UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8931

October 28, 2008

Mr. Mark Capallo, President
Energy & Process Corporation
2146-B Flintstone Drive
Tucker, GA 30084-5000

SUBJECT: ACKOWLEDGEMENT OF ENERGY AND PROCESS' ADDITIONAL RESPONSE TO REACTIVE VENDOR INSPECTION – NRC TEAM INSPECTION REPORT 99900866/2008-001 AND NOTICE OF NONCONFORMANCE

Dear Mr. Capallo:

This letter is in reference to your August 18, 2008, additional response to the five nonconformances referenced in Nuclear Regulatory Commission (NRC) Inspection Report 99900866/2008-001, dated May 20, 2008. Your initial response was sent on June 9, 2008, and did not provide sufficient corrective actions to the identified nonconformances. Our July 8, 2008 letter provided specific items that must be addressed by Energy and Process Corporation to allow closure of the nonconformances. These nonconformances addressed problems with Energy and Process' Quality Systems Program regarding inadequate surveillance of the fabrication of rebar, inadequate audits of sub-suppliers, failure to verify adequacy of design in the dedication of commercial grade items, failure to write a condition report for a significant condition adverse to quality, and failure to properly disposition a code deficiency.

We have completed our review of your additional response and are advising you of our decision. Details of our review are provided in the enclosure to this letter. Our review has determined that your additional response does not adequately address three of the five nonconformances. Nonconformances 99900866/08-01-01 (inspections) and 08-01-03 (design control) require additional corrective actions and/or additional information before we can close these items. We are aware that you are still in the process of providing an additional response to Nonconformance 99900866/08-01-02 associated with the implementation of your external and internal audit programs. Your responses to Nonconformances 99900866/08-1-04 and 99900866/08-01-05 were reviewed and found to be adequate and will be closed.

In our July 8, 2008 letter we pointed out four concerns with your purchase of safety-related parts that were identified as a result of our review of your June 9, 2008 response. In your August 18, 2008 letter you did not provide sufficient information that would provide assurance that activities associated with the purchase of safety-related parts are properly controlled. Specifically, your response should address:

1) how you will document discussions with customers that are used to reach agreement on the control of supply for basic components as part of the purchase of safety-related, items relied upon for safety, or Nuclear Quality Assurance Level 1 (NQA-1) parts that are not included in the purchase specification;

2) how you will meet your American Society of Mechanical Engineers' NCA-3800 Quality Systems Certificate requirement to establish a quality program for the control of quality during manufacture or fabrication of safety related or QL-1 parts;

3) how you will provide controls to ensure that a vendor's responsibility to inspect the fabrication process is not relieved by a customer's promise to perform receipt inspection; and

4) how you will control changes to formal contractual requirements versus the informal processes for changing contract commitments.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," this document may be accessed through the NRC's public electronic reading room, Agency-Wide Document Access and Management System (ADAMS) in the Internet at http: www.nrc.gov/reading-rm/adams.html.

Finally, you indicated a desire to engage in a face-to-face dialogue with us. The NRC is willing to discuss your corrective actions in a public meeting at a mutually agreeable time. Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/

Charles R. Ogle, Deputy Director
Division of Construction Inspection

Docket No. 99900866

Enclosure:
NRC Response to Energy and Process Letter
dated August 18, 2008

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Letter to M. Capallo from Charles R. Ogle dated October 28, 2008

SUBJECT: ACKOWLEDGEMENT OF ENERGY AND PROCESS' ADDITIONAL RESPONSE TO REACTIVE VENDOR INSPECTION – NRC TEAM INSPECTION REPORT 99900866/2008-001 AND NOTICE OF NONCONFORMANCE

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NRC Response to Energy and Process Letter dated August 18, 2008

Nonconformance 99900866/08-01-01

10 CFR 50, Appendix B, Criterion X, "Inspection," requires, in part, that "a program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity."

Contrary to the above, from January 2007 through February 2008, Energy and Process performed surveillances (inspections) of fabricated reinforcing steel purchased from Commercial Metals Company (CMC) Rebar Carolinas that did not verify conformance to specified documents, including the American Concrete Institute (ACI) 349, "Code Requirements for Nuclear Safety-Related Concrete Structures." The failure of Energy and Process to perform adequate surveillances that verified conformance to quality during fabrication of reinforcing steel resulted in a large quantity of nonconforming reinforcing steel, approximately 892 tons, sent to the Mixed Oxide Fuel Fabrication Facility for installation into items relied on for safety structures.

Energy and Process Additional Response to Nonconformance 99900866/08-01-01

Energy and process provided six attachments and discussed evidence of agreements reached with Duke, Cogema, and Stone and Webster; quality program improvements made to the commercial grade dedication program; and application of ACI-349 based on the original purchase specification for rebar at the Mixed Oxide Fuel Fabrication Facility. Energy and Process discussed an "overview" of ACI-349 vs ACI-315, and identified ACI-315 as a non-mandatory standard to provide clarity to various MOX communications. Energy and Process continues to take the position that bend diameter is not a critical characteristic for rebar and only needs to be verified if stipulated on drawings or called out by the customer.

Evaluation of Energy and Process' Additional Response to Nonconformance 99900866-01-01

The NRC does not accept the Energy and Process response. The six attachments provided by Energy and Process as additional responses to this nonconformance do not appear to address the nonconformance. This nonconformance specifically was issued to highlight the fact that Energy and Process did not properly inspect the fabrication of rebar. The response to this nonconformance must provide the specific corrective actions that Energy and Process will take to ensure that, in the future, fabrication activities that are part of the purchase of NQA-1, Appendix B, and basic parts dedicated as safety-related, are properly inspected.

Regarding the overview of ACI-315 versus ACI-349, it is our conclusion that either standard, when reviewed for the fabrication of rebar (the bending of rebar), would mandate specific requirements regarding minimum bend diameters. It is unacceptable to consider the standard specified for the fabrication of rebar, to be used in safety-related applications or items relied

upon for safety, as non-mandatory. If the logic applied by Energy and Progress were acceptable, there would be no limit to bend diameter. This could obviously result in excessively bent rebar that could fail under design basis loads. We agree that ACI-349 is typically used in the construction of nuclear power plants, and that ACI-315 can be used as the standard for non-nuclear construction applications.

However, in this case, either would have sufficed for minimum bend diameter requirements and if both are referenced for the purchase of an NQA-1 part, then the parts provider should seek clarification from the customer to ensure that the application of both are clearly stated in the purchase specification. The response should include measures to ensure that codes and standards referenced in procurement specifications are met.

Nonconformance 99900866/08-01-02

10 CFR 50, Appendix B, Criterion XVIII, "Audits," requires in part, that "audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program." Contrary to the above, for the period January 2007 through February 2008, audits conducted by Energy and Process were inadequate for determining the effectiveness of the quality assurance (QA) program being audited. Specifically, the audits did not contain the audit scope, objective evidence and review and summation documentation required to determine audit program effectiveness.

Energy and Process' Additional Response to Nonconformance 99900866/08-01-02

No additional response to this nonconformance was provided by Energy and Process. Energy and Process indicated in the August 18, 2008 response that additional information is still being developed for this nonconformance and that it will be provided in the near future.

Nonconformance 99900866/08-01-03

10 CFR 50, Appendix B, Criterion III, "Design Control," requires, in part, that "measures shall be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components."

Contrary to the above, for the period January 2007 through February 2008, the commercial grade dedication processes for the procurement of piping material procured from Outokumpu, for plate steel procured from Claymont Steel, and for reinforcing steel procured from Commercial Metals Company Rebar Carolinas were inadequate in that these materials were supplied to MFFF for use in items relied on for safety structures, systems and components without adequate review for suitability of application.

Energy and Process Additional Response to Nonconformance 99900866/08-01-03

In their response, Energy and Process discussed the process used to address Corrective Action Report (CAR) 02-08 and the enhancements to QCP-11, the procedure used for commercial grade dedication. Section 11.3 states that the QA manager will establish the method for identification and verification of critical characteristics. Energy and Process determines the

critical characteristics when a simple commodity is specified and requirements are contained in a code, standard, or purchase order.

Evaluation of Energy and Process' Additional Response to Nonconformance 99900866-01-03

The enhancements to QCP-11, entitled "Commercial Grade Item Dedication," still provide concerns regarding the dedication process. While simple components or commodities may have readily identified critical characteristics, which can be verified by one of the four methods specified in Electric Power Research Institute's NP-5652, the response does not specify what actions will be taken when the simple component is to be used in a more complex application. For example, different design requirements may impose additional testing and/or verification activities to ensure that a basic component will perform acceptably in its intended application. These "unique applications" may require specific technical knowledge capabilities or close coordination between customer and parts provider to ensure that all of the necessary commercial grade dedication activities have been completed and verified before installation. The response should address this concern including measures to assure that if commercial grade dedication activities are undertaken, the appropriate engineering knowledge will be available to support such decisions.

Nonconformance 99900866/08-01-04

10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" requires, in part, that "in the case of significant conditions adverse to quality, measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Energy and Process Quality System Manual, Section XIV, Rev. 2, "Corrective Action," Item 14.3 states, "Identification of repetitive or significant conditions adverse to quality shall result in issuance of a CAR, Form #107 (Exhibit T), to the responsible vendor or internal department head, as applicable." Energy and Process Quality System Manual, Section IX, Rev. 2, "Nonconforming Material Control," Item 9.2.2 states, "Nonconformances shall be evaluated for reportability under 10 CFR Part 21."

Contrary to the above, from approximately 2007 to the date of this inspection, Energy and Process did not assure that the cause of a significant condition adverse to quality was determined in that they did not generate a Form #107 (Exhibit T) Corrective Action Request to address the failure to meet the ACI-349, "Code Requirements for Nuclear Safety-Related Concrete Structures," limits on reinforcing steel minimum bend diameter for approximately 892 tons of nonconforming reinforcing steel bars, a significant condition adverse to quality. As a consequence, Energy and Process failed to perform a root cause analysis to determine the cause of the condition, and failed to perform an extent of condition review and a 10 CFR Part 21 reportability analysis.

Energy and Process' Additional Response to Nonconformance 99900866/08-01-04

Corrective Action Request (CAR) 05-08 was provided which documented the nonconformance with rebar that was not bent to minimum diameter requirements. Corrective actions were to implement inspections of rebar to ensure that minimum bend diameters were met. In addition,

Energy and Process generated a memo to all associates reminding them of the necessity of ensuring that the quality assurance program is used to disposition deviations or nonconformances. Energy and Process developed a new procedure "Processing NCRs and CARs," QCP-10. This procedure provides specific guidance for the disposition of conditions adverse to quality. Also, Form 107 was revised to add consideration for Part 21 evaluations and reportability.

Evaluation of the Energy and Process Corporation Response to Nonconformance 99900866-01-04

The NRC finds that the Energy and Process response to this nonconformance is adequate.

Nonconformance 99900866/08-01-05

10 CFR 50, Appendix B, Criterion XV, "Nonconforming Material, Parts, or Components" requires, in part, that "measures shall be established to control materials, parts, and components which do not conform to requirements in order to prevent their inadvertent use or installation."

The Energy and Process Quality System Manual, Section IX, Rev. 2, "Nonconforming Material Control," requires that the QA Manager disposition nonconforming items by: returning material to vendor; downgrading the material classification; requesting the customer to accept the item disposition with a deviation request; scrap; or rework.

ASME B31.3 Section 340 states, in part, that it is the owner's responsibility to inspect the piping to the extent necessary to be satisfied that it conforms to all applicable exam requirements of the code and of the engineering design. It further states that the owner shall have the right to inspect the piping to satisfy the owner's responsibilities. Section 341 states, in part, that inspection does not relieve the manufacturer or fabricator of the responsibility for providing components in accordance with the requirements of the Code. This Section further requires that an examined item with one or more imperfections of a type or magnitude exceeding the acceptance criteria of the Code shall be repaired or replaced.

Contrary to the above, Energy and Process, with assistance from Piping Systems, Inc., did not properly control nonconforming material and prevent its use in that they incorrectly dispositioned nonconforming material associated with Nonconformance Report 09-08 dated January 15, 2008. Specifically, on December 20, 2007, MFFF Services issued Nonconformance Report CE-07-0154, to document receipt of a piping spool piece (F0231) from an Energy and Process subcontractor, Piping Systems, Inc. containing a weld defect that did not meet the acceptance criteria of ASME B31.3, 1996 Edition, 1998 Addenda, paragraph 341.3.2 and Table 341.3.2, which limit incomplete penetration to not more than 1.5 inches in any 6 inch weld length. Energy and Process did not repair or replace the defect nor request MFFF Services to accept the item disposition with a deviation request, but dispositioned the weld defect as use-as-is by inappropriately applying allowances in ASME B31.3 Section 341.3 for acceptance, by leak testing, of joints not subject to examination The Nonconformance was issued for the failure to adequately disposition an ASME B.31.3 code deficiency for a piping spool piece.

Energy and Process Response to Nonconformance 99900866/08-01-05

Energy and Process provided a new procedure “Processing NCRs and CARs,” QCP-10. This procedure provides specific guidance for the disposition of nonconforming materials.

Evaluation of the Energy and Process Corporation Response to Nonconformance 99900866-01-05

The NRC finds that the Energy and Process response to this nonconformance is adequate.