

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION

Report No: 99901307/96-01

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Nuclear Industry
Activity: Manufacturer and supplier of threaded fasteners,
fittings, flanges, and other items used primarily in
nuclear applications.

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January 28-30, 1997

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1 INSPECTION SUMMARY

During this inspection, the NRC inspectors reviewed the implementation of selected portions of B&G Division of ACCUTECH (ACCUTECH) quality assurance (QA) program with emphasis on commercial grade material dedication practices and upgrading of unqualified source material for applications requiring certification to American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) requirements. The inspectors also reviewed the implementation of ACCUTECH's program for reporting of defects under Part 21 of Title 10 of the Code of Federal Regulations (10 CFR Part 21). This inspection was a part of an NRC pilot program in the development of inspection procedures for assessing licensee oversight of supplier quality. In that regard, this inspection can be considered as vendor shop follow up of an NRC inspection of PECO Energy Company (PECO).

The inspection bases were:

- Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR Part 50)
- 10 CFR Part 21, "Reporting of Defects and Noncompliance"
- ASME Code, Section III, Subarticle NCA 3800.

During this inspection, two violations of NRC requirements were identified and are discussed in Section 3.2.2.c of this report.

During this inspection, five instances where ACCUTECH failed to conform to NRC requirements imposed upon them by NRC licensees were identified. These nonconformances are discussed in Sections 3.2.2.c, 3.3.2, 3.4.3, 3.6, and 3.8 of this report. Also, Nonconformance 99901076/94-01-03 remains open.

2. STATUS OF PREVIOUS INSPECTION FINDINGS

Although this was the first inspection under B&G's ownership of this company (previously Cardinal Industrial Products, Limited Partnership [Cardinal]), inspection findings from the NRC, December 1994 inspection of Cardinal that relate to material currently being supplied by ACCUTECH were reviewed.

2.1 Nonconformance 99901076/94-01-03 (OPEN)

Contrary to Criterion VII of 10 CFR Part 50, Appendix B, Cardinal had not established a documented basis to substantiate that its destructive testing sampling plan for verifying critical characteristics provided reasonable assurance that dedicated commercial grade items (CGIs) met the applicable procurement document requirements.

a. Background

Several exchanges of correspondence took place between the NRC staff, Cardinal, and B&G in 1995. The last letter, dated August 30, 1995, was written after B&G's acquisition of the company and included a rationale for selecting sampling plans for commercial grade item dedication. NRC's acknowledgement of this letter, dated December 5, 1995, stated that, while the rationale presented in the August 30, 1995, letter could be expected to improve the overall assurance of product integrity, it placed heavy reliance on visual and dimensional inspection to assure lot homogeneity. With respect to the acceptability of the proposed destructive sampling plan, the NRC December 5, 1995, letter stated that, for sampling nonhomogeneous product lots, the NRC staff has generally accepted a confidence level of 90-95 % that no more than 5-10 % of the sampled items are nonconforming. It stated further that the destructive sample size and rationale described in the August 30, 1995, letter does not appear to provide this level of confidence for random lots (unverified traceability) of material, especially for the verification of critical characteristics related to the physical properties of materials.

The NRC December 5, 1995, letter also stated that a supplier who certifies his product as complying with 10 CFR Part 50, Appendix B can either supply a product that has been designed and manufactured under the applicable provisions of Appendix B, or supply a dedicated commercial grade item after verifying all of the item's critical characteristics. If verification is based on product sampling, confidence level of the sampling plan should meet the criteria discussed above. The letter further stated that suppliers with dedication programs that do not demonstrate this confidence level for verifying critical characteristics have the option of supplying such material under their licensee approved quality programs, but without certifying compliance with Appendix B.

b. Observations and Findings

The inspectors attempted to verify the sampling plan rationale as described in Cardinal's August 30, 1995, letter. This was done by reviewing the documentation that would support Cardinal's statements concerning visual and dimensional inspection and trending data and the use of this information as a basis for sampling decisions. Cardinal contended that for finished fasteners procured from non-approved/non-audited suppliers, Cardinal performs 100% visual inspection to identify visual discontinuities per the applicable material specification. It further stated that visual inspection can identify mixed fastener lots since different types or size of product markings; product color difference; and different forging indications all could be an indication of a mixed fastener lot. It went on to say that after a product has received a dimensional and visual inspection, the probability of the product complying with the chemical and mechanical requirements are extremely high, based on nonconformance report (NCR) trending data and years of manufacturing and testing of fasteners.

The inspectors reviewed ACCUTECH Standard Operating Procedures (SOP) 4.001, Purchase Order Processing, Revision 8, dated November 15, 1995, and SOP 9.001, Material Receiving Inspection, Revision 12, dated November 15, 1995, to verify that it included appropriate receipt inspection guidance to effectively identify mixed fastener lots that could provide an indication of lot homogeneity. The inspectors determined that SOPs 4.001 and 9.001 did not include any procedural guidance for determining lot homogeneity beyond normal visual inspection and review for manufacturing process defects and shipping damage. Also, several fastener receipt inspection records reviewed did not include any documentation to indicate that visual inspection addressed lot homogeneity and mixed fastener lots. The inspectors also reviewed several Quality Trending Reports for internal and external (vendor) NCRs, but these reports also did not include any specific trending data on fastener testing failures related to sample plans.

In response to inspector questions concerning documentation and control of indicators of lot homogeneity, ACCUTECH stated that they did not have a documented basis to support the information that was previously described to the NRC in Cardinal's August 30, 1995, letter.

c. Conclusions

In conclusion, the inspectors determined that ACCUTECH continues to place heavy reliance on visual and dimensional inspection to support the verification of lot homogeneity. Based upon this method for lot verification of lot homogeneity, ACCUTECH then utilizes the ASTM A-325 shipping lot sampling plan for destructive testing (material chemistry and mechanical properties) and the EPRI guidelines for nondestructive testing (dimensional). The NRC inspectors determined that visual inspection for shipping damage and manufacturing defects can not assure that all items in the same product lot were manufactured from the same heat of material or were heat treated under the same conditions. Additionally, the inspectors noted that, as discussed in Inspection Report 99901076/94-01, the use of ASTM A-325 shipping lot sampling plan is inappropriate for this application.

Based on the above information, Nonconformance 99901076/94-01-03 is considered **Open**, and requires additional response from ACCUTECH to address the original concerns documented in Nonconformance 99901076/94-01-03 and discussed further with the NRC inspectors during the November 1996 inspection.

3. **INSPECTION FINDINGS AND OTHER COMMENTS**

3.1 Description of Facilities and Activities

B&G Manufacturing Co., Inc. (B&G) purchased the name and certain assets of Cardinal on July 10, 1995, and operated the acquired company as Cardinal Industrial Products Division of B&G (B&G-Cardinal) until

December 1995, when they renamed it ACCUTECH. The transition included acquisition of some new production equipment, upgrading of in-house heat treatment capability, and changes in company management.

According to ACCUTECH management, standard fasteners (ASTM/ASME) constitute about 80% of the company's product line. Specialty fasteners account for 10% of the product volume and standard material forms (plate, flanges) make up the remaining 10%. ACCUTECH has been accredited by the ASME as a Materials Organization (MO). Their ASME Quality Systems Certificate (QSC) expires on January 9, 1999.

3.2 10 CFR Part 21 Program

3.2.1 Implementing Procedure

The inspectors reviewed ACCUTECH SOP 17.002, "Reporting of Defects and Noncompliance," Revision 6, dated November 15, 1995, and representative documentation to verify implementation. Procedure 17.002 established the responsibilities and actions for the reporting of defects and informing of deviations in accordance with the requirements of 10 CFR Part 21. The inspectors reviewed procedure 17.002 to determine whether the weaknesses identified during the previous inspection and documented in Inspection Report 99901076/94-01, had been adequately addressed.

Inspection Report 99901076/94-01 identified that procedure 17.002 did not contain provisions to inform customers of deviations that Cardinal could not evaluate. This weakness was addressed in Revision 6 of procedure 17.002, paragraph 2.4.3, which stated that, in the cases when ACCUTECH could not determine if a significant safety hazard exists, the Quality Assurance Manager should notify all affected customers within five working days.

Inspection Report 99901076/94-01 identified that procedure 17.002 did not contain provisions for documentation of evaluations to determine whether a deviation was a defect. This weakness was addressed in Revision 6 of procedure 17.002, paragraphs 2.2, 2.3, 2.4.1, 2.4.2, and 2.7, which required that deviations be documented on form CF 17.2 and reviewed by the Quality Assurance Manager to determine whether a substantial safety hazard existed, or whether the deviation information should be provided to the customer for evaluation.

Inspection Report 99901076/94-01 identified that procedure 17.002 did not contain provisions to notify the NRC when a defect was determined to exist. This weakness was addressed in Revision 6 of procedure 17.002, paragraph 2.4.2, which required that the NRC be notified within two days by telefax and thirty days in writing when ACCUTECH had evaluated a deviation and determined that a substantial safety hazard existed.

The inspectors concluded, for the weaknesses discussed above, that the applicable revisions to procedure 17.002 had addressed the weaknesses and had adequately proceduralized the requirements of 10 CFR Part 21.

In addition, Inspection Report 99901076/94-01 identified that procedure 17.002 interchanged the terms "defect" and "deviation" in several places. The inspectors determined that this weakness had not been completely addressed in Revision 6 of procedure 17.002. There were two instances where the term defect (or defective) was used in place of the appropriate term, deviation. Paragraph 2.3 stated "when an employee is aware of defective material which has been shipped to a customer, he shall complete form CF 17.2 and submit one copy to the following: Branch Manager and Quality Assurance Manager." As stated in 10 CFR Part 21, a defect results from an evaluation of a deviation. An employee could become aware of material containing a deviation which would require evaluation by ACCUTECH management, or the customer, to determine if a defect exists. Additionally, paragraph 2.4.1 stated, "In cases where the defect does not create a substantial safety hazard...." By the 10 CFR Part 21 definition, a defect can create a substantial safety hazard, and the correct term in the context of paragraph 2.4.1 is deviation. The inspectors concluded that this revision had partially address the weakness identified in Inspection Report 99901076/94-01 and a weakness still existed concerning the correct use of the terms deviation and defect. This was discussed with ACCUTECH management who indicated that this issue would be addressed in a subsequent revision of procedure 17.002.

3.2.2 Part 21 Program Implementation

a. Background

In the following discussion Cardinal is used to refer to the pre-July 10, 1995, business and B&G-Cardinal or ACCUTECH are used to refer to the B&G owned business as applicable to the particular activities, correspondence, or documentation reviewed.

ACCUTECH had performed several 10 CFR Part 21 evaluations, all related to a single topic, during the period since the previous NRC inspection of Cardinal in 1994. The subject of the 10 CFR Part 21 evaluations was the failure of certain ASME SA-193, Grade B7 (B7) fasteners, of various sizes, to meet the required mechanical specifications. The failures to meet specifications were determined to be due to inadequate heat treatment, performed during the production of the fasteners, which had occurred during the time period prior to B&G's purchase of Cardinal on July 10, 1995.

ACCUTECH used Heat Numbers, Trace Codes, and Heat Codes to provide traceability of the fasteners it manufactured, as follows: When ACCUTECH purchased raw material from the manufacturing mill, the material was received with a mill assigned Heat Number which identifies a specific melt of the material with uniform chemical properties. ACCUTECH assigned a Trace Code to the first heat lot of a particular sized fastener manufactured from this material. ACCUTECH used the same Trace Code, combined with a Heat Code, for additional heat lots of the fastener manufactured from the same material (each additional heat lot was assigned a unique Heat Code). As a result, the fasteners size,

Trace Code and Heat Code uniquely identified the material that a fastener was produced from and during what furnace operation a fastener was heat treated.

b. Identification of Defective and Suspect Heat Lots of Cardinal Manufactured B7 Fasteners

The inspectors reviewed the ACCUTECH 10 CFR Part 21 evaluations performed in accordance with ACCUTECH Standard Operating Procedure (SOP) 17.002, "Reporting of Defects and Noncompliance," Revision 6, dated November 15, 1995, including representative documentation, to verify implementation of the requirements of 10 CFR Part 21.

Shortly after the July 1995, B&G acquisition of Cardinal, the Duquense Light Company (Duquense) informed B&G-Cardinal that one of two B7 capscrews, purchased from Cardinal, had failed during the performance of acceptance testing and, when an additional three specimens were tested, one failed the tensile test. In July 1995, Duquense witnessed additional testing at B&G-Cardinal of four fasteners during which one failed the tensile test. In addition, an August 15, 1995, letter from Metallurgical Testing Corporation to B&G-Cardinal, which documented a metallurgical examination of the failed fasteners, discussed possible causes of the fastener failures and identified inadequate heat treatment as a likely cause.

B&G-Cardinal generated an internal document on August 29, 1995, form CF 17.2, "Reporting Defects and Noncompliance 10 CFR Part 21," which noted the improper heat treating of heat lot TU1 where the center of the heat charge had apparently not reached heat treatment temperature. This was evaluated, determined to be a defect, and to be reportable to the NRC. Supporting documentation identified the customers, which included eight licensees. B&G-Cardinal followed with an August 29, 1995, letter to the NRC which identified three heat lots S4, S5, and TU1 as being defective, indicated that all customers had been notified, and indicated that a complete report would be provided to the NRC within 60 days. B&G-Cardinal issued letters on August 30, 1995, to all affected customers informing them that they had been supplied fasteners from a heat lot which contained defective product (heat lots S4, S5, and TU1). In addition, on September 5, 1995, B&G issued letters to the affected customers, reiterating that defective heat lots existed and that B&G intended to investigate and appraise the customers of the results. On September 11, 1995, B&G-Cardinal issued a letter to the NRC which summarized previous events concerning the three defective heat lots (heat lots S4, S5, and TU1), stated that all affected customers had been notified, and that all B7 inventory was on hold and being tested.

On September 11, 1995, B&G-Cardinal issued letters to all affected customers addressing a fourth heat lot, TS1, that contained defective product. On September 12, 1995, B&G issued a letter to all affected customers of heat lot TS1, reiterating that the defective heat lot existed and that B&G intended to investigate and appraise the customers of the results. On September 12, 1995, B&G-Cardinal issued a letter to

the NRC which identified the additional affected heat lot TS1, for a total of four affected heat lots and identified the customers which had received material from the four affected heat lots.

On September 26, 1995, B&G-Cardinal issued a letter to the NRC which identified five additional suspect heat lots of B7 fasteners (Q5, CX1, TU2, L6, and TU1 (this is an additional heat lot, of different sized fasteners, than the TU1 listed in the August 29, 1995, ACCUTECH letter)). The letter indicated that all customers had been notified, and indicated that a complete report would be provided to the NRC within 60 days. On September 29, 1995, B&G issued a letter to all affected customers notifying that they had been supplied fasteners from a heat lot suspected of containing defective product (for the fifth through ninth heat lots Q5, CX1, TU2, L6, and TU1).

On November 21, 1995, B&G issued a letter to NRC, containing the ACCUTECH Final Report, which discussed the heat treatment concerns, immediate action, investigation, findings, conclusions, and summary. The Final Report documented the extensive testing and analysis that ACCUTECH had performed to determine the cause of the defective B7 fasteners and to bound the concern. ACCUTECH had performed a sequence of tests in which twenty-two fastener heat lots, representative of earlier Cardinal productions heat lots, were heat treated and then tested for applicable mechanical properties. Six of the twenty-two test heat lots produced fasteners with unacceptable properties. The main process variables affecting the heat treatment were determined to be the total weight of the furnace charge, packing density of the material being heat treated, and the time at the required temperature. The larger the weight and density of the fastener heat lot and the shorter the length of heating time, the more likely the fastener heat lot would contain fasteners which exhibited unacceptable mechanical properties. ACCUTECH then took the weight/heat-time combinations of the failed test heat lots, compared the information with Cardinal production heat lots, and determined that an additional five Cardinal production heat lots of B7 fasteners were potentially defective (suspect). The five heat lots identified as suspect (TU1, Q5, CX1, TU2, and L6) had been addressed earlier in the September 26, 1995, B&G-Cardinal letter to the NRC and the September 29, 1995, letter to the applicable customers. In addition, the report indicated that B&G-Cardinal believed that the problem of substandard fasteners did not extend beyond the heat lots of B7 fasteners identified as defective or suspect, including any other materials heat treated by Cardinal. The report also indicated that this conclusion could not be guaranteed and that the customer should consider replacing fasteners from the identified heat lots and consider testing other heat lots as necessary. On February 5, 1996, B&G issued a letter, which provided the B&G final report to all affected customers of the identified heat lots (through November 1995).

On March 22, 1996, ACCUTECH received information from Washington Public Power Supply System (WPPSS) which indicated that WPPSS had determined that defective material had been provided to them from a heat lot which had not been included in the final report as defective or suspect (heat

lot TS7). ACCUTECH had previously removed heat lot TS7 from inventory, but had some of the removed material still on site. In addition, material from another heat lot, K7, which had also been removed from inventory was still on site. ACCUTECH tested both heat lots, TS7 and K7, and determined that some items, in both heat lots, did not meet specification. ACCUTECH notified the NRC of the defective heat lots TS7 and K7 by letter dated May 8, 1996.

In addition, during the January 1997, NRC inspection, ACCUTECH identified an additional heat lot, M2, which had been heat treated as a part of the same furnace charge as heat lot K7. Subsequent to the completion of the inspection, ACCUTECH filed a 10 CFR Part 21 report to the NRC which provided notification of the suspect heat lot M2.

During the NRC inspection, ACCUTECH indicated that, as part of the corrective action process, all B7 fasteners heat treated by Cardinal, had been removed from ACCUTECH inventory shortly after Duquense had informed ACCUTECH of the defective B7 fasteners.

c. Control of the Heat Treatment Process

The inspectors reviewed the available furnace logs, temperature recorder charts, and Cardinal heat treating procedure, SOP 18.001 Rev. 6, dated December 6, 1994, "Heat Treating," as a part of an assessment of ACCUTECH's final report, "Investigation and Analysis of Suspect Fasteners," dated November, 1995. Furnace records were available for the last five years of operation of the heat treating furnace. During that time 1,418 separate furnace charges were processed. The operations included quenching and tempering, stress relieving, age hardening and solution annealing. Materials included carbon and medium carbon alloy steels, precipitation hardenable materials, and austenitic and martensitic stainless steels.

Review of SOP 18.001 indicated that this procedure provided very little guidance on the operation of the heat treating oven. Specifically, there were no instructions to control the material charge size and distribution in the furnace, or thermocouple location with respect to the furnace charge. As demonstrated by ACCUTECH's investigation, these variables can have a significant effect on the heat treatment results. Inadequate or inconsistent control of these variables would tend to significantly expand the bounding load density and furnace time limits established by the investigation (conducted under controlled conditions) to include heat lots not previously reported. The probability that inadequate process controls existed is supported by the situations discussed above where defective fasteners were identified from heat lots that were considered acceptable based on ACCUTECH's investigation.

The inspectors also noted that a significant amount of austenitic stainless steel was solution annealed in the furnace during this time period. While this material was not specifically addressed in ACCUTECH's investigation, a review of furnace logs and heat treatment charts showed some instances where the charge characteristics and

furnace times similar to those considered suspect in ACCUTECH's assessment of alloy steel fasteners were also recorded for solution annealing treatment of stainless steel fasteners. Under these conditions, if some fasteners did not reach the solution annealing temperature, they could become severely sensitized as a result of the heat treatment cycle and, therefore, be highly susceptible to intergranular corrosion. There was no physical evidence to indicate that improper solution annealing had actually occurred.

d. Conclusions

- Failure to Inform the NRC of a Defect In the Required Time
Heat lot TS7 was evaluated and determined to contain a defect as documented on the ACCUTECH Form 17.2, which was approved by the Branch Manager on March 28, 1996. However, the NRC was not notified by facsimile or telephone within two days as required by ACCUTECH SOP 17.002 and 10 CFR Part 21.21(c)(3). In addition, the written notification was not sent by ACCUTECH to the NRC until May 8, 1996 (41 days after the ACCUTECH Form 17.2 evaluation) which does not meet the requirements of ACCUTECH SOP 17.002 or 10 CFR 21.21(c)(3) which require the written notification be provided to the NRC within 30 days. The inspectors concluded that the ACCUTECH had failed to notify the NRC within two days of the responsible officer obtaining the information of a defect affecting a basic component and had failed to provide the written notification within the 30 days of the responsible officer obtaining information of a defect affecting a basic component, as required by 10 CFR 21.21. Failure to notify within two days and provide written notification within 30 days was identified as a violation of 10 CFR Part 21. (Violation 99901307/96-01-01)

- Failure to Adequately Evaluate Heat Lot TS7
During discussion with the NRC inspectors, ACCUTECH indicated that the failures of heat lot TS7 were possibly due to commingling of non-heat treated fasteners with heat treated fasteners. This conclusion was based on the weight and length of heat treatment of the fasteners being well outside the bounds of suspect fasteners established by the test documented in the November 1995 Final Report. However, the April 1, 1996, WPPSS letter to ACCUTECH reporting the defective fasteners of heat lot TS7 indicated that, subsequent to the mechanical test performed on the defective fastener, a metallurgical examination of a defective fastener had confirmed that the fastener had been inadequately heat treated. In addition, the inspectors concluded that ACCUTECH had not adequately evaluated whether the identified defects in heat lot TS7 could affect the validity of conclusions documented in the Final Report where the weight and length of heat treatment boundaries for suspect heat lots had been established, and to determine if any further review of the earlier research was required. The failure to perform an adequate review of heat lot TS7 was identified as a violation of 10 CFR Part 21. (Violation 99901307/96-01-02)

- Failure to Adequately Evaluate Heat Lot K7 and Identify Heat Lot M2
The production heat lot K7 had been modeled as one of the test heat lots

used to establish the weight and heat treatment boundaries documented in the Final Report. The test heat lot modeled after heat lot K7 had not produced any defective fasteners and, therefore, heat lot K7 had not been reported earlier as a suspect heat lot. ACCUTECH had not documented any evaluation activities for heat lot K7, as discussed above, and also indicated during the inspection that ACCUTECH had not reviewed the contradictory situation of the existence of a "good" test charge modeled after a production heat lot later determined to contain defective material (heat lot K7). In addition, during the NRC inspection, the ACCUTECH review of the K7 furnace records indicated that an additional heat lot had been heat treated in the same furnace charge as heat lot K7. ACCUTECH indicated that the additional heat lot, M2, would also be considered suspect, since it had been heat treated together with the known defective heat lot, K7. On January 31, 1997, subsequent to the completion of the NRC inspection, ACCUTECH notified the NRC of the suspect heat lot M2 by facsimile. The inspectors concluded that ACCUTECH had performed an inadequate review of the heat lot K7 defect as indicated by ACCUTECH failing to identify the additional suspect heat lot M2. The failure to perform an adequate review of heat lot K7 was identified as an additional example of Violation 99901307/96-01-02.

- Failure to Document the K7 Evaluation in Accordance With Procedure
The evaluation of heat lot TS7 had been documented on SOP Form CF 17.2, dated March 28, 1996, however no form CF 17.2 was on file documenting the evaluation of heat lot K7. The inspectors concluded that although ACCUTECH had performed an evaluation of heat lot K7, (based on the notification of the defect), ACCUTECH had failed to document the evaluation in accordance with ACCUTECH SOP 17.002, which was identified as a Nonconformance to Criterion V, "Procedures," of 10 CFR Part 50, Appendix B. (Nonconformance 99901307/96-01-07)

3.3 Material Supplied under ASME Code Rules

3.3.1 Procedural Controls

The controls for processing orders for material supplied under the rules of the ASME Code are described in ACCUTECH's Quality Systems Manual (QSM), which had been reviewed and accepted by the ASME. Second Edition, Revision 0 of this manual, dated 11/29/95, was in effect at the time of this inspection. SOPs supplement various sections of the manual.

3.3.2 Implementation Review

The inspectors selected a sampling of purchase orders from NRC licensees (emphasis on material supplied to PECO) for ASME Code material that ACCUTECH had processed within the last year. The documented bases for compliance with the applicable ASME Code requirements in the processing of these orders were reviewed with significant observations summarized below:

- PECO Purchase Order (PO) LS 605919, dated January 18, 1996, for forty four 1 1/4 inch by 8 inches long ASME SA-193, grade B7 bolts in accordance with the requirements of Section III of the ASME Code, 1992 edition.

ACCUTECH supplied this material under their ASME (QSC) and provided a Certified Material Test Report (CMTR) and a Certificate of Compliance (COC). The CMTR contained transcribed ladle analysis results for this material as well as mechanical property test results and heat treatment description. Review of supporting documentation indicated that ACCUTECH obtained the starting material in the form of cold finished SA-193 bars from Republic Steel Co., an approved vendor. ACCUTECH heat treated the material and performed two sets of chemical analyses, impact tests and tensile tests. Review of documentation supplied to PECO indicated that ACCUTECH failed to include the mill heat analysis in documents provided to the customer. Paragraph NCA 3862.1 of Section III of the ASME Code requires that certifications for subcontracted chemical analyses, including melting mill heat analyses, heat treatment, tests, and examinations to be furnished as an identified attachment to the CMTR.

Section 6.0, "Control of Certifications" of the ACCUTECH QSM requires that CMTRs include the actual results of chemical and mechanical attributes, description of heat treatment, and nondestructive examination reports. It does not require, however, that mill heat analysis reports provided by approved suppliers be included with the CMTR. ACCUTECH staff acknowledged that their standard practice was to provide the original mill heat analysis reports only when specifically requested by the customer. Failure to provide all of the documentation required by Paragraph NCA 3862.1 of Section III of the ASME Code was identified as Nonconformance 99901307/96-01-03.

- PECO Purchase Order LS 607801, dated March 28, 1996, for twenty 1/2-13 by 2 1/4 inches long ASME SA-193, grade B7 bolts in accordance with ASME Code, Section III, Class 2.

ACCUTECH supplied this material in accordance with their QSC and provided a CMTR and a COC. The CMTR contained identification of the item supplied, transcribed ladle analysis, check analysis, tensile properties, description of the heat treatment performed, QSC number, and statement certifying compliance with the applicable requirements. The COC contained identification of the item supplied, ACCUTECH's QSC number and certified compliance with the PO requirements, including 10 CFR Part 21 and 10 CFR50, Appendix B. The COC also described the heat treatment performed and certified that satisfactory macroetch test had been performed, visual inspection conducted per SOP 11.002, Rev. 9 (report attached) and that no welding had been performed on this material.

ACCUTECH (then Cardinal) purchased the starting material, cold finished SA-193, grade B7 bar on September 25, 1990, from Republic Steel Co., an approved supplier. On August 27, 1993, Cardinal issued a purchase order to Rooke Manufacturing, an approved supplier, to cut and hot-head this material and, on the same date, issued a purchase order to Phoenix Heat Treating, an approved supplier, to normalize, harden and temper the hot headed blanks to SA-193 requirements. Cardinal then performed 2 tensile tests on this lot of material.

The inspectors noted that, contrary to the ASME Code requirements, neither the mill heat analysis report nor Phoenix Heat Treatment certification were furnished as attachments to ACCUTECH's CMTR that was provided to PECO. This was identified as an example of Nonconformance 99901307/96-01-03.

- Consumers Power Company Purchase Order G 0183280, dated December 7, 1995, for 100, 1/2-13, SA-194, grade 2H nuts to the requirements of ASME Code, Section III, Class 1, 1989 Edition with 1990 Addenda.

and

- Entergy Purchase Order MP 96L093, dated November 8, 1995, for 76, 1/2-13, SA-194, grade 2H nuts to the requirements of ASME Code, Section III, NB.

ACCUTECH supplied this material from existing stock. The nuts used to fill this order were from the same heat of material, and had the same manufacturing history, as discussed in Paragraph 3.4.3 of this report under Wisconsin Electric Power Co. Purchase Order 4500021861.

ACCUTECH certified the material for the above procurements as being provided in accordance with their ASME QSC. The certifications did not indicate that the material was supplied as "size excluded," therefore all of the NCA quality requirements were considered applicable for these procurements. The inspector noted that the mill heat analyses and mechanical test certifications by approved suppliers were not included with, or referenced on ACCUTECH's certification and that there was no evidence in the document package that a macroetch test was performed on the source material as required by ASME SA-194. The inspector also noted that there was insufficient documentation (audit reports) to demonstrate that the suppliers of this product were qualified to the requirements of NCA 3800.

Failure to provide adequate documentation to demonstrate compliance with NCA 3800 and with the applicable requirements of the material specification was identified as an example of Nonconformance 99901307/96-01-03.

3.4 Non-Code Material Supplied Under 10 CFR Part 50, Appendix B.

3.4.1 Procedural Controls

ACCUTECH's controls for processing non-Code material that is to be supplied under the rules of 10 CFR Part 50, Appendix B are described in Addenda No. 1 to its ASME QSM described above. According to ACCUTECH, the intent of this Addenda is to modify sections of its QSM to assure compliance with 10 CFR 50, Appendix B, ANSI N 45.2, ANSI/ASME NQA-1 and other quality related standards as it applies to non-Code items. SOPs are used to supplement the controls described in Addendum 1 to the QSM. For example, ACCUTECH's commercial grade item (CGI) dedication program is described in SOPs 4.001, 9.001, 10.010, 11.001, and 11.002.

3.4.2 Use of Sampling in the Dedication Process

a. Observations and Findings

As part of the review of Open Nonconformance 99901076/94-01-03, (previously described in Section 2.1), the inspectors reviewed the current sample plan methodology as part of the commercial grade dedication process in place at ACCUTECH. The inspectors determined that it is basically the same process that was reviewed during the NRC's December 1994 inspection at Cardinal, in that it places heavy reliance on visual and dimensional inspection to support the verification of lot homogeneity. No additional controls had been implemented in the ACCUTECH QA program to support the sampling process rationale described in Cardinal's August 30, 1995, letter. In fact, the nondestructive dimensional inspection sampling plan described in Section 3.13.1 of revision 8 of SOP 4.001, which references the EPRI guidelines, is actually less conservative than the sampling plan reviewed (Revision 6 of Cardinal Standard Practice 4.001) during the December 1994 inspection.

ACCUTECH representatives stated that they did not have a documented basis to support the information that was previously described to the NRC in the August 30, 1995, letter concerning sampling. ACCUTECH had recently written a "white paper" that described proposed changes to the ACCUTECH sample plan methodology for testing and examination. This document was dated November 7, 1996, but had not as yet been implemented as part of the ACCUTECH QA program. The inspectors did not review this document during the inspection since it had not been approved and implemented as part of the QA program and did not reflect the process for the dedication activities that were reviewed.

b. Conclusions

The inspectors determined that ACCUTECH places heavy reliance on visual and dimensional inspection to support the verification of lot homogeneity. Based upon this method for verification of lot homogeneity, ACCUTECH then utilizes the ASTM A-325 shipping lot sampling plan for destructive testing (material chemistry and mechanical

properties) and the EPRI guidelines for nondestructive testing (dimensional). The inspectors determined that visual inspection for shipping damage and manufacturing defects can not assure that all items in the same product lot were manufactured from the same heat of material or were heat treated under the same conditions and that, as discussed in Inspection Report 99901076/94-01 and related correspondence, the use of ASTM A-325 shipping lot sampling plan is inappropriate for this application.

Nonconformance 99901076/94-01-03 is considered Open, and requires additional response from ACCUTECH to address the original concerns documented in this nonconformance and discussed further with the NRC inspectors during the November 1996 inspection.

3.4.3 Implementation Review

The inspectors selected a sampling of recent POs from NRC licensees (emphasis on material supplied to PECO) for non-Code items ordered to the quality requirements of 10 CFR Part 50, Appendix B. The documented basis for compliance with the applicable Appendix B and customer PO requirements were reviewed with significant observations summarized below:

- PECO Purchase Order LS 606821, dated February 15, 1996, for twenty four 7/8-9 by 2 1/4 inches long ASTM A-325 bolts.

ACCUTECH's certification for this material included heat number identification, transcribed ladle analysis, description of the heat treatment, hardness test results, and certification that this material was manufactured in accordance with ACCUTECH's QSM, Second edition, Revision 0, Addenda 1, and that the material supplied complies with the PO requirements.

ACCUTECH drew this material from existing stock of 7/8-9 by 7 1/4 inch bolts, performed chemical analyses and hardness tests on two samples, and cut the required number of bolts to the 2 1/4 inch length specified in the PO. ACCUTECH (then Cardinal) had purchased the bolts from Mitsuboshi Sangyo Co. Ltd., who obtained the starting material from Azuma Steel Co., Chiba, Japan. The inspector noted that the Azuma CMTR was dated November 19, 1980, but contained a typed statement that the material was manufactured and supplied in accordance with Azuma Steel Co. QA program that had been surveyed and approved by Cardinal on April 1, 1982. ACCUTECH staff could not explain the apparently erroneous date or dates on the Azuma CMTR and could not produce an audit report to indicate if or when an audit of Azuma Steel Company was performed. The inspector noted that, if the steel was produced in November of 1980, Cardinal did not have adequate assurance that the steel manufacturing process complied with a quality assurance program that they approved in April, 1982.

The inspector further noted that the limited testing performed by ACCUTECH (two hardness tests and two chemical analyses) did not provide an adequate basis for certifying this material as conforming to the requirements of 10 CFR 50, Appendix B.

Subsequent to the first phase of the NRC inspection, ACCUTECH issued Shop Order PC 327982 for additional inspections consisting of two hardness tests, two proof load and wedge tests, and two chemical analyses on samples from 325 bolts from the same heat lot which remained in stock. The results from these tests (satisfactory) were included in a supplemental certification issued to PECO on December 26, 1996. Failure to provide documented basis that material certified as conforming to the requirements of 10 CFR Part 50, Appendix B actually conforms to these requirements was identified as Nonconformance 99901307/96-01-04.

- Wisconsin Electric Power Co. Purchase Order 4500021861, dated November 1, 1996, for 100 1/2-13 SA-194, Grade 2H heavy hex nuts.

ACCUTECH supplied this material from existing stock. ACCUTECH (then Cardinal) had purchased the nuts from Unytite Fastener Mfg. Co. Ltd., Akashi Factory, Japan, who apparently obtained the starting material from Kobe Works, Kobe Steel Ltd. through a supplier, Mitui-Unitaito-Nishikobe. Kobe issued a "Mill Sheet" for the starting material on June 30, 1984. The only pertinent information appearing on the mill sheet was the heat number (KC8972), material specification (KCH45KT-W), and chemical analysis. A stamp on the mill sheet indicated that it had been accepted by Unytite on July 10, 1984. Unytite issued an "Inspection Certificate" on the finished product (252,717 nuts) on June 18, 1984, apparently before they received the mill sheet from Kobe and apparently before the acceptance of this document by Unytite. This certificate identified the material by a heat number traceable to the Kobe mill sheet and a lot number. It contained the results of chemical analysis (transcribed from the Kobe mill sheet), and indicated that five proof load, cone stripping, and hardness tests had been performed with satisfactory results. The certificate contained a quality program statement stating that the material was produced in accordance with Unytite's QA program M-00 Rev. 4, dated April 14, 1983, that had been reviewed and accepted by Cardinal on October 7, 1983. The file also contained a letter from Kobe Steel, Ltd., stating that material heat KC8972 had been produced in accordance with Kobe QA program, Rev. 6, dated January 20, 1983, that had been surveyed and approved by Cardinal on October 6, 1983.

ACCUTECH supplied this material as having been manufactured in accordance with the current edition of their their QA manual and 10 CFR Part 50, Appendix B.

The inspector identified the following concerns with the documentation described above:

- a) None of the documentation reviewed provided verification that the starting material produced by Kobe Steel Co. complied with the internal quality requirements of the applicable material specification (SA-194). Specifically, SA-194 requires a macroetch test in accordance with ASTM E-381 on each bar lot produced by the supplying mill. The Kobe mill sheet contained no reference to indicate that the material met the requirements of SA-194, and the Unityte inspection certificate did not contain any reference to a macroetch test.
- b) Unityte apparently received the starting material from Kobe Steel and completed their manufacturing and testing activities before receiving Kobe's mill sheet for this material.
- c) ACCUTECH could not produce reports of Cardinal's surveys or their bases for accepting the validity of such surveys of either Unityte or Kobe which would have approved these companies as qualified suppliers.

This item was identified as an example of Nonconformance
99901307/96-01-04

3.5 Nuclear Utilities Procurement Issues Committee (NUPIC) Audit of ACCUTECH

The inspectors reviewed the Comanche Peak Steam Electric Station TU Electric (TUE) QA Audit Report QAA-96-010 of ACCUTECH dated May 23, 1996. The audit, conducted April 29 through May 2, 1996, was led by TUE and performed in accordance with the requirements of the TUE QA program, under the auspices of NUPIC. The audit also included representatives of Iowa Electric Services, Houston Light and Power, and Northern States Power.

The inspectors reviewed the applicable sections in the TUE audit report that addressed the issues from NRC Inspection Report No. 99901076/94-01, commercial grade dedication and sampling relating to commercial grade dedication. It appears that the audit reviewed the applicable portions of the ACCUTECH program as it relates to sampling as part of commercial grade dedication, however, the audit describes the process just as Cardinal/ACCUTECH letters described it to the NRC after the 1994 inspection. It does not appear that the NUPIC audit verified or attempted to verify the ACCUTECH basis for the sampling plans utilized for destructive and nondestructive testing.

Also, when reviewing the documentation on the NUPIC audit checklist, the inspectors did not identify any evidence that the auditors reviewed ACCUTECH's rationale for verifying lot homogeneity for finished fasteners that are purchased from nonapproved suppliers. This method, in turn formulates the basis for ACCUTECH's selection of the CGI sampling plans.

In conclusion, the inspectors determined that the NUPIC audit did not address the ACCUTECH basis for their rationale for verification of lot homogeneity for finished fasteners that are purchased from nonapproved suppliers. Also, the audit apparently did not review the adequacy of documentation included with ACCUTECH's CMTRs for safety-related material supplied to licensees under the rules of the ASME Code (See section 3.3 of this report).

3.6 Corrective Action Activities

The inspectors reviewed QSM Section 17, "Corrective Action," Revision 0, dated November 29, 1995 and SOP 17.001, "Corrective Action Report," Revision 5, dated November 15, 1995. The purpose of the SOP is to establish a method of identifying and establishing the responsibilities for initiating, processing, and resolving internal or external Corrective Action Reports (CARs).

Section 3.1 of SOP 17.001 lists a failure of the QA program to comply with an approved regulation or commitment (ASME, ASTM, ANSI, MIL-STD etc.), as one of the conditions that defines conditions adverse to quality. Section 3.2 states that conditions adverse to quality may be identified during an Internal Audit, Management Audit, Supplier Audit or by other means. NRC Inspection Report No. 99901076/94-01 identified two instances (as Nonconformances) where Cardinal/ACCUTECH failed to meet the requirements of 10 CFR Part 50, Appendix B. These NRC Nonconformances appear to meet the threshold as a "condition adverse to quality" as defined in SOP 17.001 but were not entered into the corrective action process through the initiation of a CAR.

When the inspectors requested to review the CARs written to address the NRC Nonconformances, ACCUTECH stated that CARs were not written for the evaluation and disposition of the two NRC findings. Therefore, nothing had been documented by ACCUTECH to support the information described in the various letters submitted to the NRC in response to the two Nonconformances, beyond the letters themselves. This made it difficult to review the actions to prevent recurrence for Nonconformance 99901076/94-01-04 described in Cardinal's January 30, 1995 letter.

ACCUTECH's failure to identify the two NRC Nonconformances as conditions adverse to quality, i.e. failures to comply with a regulation (10 CFR 50, Appendix B), and enter them into the corrective action process through the initiation of CARs, as required by SOP 17.001, was identified as Nonconformance 99901307/96-01-05.

3.7 Trending Activities at ACCUTECH

The inspectors reviewed SOP 16.006, "Trending," Revision 1, dated November 15, 1995. The purpose of this procedure is to establish a method of identifying and recommending appropriate action for quality trending activities at ACCUTECH. This process produces a Quality Trend Report that provides details of the number and deposition of External Nonconformance Reports and percentage of rejection of items received by suppliers; Internal Nonconformance Reports, by source; customer returns; status of open Nonconformance Reports; and a QC Production Log. The Quality Trend Report also includes information on customer inquiries and an internal performance report breakdown that is used

to identify any problem areas. These reports are issued by the QA manager as a minimum of every six months, but were closer to being issued on a monthly basis.

A review of Quality Trend Reports for the last three years indicated that the trending program for ACCUTECH supplied products and material/items received from vendors is effective in providing valuable information to the quality, technical, and manufacturing departments concerning the status of the QA program and important trends in the overall quality process at ACCUTECH. However, when reviewing the corrective actions for Nonconformance 99901076/94-01-03, the inspectors did not identify any objective evidence in the Quality Trend Reports to support the correlation of trending data of NCRs to the selection of testing and inspection sample plans as described in ACCUTECH's August 30, 1995, letter concerning the sample plan nonconformance.

3.8 ACCUTECH Use of Cardinal Industrial Products Warehouse Inventory

a. Inspection Scope

The inspectors reviewed SOP 22.001, "Transference of Material and Associated Documentation Between CIPC and ACCUTECH," Revision 2, dated November 15, 1995, to determine the process used by ACCUTECH to verify that warehoused material inherited from the previous owner, Cardinal, would meet the current QA program material qualification requirements for supply as ASME Code and safety-related materials. The purpose of SOP 22.001 is to ensure that materials and documents are properly reviewed and approved prior to use by ACCUTECH as ASME Code and safety-related materials.

b. Observations and Findings

The inspectors were told by ACCUTECH that this procedure was originally implemented in 1985 to handle bankruptcy proceedings material sales and was not really intended for regular program implementation. However, during review of various material data packages during the inspection, the inspectors determined that the process described in SOP 22.001, including use of the Document Review Checklist, was still being implemented until approximately June 1995. B&G assumed control of Cardinal in July 1995.

The inspectors requested material documentation data packages for old Cardinal material from warehouse stock that had been recently sold as safety-related or as ASME Code to nuclear utilities. The inspectors were told that they could not identify the entire population of old Cardinal material that was currently being sold by ACCUTECH, but they were currently in the process, as time permitted, to identify and determine full material qualification for all the Cardinal inventory in the warehouse. The inspectors then requested the data packages for Cardinal material still in inventory.

The inspectors began with a review of the issue described in Section 3.4.3 of this report, concerning PECO PO LS 606821, dated February 15, 1996. This package was chosen since the items that were sold to PECO in 1996 were from existing warehouse stock that was acquired from Cardinal after the B&G purchase of Cardinal in 1995. The inspectors reviewed the data package for

PECO PO LS 606821 to determine compliance to SOP 22.001 as it relates to the material shipped to PECO. The inspectors determined that for the material shipped to PECO, ACCUTECH could provide no evidence of any document review as required by SOP 22.001 to be performed and recorded on the Document Review Checklist form. The specifics of the material sold to PECO is described in Section 3.4.3 of this report.

It was also determined that additional warehouse inventory from the same material heat lot sold to PECO had been sold to additional utilities such as Union Electric (PO No. 093879 dated April 15, 1996) as safety-related 10 CFR 50, Appendix B material. The inspectors then inquired if ACCUTECH addressed the problems with the PECO order from a generic standpoint to determine if other material from the same heat lot number was sold to other utilities. The inspectors were told that subsequent to the first phase of the NRC inspection, ACCUTECH issued Shop Order PC 327982 for additional inspections consisting of two hardness tests, two proof load and wedge tests, and two chemical analyses on samples from 325 bolts of the same heat lot which remained in stock. The results from these tests (satisfactory) were included in a supplemental certification issued to PECO on December 26, 1996. ACCUTECH stated that they also conducted additional testing for other data packages where material was supplied from the above heat lot, based upon the sample plans identified in their SOPs. The NRC has stated, in previous correspondence, that these sample plans did not provide an adequate basis for certifying material as conforming to the requirements of 10 CFR 50, Appendix B.

ACCUTECH did not initiate a Corrective Action Report (CAR) and did not evaluate the finding for its generic applicability for other material sold from the same heat lot and for other types of old Cardinal material sold from warehouse stock.

The inspectors reviewed a second package for items that were also supplied from warehouse stock inherited from Cardinal and sold to utilities in 1996. This package was for material that was supplied to Wisconsin Electric under PO 4500021861, dated November 1, 1996. The technical details of this PO and supply is described in Section 3.4.3 of this report. Again, as in the previous example, the inspectors determined that for the material shipped to Wisconsin Electric, ACCUTECH could provide no evidence of any document review as required by SOP 22.001 to be performed and recorded on the Document Review Checklist form. The inspectors then determined that similar material from the same warehouse stock, that represents the same heat of material, was sold to numerous utilities since mid-1995.

c. Conclusions

The inspectors concluded that ACCUTECH had not implemented the requirements of SOP 22.001 since July 1995 and failed to ensure that material and documents are properly reviewed and approved for old Cardinal material sold from warehouse stock to utilities as ASME Code or safety-related 10 CFR 50, Appendix B. At the time of the inspection, ACCUTECH could not identify the entire population of old Cardinal material that was currently in warehouse stock and being sold by ACCUTECH with questionable material certification. This issue is identified as Nonconformance 99901307/97-01-06.

The inspectors also concluded that subsequent to the first phase of the inspection in November 1996, ACCUTECH failed to initiate a Corrective Action Report (CAR) and did not evaluate the finding concerning the material supplied under PECO PO LS 606821 for its generic applicability for other material sold from the same heat lot or for other types of old Cardinal material sold from warehouse stock.

3.9 Source Inspection Activities

The inspectors reviewed QSM Section 8.0, "Control of Purchased Material and Services," Revision 0, dated November 29, 1995 and SOP 8.005, "Performance of Source Inspection," Revision 3, dated November 15, 1995. The purpose of the SOP is to establish the method for performing and documenting source inspections.

The inspectors review 1 the 1996 Source Inspection Log and selected the source inspections performed at Nortec Specialty Steel (Nortec), Lubbock Texas and Atlas Specialty Steel (Atlas), Welland, Canada for review. Two inspection trips were made to both facilities in 1996 in support of two different ACCUTECH purchases, one to fill a PO received from ABB Combustion Engineering Nuclear Power (ABB CENP) and one to fill a PO from a Korean company. Both POs issued to ACCUTECH were for 1.600-0 A276-93 type 304 stainless steel round bars, but for different quantities and length. The Korean order was for 78 bars 310 inches long. The PO issued by ABB CENP to ACCUTECH was for 85 bars 210 inches long and stated on their PO that it was for use at commercial nuclear power plants.

ACCUTECH placed the POs for the round bar with Nortec. Nortec subcontracted to Atlas, who as the original steel mill supplied the bars to Nortec. Nortec performed the straightening and grinding prior to delivery to ACCUTECH. The inspectors reviewed the Source Inspection Plans (SIPs) for Atlas (96-010, dated September 17, 1996, and 96-021, dated November 19, 1996) and for Nortec (96-013, dated October 9, 1996, and 96-018, dated December 4, 1996). The SIPs documented ACCUTECH's verification and comments for the inspection attributes identified on the SIP.

The inspectors discussed with ACCUTECH the fact that the SIP for both Atlas and Nortec did not include documentation for heat treatment as an inspection attribute. Considering the fact that the ABB CENP Purchase Specification for Quality Requirements listed heat treatment as an item requiring certification by ACCUTECH, heat treatment should have been included as an inspection attribute.

The inspectors concluded, with the exception of the failure to include the review of heat treatment activities and records at both facilities, the implementation of source inspection activities appeared to document the verification of the appropriate inspection attributes for the scope of supply.

3.10 Lead Auditor Qualification

The inspectors reviewed QSM 8.0, "Control of Purchased Material and Services," Revision 0, dated November 29, 1995, Section 8.5, and SOP 20.001, "Qualification of Auditors and Lead Auditors," Revision 2, dated November 15, 1995. The purpose of the SOP 20.001 is to ensure that personnel performing either internal or supplier audit/surveys are adequately qualified to perform those quality activities.

During the review of source inspection activities described above, the inspectors noted that the Quality Director, B&G Manufacturing had performed source inspections activities on behalf of ACCUTECH in 1996. According to the ACCUTECH QA Manager, this individual had been qualified as an lead auditor per the requirements of the ACCUTECH QA program and performed all audit and source inspection activities under the ACCUTECH QA program. This information was verified through review of auditor qualification records.

The inspectors discussed with ACCUTECH that this personnel interface between B&G and ACCUTECH is not described in QSM Section 2.0, "Organization," or identified on the ACCUTECH Organizational Chart. Based on the review of auditor qualification documentation, with the exception of the observation concerning the use of B&G personnel for ACCUTECH audits, audit activities performed by ACCUTECH were determined to be adequately implemented.

3.11 Entrance and Exit Meetings

Entrance and exit meetings were held for each segment of the two-part inspection. In the entrance meetings, held on November 12, 1996, and on January 28, 1997, the NRC inspectors discussed the scope of the inspection and outlined the areas to be inspected. In the exit meetings, held on November 14, 1996, and on January 30, 1997, the inspectors discussed their findings and concerns with ACCUTECH management.

PARTIAL LIST OF PERSONS CONTACTED

William A. Edmonds, President, B&G Manufacturing Company
Jim Sands, Quality Director, B&G Manufacturing Company
Roy P. Reindl, Branch Manager
Bill Sulhan, Quality Assurance Manager
Greg Keller, Marketing & Technical Services Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

99901307/96-01-01	VIO	exceeding Part 21 notification timeliness limit
99901307/96-01-02	VIO	inadequate Part 21 evaluation
99901307/96-01-03	NON	incomplete documentation supplied to customer
99901307/96-01-04	NON	inadequate verification of conformance
99901307/96-01-05	NON	inadequate corrective action
99901307/96-01-06	NON	inadequate review of material in Warehouse stock
99901307/96-01-07	NON	inadequate documentation of Part 21 evaluation

Discussed

Nonconformance 99901076/94-01-03 remains open and requires a response.