

ORGANIZATION: A&G ENGINEERING CO. II, INC.
ANAHEIM, CALIFORNIA

REPORT NO.: 99901006/85-01	INSPECTION DATE(S): 4/29-5/2/85	INSPECTION ON-SITE HOURS: 47
CORRESPONDENCE ADDRESS: A&G Engineering Co. II, Inc. ATTN: Mr. Marvin Thomas President 4640 E. LaPalma Avenue Anaheim, California 92806		
ORGANIZATIONAL CONTACT: Mr. John Thalasinis, QA Manager TELEPHONE NUMBER: (714) 779-4100		
PRINCIPAL PRODUCT: Ferrous & nonferrous bolting. NUCLEAR INDUSTRY ACTIVITY: 10%		
ASSIGNED INSPECTOR: <u>N. J. Miège</u> <u>6/27/85</u> N. J. Miège, Reactive Inspection Section (RIS) Date		
OTHER INSPECTOR(S): T. F. Burns, Consultant		
APPROVED BY: <u>E. W. Merschoff</u> <u>6/28/85</u> E. W. Merschoff, Chief, RIS, Vendor Program Branch Date		
INSPECTION BASES AND SCOPE: A. <u>BASES</u> : 10 CFR 50 Appendix B, 10 CFR 21. B. <u>SCOPE</u> : This inspection was performed as the result of an allegation made to the NRC concerning inadequate implementation of the A&G Engineering Co. II, Inc. (A&G) quality assurance program.		
PLANT SITE APPLICABILITY: Not determined during this inspection.		

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A. VIOLATIONS:

None.

B. NONCONFORMANCES:

1. Contrary to Criterion VII of 10 CFR 50 Appendix B and Section V, Paragraph II.C.1 of the A&G Engineering Co. II, Inc. (A&G) Quality Assurance Manual (QAM) sufficient objective evidence was not documented on vendor audit checklists to substantiate and/or verify the A&G auditor's findings.
2. Contrary to Criterion XII of 10 CFR 50 Appendix B, Section XX, Paragraph II.I.2 of the A&G QAM and A&G Quality Assurance Procedure (QAP) PR XX-A, Rev. A, paragraph VI:
 - a. the performance of the required "periodic checks" of measuring equipment could not be verified.
 - b. gauge 92A was incorrectly color coded.

C. UNRESOLVED ITEMS:

None.

D. OTHER FINDINGS AND COMMENTS:

10 CFR Part 21

The procedures adopted by A&G to comply with 10 CFR Part 21 were reviewed and the inspector verified that the procedures were adequate. The posting of these procedures, 10 CFR Part 21, and Section 206 of the Energy Reorganization Act of 1974 was also verified. A&G has never made a Part 21 report, nor was the QA manager aware of any instance where A&G material was the subject of a Part 21 report issued by either an A&G customer or a utility.

There were no findings in this area of the inspection.

Documentation Review

Fourteen purchase order (PO) packages from eight different customers were reviewed. The packages typically included: A&G's nuclear price quotation, certified material test reports, invoices, shipping manifests, A&G Certificates of Compliance, the customer's incoming PO, A&G's PO to a

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vendor to procure material, A&G nuclear receiving inspection report, A&G nuclear receiving ticket, reports of physical testing results, and special customer requirements when applicable. The review was undertaken to ensure that A&G procures nuclear material and services from properly qualified sources, correctly invokes federal and customer requirements on their vendor, maintains traceability of material, and properly implements the requirements of their quality assurance program. A review of the A&G Qualified Vendor List and selected vendor audits was also performed in conjunction with this PO review. The vendor audits were performed by personnel qualified in accordance with NQA-1 and using written checklists. However, the checklists were not always suited to the particular activity performed by the vendor, for example, calibration services or physical and chemical testing and analysis. Sufficient objective evidence to substantiate the audit findings (such as a list of procedures or POs reviewed) was also generally lacking.

Nonconformance B.1 was identified in this area of the inspection.

It was not possible to review and evaluate A&G's procedure for upgrading material to ASME Section III Class 1 since all ASME Section III Class 1 material which A&G has supplied has been excluded from any additional NDE testing requirements due to its small size (i.e., less than one inch diameter).

Corrective Action

Section XXIII, "Corrective Action," of the A&G QAM, the Corrective Action Request Log - Nuclear and 36 Corrective Action Reports (CARs) dated from January 20, 1982, through April 18, 1985, were reviewed. All CARs examined had been properly completed and signed off by A&G personnel as required by the QAM. The appropriateness of the corrective action taken was not evaluated.

There were no findings in this area of the inspection.

Nonconformance Material

Section XVII, "Nonconforming Material Control," of the A&G QAM, the Nonconforming Material Log, and 73 Nonconforming Material Reports (NMRs) dated from January 15, 1982 through April 4, 1985, were reviewed. All NMRs reviewed had been completed and signed off by A&G personnel per the requirements of the QAM.

There were no findings in this area of the inspection.

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Internal Audits

Section XXII, "Audits" of the A&G QAM and internal audit reports for the years 1981, 1982, 1983, 1984, and 1985 were reviewed. All audits were performed within the prescribed twelve month time interval. However, prior to 1984 the audit reports were generally inadequate and objective evidence to support the auditor's conclusions was not provided. In 1984 A&G hired a private firm to perform both the internal audits and management system audit. The private firm developed checklist questions and provided lists of the documents examined during the audits (for example: POs, shop travellers, etc.).

There were no findings in this area of the inspection.

Plant Tour

A tour was conducted of the A&G facilities to evaluate the adequacy of material control and storage activities. The facility was found to be clean and orderly. Raw materials were found to be in protective storage segregated by product form and size. Also, both raw and finished products were tagged or hard marked to identify the manufacturer/supplier, size, ASTM or AISI specification and quantity. One order being processed was identified as nuclear and was found to be segregated from commercial items, hard marked (die stamped) and further identified by a shop traveler. The shop traveler identified the heat code customer, item, size, quantity, and each step in the manufacturing process.

There were no findings in this area of the inspection.

Calibration of Measuring and Test Equipment

Section XX, "Control of Measuring and Testing Equipment," and calibration records (Gauge Control Records and Calibration Cards) dated from 1981 through April 1985 for nine different gauges were reviewed. A&G subcontracts to outside calibration services the task of calibrating their measuring and test equipment in accordance with a predetermined schedule. The gauges are color coded to identify the specific months when each must be calibrated. A "periodic check" as defined in Section XX is also required each time an instrument is used to ensure continued accuracy.

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Nine gauges were selected at random to verify that each was color coded and calibrated correctly. One gauge, 92A, was found to be marked with an incorrect color code. It was also impossible to verify the performance of the "Periodic Checks." The check is to be performed by a quality control/quality assurance person who makes the pertinent entries on the Gauge Control Record. A review of the Gauge Control Records revealed that there were no entries indicating that the checks had been performed. Specific examples of such records are:

<u>Gauge</u>	<u>"Periodic Checks" not verified</u>
6A	9/2, 8, 13, 15, 26 and 30 (1982) 1/22/83 to 6/1/83 6/21/83 to 12/1/83 12/1/83 to 6/1/84
23A	2/4/82 to 8/11/82 9/21/82 to 10/25/82 5/5/83 to 1/29/85
67A	4/14/82 (one day only) 5/3/82 to 6/21/82 7/12/82 to 9/23/82 3/18/82 to 9/2/83 9/12/83 to 6/16/84

Nonconformance B.2 was identified in this area of the inspection.

Training

Section XXI, "Training of Personnel" of the A&G QAM was reviewed, and A&G training records were examined. Lesson plan content was examined for the period 1981 through 1985 and was found to be substantive. Training was directed to those employees having duties and responsibilities affecting the quality of A&G products. Personnel who have received this training include the president, QA manager, QA auditor, production foreman, purchasing agent, quality control inspectors, manufacturing manager, and document control clerk. Topics covered during training sessions included but were not limited to:

- examinations, tests, and reports
- identification control of product
- receipt inspection
- audits
- control of special processes

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- f. certification
- g. QAM and subsequent revisions

There were no findings in this area of the inspection.

Allegation

An allegation was made to the NRC concerning inadequate implementation by A&G of their quality assurance program. This allegation was not substantiated in that, with the exception of several isolated instances (Nonconformances B.1 and B.2), the A&G quality assurance program is adequately implemented.

E. PERSONS CONTACTED:

- *J. Thalasinis, QA Manager, A&G
- *M. Thomas, President, A&G
- *W. Cook, Assistant QA, A&G

F. DOCUMENTS EXAMINED:

1. QAM, Rev. C, 4/17/85, A&G Engineering Co. II, Inc. Quality Assurance Manual.
2. Documentation Package, 14 documentation packages for orders from 8 different customers packages typically included: - A&G Nuclear Price Quotation - CMTRs - Invoices - Shipping Manifests - A&G Certificates of Compliance - Customer's Incoming PO - A&G PO to Vendor to Procure Material - A&G Nuclear Receiving Inspection Report - Special Customer Requirements (when applicable) - A&G Nuclear Receiving Ticket - Report of Physical Testing Results.
3. Other, Approved Vendors List and Vendor Audit Checklists.
4. Other, 9 Shop Travelers.
5. Procedure, A&G Procedures for Compliance with 10 CFR Part 21.
6. Other, Exhibit XXXI, Rev. A, 5/7/82, Nonconforming Material Report Log.
7. QCD, 73 Nonconforming Material Reports dated 1/15/82 - 4/4/85.

*attended exit meeting

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8. QCD, Exhibit XI, Rev. A, 5/7/82, Corrective Action Request Log - Nuclear.
9. QCD, 36 Corrective Action Reports dated 1/20/82 - 4/18/85.
10. Other, Internal Audit Reports - 1982, 1983, 1984, 1985.
11. Other, Auditor Qualification Records for two A&G Employees.
12. Internal Memo, 12 Semi-Annual Reports on the Status and Adequacy of the QA Program.
13. Other, Six reviews of ASME Code Addenda.
14. Lesson Plan, 1981-1985, Twenty Lesson Plans - Training of Personnel (for period 1981 thru 1985).
15. Purchase Order, 12489-S, 1985, Material "Upgrade" - 20 pcs. SA 540 Bolts, 8 pcs SA194 Nuts.
16. Purchase Order, H-58798, 2/1/85, Material "Upgrade" - 2000 pcs. SA194 Gr. 6 Nuts.
17. Audit Report, 5/25/84, Audit Report of a material manufacturer.
18. Audit Report, 1983/1984, Audit Report of a material manufacturer, 12/6 & 7/83 and 11/29 & 30/84.
19. Audit Report, 5/18/84, Audit Report of a material manufacturer.
20. Audit Report, 6/15/84, Audit Report of a calibration service.
21. Audit Report, 3/11/85, Audit Report of a testing lab.
22. Purchase Order, 8E 104035, 10/11/84, Cap Screws - Class 3, 1974 Edition 1, ASME III, SA 193 B7.
23. Purchase Order, 8E 204103, 10/23/84, Safety Related "Monel" B-164 Nuts.
24. Purchase Order, 8W 094124, 10/2/84, Safety Related Bolts ASTM A193 B8M.
25. Purchase Order, 8K 084011, 8/29/84, Safety Related Bolts and Nuts SA 193 B8M, SA 194, 8.

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26. Purchase Order, 4R-67787, 7/12/84, ASTM A 193 Gr. B6 Main Steam Check Valve, Hex Head Bolts - Replacement Parts.
27. Purchase Order, 61057, 8/8/84, SA 193 Gr. B7 (10'length) SA 617 Visual, Bar Steel - All threaded inspection.
28. Audit Report, 4/30.84, Audit Report of a laboratory.
29. Gauge Calibration Records, various document nos., 1982-1983 and 1984-1985, Nine Gauge Calibration Records 6A, 23A, 35A, 67A, 92A, 113A, 139A, 127A, 3B.