated using 10 CFR 50 Appendix B qualified controls. It would be a concern if questionable test results were obtained and testing was performed on only one piece from a heat or lot of material that was



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not validated through a traceability survey, as a minimum. Of course, the testing of one piece from an unaudited subcontractor is not employed by CPS, which was reflected as a strength in the inspection report of our dedication program.

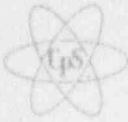
Training has also been conducted in an effort to educate both the CPS laboratory and QA personnel in detecting questionable test results. The additional material testing may reflect compliance with the specification and critical characteristic requirements, however, material may be suspect due to the results not being within an acceptable tolerance range of those results reflected on a manufacturer's test report. As stated above, the CPS Quality Engineer is required to document an evaluation in such cases and determine whether the material is acceptable or not.

Also, CPS has recently contacted the manufacturer of the subject A-216 material, Glover Machine. Glover Machine is a family owned company that has been in existence for approximately 175 years. During conversations with Mr. Jim Glover it was indicated that their product line is primarily A-216 materials, which represents 95 percent of their business. A survey is anticipated this year for both the melt facility and the machine shop, which are in separate locations. This should allow testing of one piece per heat/lot as described in our current program as stated above.

Review of our records indicates that CPS has not procured any other material from Glover Machine. The original dedication plan was issued on January 22, 1993 in order to support the Bechtel purchase order.

A revision to CPS certification documents has also been made and is now being implemented. CPS certification now reflects a clause that informs the buyer that the only testing performed by CPS during the commercial grade dedication process is that reflected on the test reports attached to the CPS certification document. This leaves no room for guess work for a company that procures non-Code safety related materials from CPS relative to the **number of pieces tested** and the type of testing actually performed.

Nonconformance 99901263/93-01-02: Past calibration records for the CPS spectrometer were being stored on a computer diskette and were not easily retrievable due to the spectrometer's software program. Also, there was no documented evidence that these past calibrations



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had been reviewed and accepted by the QA Department.

CPS Response: Root cause of this deficiency was the inattention to detail by CPS Laboratory and Quality Assurance personnel. Not included in the inspection report was the fact that this area had previously been discussed among cognizant CPS personnel prior to the NRC inspection. This is substantiated by the fact that current curve sets for all alloy types currently being used at CPS were printed out, reviewed, and approved in October of 1993 during the last calibration/validation of existing and/or newly implemented curves. As a result of the nonconformance issued by NRC, all past calibration records for the Baird spectrometer have been printed out and placed in their respective binders. Each binder is reflective of the time frame the calibration was put into effect up to the date it was superseded by the next calibration/validation effort. This effort resulted in the assembling of two additional binders, similar to the one found in place by the inspection team that covers the current calibration of the spectrometer.

The assembly of both sets of binders reflecting the curve-sets of the various alloy systems was completed by the CPS Laboratory Supervisor. Review, approval, and sign off by the CPS Quality Assurance Manager was completed on December 30, 1993, indicating acceptance by the CPS QA Department. The actions required by the CPS Nonconformance Report and Internal Corrective Action Request issued during the NRC inspection have been addressed and completed.

Nonconformance 99901263/93-01-03: CPS Procedure No. SP-202, Revision 6, dated October 6, 1993, failed to contain an acceptance criterion for the daily spectrometer standardization and limits on the analysis range for each element effected by the one point standardization method.

CPS Response: Root cause was the omission of the word "standardization" from paragraph 4.12 of SP-202, Revision 6, by the CPS Quality Assurance Department. This paragraph did reflect tolerances for calibration, however, did not specifically reflect which of the two tables of ASTM E-415 the tolerances were tied to. It is noted that CPS records indicate compliance with both tables for the calibration/validation and for standardization practices. Procedure SP-202 was revised and implemented into the program on December 30, 1993. Corrective action included adding specific tolerances for standardization of the spectrometer based on ASTM



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E-415, in addition to the specific tolerances for actual calibration/validation process.

In addition to the above nonconformances, CPS provides the following responses to other areas identified in the inspection report:

Open Item 99901263/93-01-04: CPS performed an incorrect analysis of calibration results for a pressure gage. Upon receipt of the data from the CPS qualified calibration subcontractor, the root cause of the concern was the obvious incorrect assessment of the calibration data. This was the responsibility of the CPS Quality Assurance Manager. All pertinent information was supplied to each CPS customer that was notified of the concern. Included in the initial notification was a copy of the 3/31/92 Interim Report submitted to the NRC Operations Center, which explained the exact scenario of the results of the calibration activity. However, none of the recipients identified an incorrect assessment of the calibration data. A re-evaluation has been performed by CPS on the concern of over testing the materials. None of the applicable material specifications associated with the suspect hydrostatic tests reflect an absolute restrictive maximum limitation for conducting hydrostatic tests. As a result, there is no basis for issuing additional concerns based upon the tests performed and the original data received from the CPS subcontracted calibration supplier.

CPS believes that the licensees required to comply with the requirements of 10CFR21 should be notified that the error has occurred. Based on the fact that the affected licensees will be reading the subject NRC Inspection Report upon publication in the NUREG-0040 document, and will likely request CPS to provide information relative to the actions taken, such notification will not be made by CPS at this time. This is also based on the fact that all material has been dispositioned by each customer, and further evaluation of the initial notification indicates no additional concerns are evident.

To assist in preventing recurrence of the above, all future evaluations conducted pursuant to the requirements of 10CFR21 will include the Quality Assurance Manager, Assistant Quality Assurance Manager, and General Manager, as a minimum. Other CPS employees



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will be utilized in the evaluation process when their expertise and/or daily work responsibilities fall under the subject matter of an evaluation. Each evaluation disposition will be acknowledged by signature of the individuals indicated above.

Paragraph 3.2 - 10 CFR Part 21: As a note, CPS has made a revision to Procedure SP-601, "Identification, Evaluation and Reporting of Defects and Failure to Comply" to include reference to facsimile and telephone numbers that can be obtained by an individual by simply locating one of the three CPS posting locations for a current copy of 10 CFR Part 21. This may assist an individual in contacting the Operations Center if needed.

Paragraph 3.2.1 - Filing of Part 21 Reports: For clarification, only two of the three reports reflected in the inspection report were actually filed by CPS. The deficiency with the A-500 square tubing was filed by the manufacturer, UNR - Leavitt. CPS did verify during the initial evaluation period that the NRC Operations Center had received a written report from UNR - Leavitt. If the manufacturer had not filed the necessary report, CPS would have filed such at that time.

Paragraph 3.5.3.1 - CPS Material Test Report: Relative to the documenting of hardness tests, CPS has made a revision to Procedure SP-709 and Form 709B. The form revision was made to include a column for entering the CPS internal measuring and test equipment number for the specific hardness tester used. Each hardness tester is assigned its own unique identification number within the CPS calibration system. The necessary revisions to Procedure SP-709 and Form 709B were made and implemented into the CPS program on December 30, 1993. As noted in the inspection report no loss of equipment traceability occurred. This is based on the fact that of the three hardness units used, one bench model is for superficial testing, the other bench model is for B and C scales, and the third unit is for conducting portable hardness testing. The recording of readings from either bench units provides definite traceability to the equipment used purely based on the hardness scales reflected on Form 709B. When the portable unit is used, a separate calibration is performed and recorded on a form other than Form 709B. This



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provides evidence of using the portable hardness tester on specific occasions, which are very rare.

Continued use of the previous Form 709B could have caused concern with absolute traceability to the test equipment, and was a violation of the QA Program requirements as noted in the inspection report. As the form has been revised, no further concern should arise regarding absolute traceability to the equipment used for any specific hardness test.

Paragraph 3.5.4 - Abnormal Laboratory Conditions: CPS has assembled a manual for tracking maintenance history, servicing by authorized individuals, parts replacement, and abnormal conditions for the equipment in the CPS laboratory. The CPS nonconformance system will be utilized for any condition that, upon evaluation, identifies suspect results are possible for either past or current equipment performance acceptability.

Paragraph 3.6 - CPS Inspector Certification Process: The current CPS procedures require a training outline to be generated for each individual upon entering a quality assurance and/or quality control related position. Each training outline, in addition to the CPS Required Reading List, reflects the level of discipline being trained for, the associated program and procedural requirements involved for the training scope, the duration of training time, and any previous experience that reflects work in the area of training being conducted, as a minimum. Only appropriately trained and qualified individuals are involved in monitoring the training process of an individual in training. Also, it is a requirement that the training period be documented on appropriate forms by qualified individuals reflecting what training has been performed and the time involved with such training activities. Once satisfactory performance is achieved in addition to compliance with the training outline, the individual responsible for overseeing the training process is required to document the justification for the training individual's satisfactory performance for the scope of qualification reflected on the training outline. This document is forwarded to the CPS Quality Assurance Manager who reviews all training records and applicable correspondence relative to satisfactory compliance with the training outline and the individual's scope of qualification being attained. If the review



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indicates satisfactory compliance with the training outline, program requirements, and procedural requirements, a certification document is issued reflecting the scope of qualification allowed, including the level of inspector achieved, based on the training and associated documents assembled.

During the next revision to the CPS qualification and certification procedure for inspection personnel additional information may be included. This would expand on the actual processes being utilized and provide a more prescriptive basis for the overall qualification process.

CPS trusts the responses and information provided in this correspondence satisfactorily addresses the nonconformances reflected in the subject inspection report. Any questions or comments should be directed to the undersigned.

Sincerely,

Steven W. Andrews
Quality Assurance Manager

- cc: - H. Kerr, President - CPS
- M. Mathias, Gen. Mgr. - CPS
- CPS QA File for NRC Report No. 99901263/93-01

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