



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

June 2, 2008

Mike T. Okolita, President
PCI Energy Services, LLC
One Energy Drive
Lake Bluff, IL 60044

SUBJECT: NRC INSPECTION REPORT 99901374/2008-201, NOTICE OF VIOLATION,
AND NOTICE OF NONCONFORMANCE

Dear Mr. Okolita:

On May 5-8, 2008, U.S. Nuclear Regulatory Commission (NRC) inspectors conducted an inspection at the PCI Energy Services, LLC (PCI) facility in Lake Bluff, Illinois. The enclosed report presents the details of that inspection.

This was a limited scope inspection which focused on assessing PCI's compliance with the provisions of Part 21, "Reporting of Defects and Noncompliance," of Title 10 of the *Code of Federal Regulations* (Part 21), and selected portions of Appendix B "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Part 50 of Title 10 of the *Code of Federal Regulations* (Appendix B). This NRC inspection report does not constitute NRC endorsement of your overall Quality Assurance (QA) or Part 21 programs.

It was found that certain activities appeared to be in violation of NRC requirements that are discussed in the enclosed Notice of Violation (NOV), Notice of Nonconformance (NON), and NRC Inspection Report. Specifically, during a review of PCI's procedure that you had adopted to implement and control the provisions of 10 CFR Part 21, it was determined that PCI quality procedure GQP-16.1, "10 CFR Part 21 Notification," did not ensure that deviations and failures to comply within the time limits specified in Part 21 were evaluated. One violation of Part 21 is cited in the enclosed NOV, and the circumstances surrounding the NOV are described in the enclosed report. Please note that you are required to respond to this letter and should follow the instructions specified in the enclosed NOV when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

The NRC inspectors also identified two areas where the implementation of your QA program failed to meet NRC requirements imposed on you by your customers. During the review of records associated with PCI procedure qualification records (PQRs) and PCI welding control procedure (WCP)-1, "Weld Procedure Preparation and Qualification," it was identified that PQR 770 and PQR 781 packages did not contain adequate records regarding activities affecting quality. Additionally, PCI was not able to readily identify and retrieve records of activities affecting quality. The specific findings and references to the pertinent requirements are identified in the enclosures to this letter.

Please provide a written statement or explanation within 30 days from the date of this letter in accordance with the instructions specified in the enclosed NON. We will consider extending the response time if you show good cause for us to do so.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Sincerely,

(/RA by P. L. Hiland)

Patrick L. Hiland, Director
Division of Engineering
Office of Nuclear Reactor Regulation

Enclosures:

1. Notice of Violation
2. Notice of Nonconformance
3. Inspection Report 99901374/2008-201

cc w/enclosures:

Mr. Kevin Timmons, Quality Assurance Manager
PCI Energy Services, LLC
One Energy Drive
Lake Bluff, IL 60044

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request that such material is withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Sincerely,

(/RA by P. L. Hiland)

Patrick L. Hiland, Director
 Division of Engineering
 Office of Nuclear Reactor Regulation

Enclosures:

1. Notice of Violation
2. Notice of Nonconformance
3. Inspection Report 99901374/2008-201

cc w/enclosures:
 Mr. Kevin Timmons, Quality Assurance Manager
 PCI Energy Services, LLC
 One Energy Drive
 Lake Bluff, IL 60044

DISTRIBUTION:
 RidsNroDcipCqvb
 RidsNroDcipCqvp
 KKavanagh
 EAndruszkiewicz
 JCrutchley (signed copy)
 JPetrosino (signed copy)

ADAMS ACC NO: ML081560051

ADAMS Check: Public Non-Public Sensitive Non-Sensitive

OFC	DE:NRR	CVIB:DCI:NRR	DE:NRR	DE:NRR	D:DE:NRR
NAME	JJPetrosino	JPetrosino for EVAndruszkiewicz	BWMiller	DFTatcher	PLHiland
DATE	5/28/08	5/28/08	5/29/08	5/30/08	6/2/08

OFFICIAL RECORD COPY

NOTICE OF VIOLATION

PCI Energy Services
One Energy Drive
Lake Bluff, IL 60044

Docket No. 99901374
Inspection Report No. 99901374/2008-201

Based on the results of a Nuclear Regulatory Commission (NRC) inspection conducted May 5-8, 2008, at PCI Energy Services' (PCI) facility in Lake Bluff, Illinois, one violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Section 21.21, "Notification of failure to comply or existence of a defect and its evaluation," of 10 CFR Part 21, "Reporting of Defects and Noncompliance," states, in part, (a) Each individual, corporation, partnership, dedicating entity, or other entity subject to 10 CFR Part 21 shall adopt appropriate procedures to -- (1) Evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable, and, except as provided in paragraph (a)(2) of §21.21, in all cases within 60 days of discovery, in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected, and (2) Ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person as discussed in §21.21(d)(5). The interim report should describe the deviation or failure to comply that is being evaluated and should also state when the evaluation will be completed. This interim report must be submitted in writing within 60 days of discovery of the deviation or failure to comply. (3) Ensure that a director or responsible officer subject to the regulations of this part is informed as soon as practicable, and, in all cases, within the 5 working days after completion of the evaluation described in paragraphs (a)(1) or (a)(2) of §21.21... if the manufacture, construction, or operation of a facility or activity, a basic component supplied for such facility or activity, or the design certification or design approval under part 52 of this chapter (i) Fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the Commission or standard design approval under part 52 of this chapter, relating to a substantial safety hazard, or (ii) Contains a defect.

Contrary to the above, as of May 8, 2008:

PCI's General Quality Procedure (GQP) – 16.1, "10 CFR 21 Notification," dated May 3, 2003, did not ensure that deviations and failures to comply associated with substantial safety hazards were evaluated as soon as practicable, and, except as provided in paragraph (a)(2) of §21.21, in all cases within 60 days of discovery, in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected. Additionally, GQP-16.1 did not ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible PCI officer.

This issue has been identified as Violation 99901374/2008-201-01.

This is a Severity Level IV violation (Supplement VII).

ENCLOSURE 1

Pursuant to the provisions of 10 CFR 2.201, "Notice of Violation," PCI is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Director, Division of Engineering, Office of Nuclear Reactor Regulation, within 30 days of the date of the letter transmitting this Notice of Violation. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agency-wide Documents Access and Management System (ADAMS), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection, described in 10 CFR 73.21.

Dated this 2nd day of June, 2008.

NOTICE OF NONCONFORMANCE

PCI Energy Services
One Energy Drive
Lake Bluff, IL 60044

Docket No. 99901374
Inspection Report No. 99901374/2008-201

Based on the results of a Nuclear Regulatory Commission (NRC) inspection conducted May 5-8, 2008, at PCI Energy Services' (PCI) facility in Lake Bluff, Illinois, two nonconformances with 10 CFR Part 50 Appendix B requirements were identified. In accordance with the NRC Enforcement Policy, the nonconformances are listed below:

- A. Criterion V, "Instructions, Procedures, and Drawings," of Appendix B to 10 CFR Part 50 states, in part, activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Section 5.0, "Instructions, Procedures, and Drawings," of PCI's Quality Assurance Program (QAP) Manual, Revision 16, states, in part, documented controls are required for activities that affect the quality of designated items and services to ensure that the activities are suitably prescribed, accomplished and recorded.

Section 5.5.2, "Specimen," of PCI Welding Control Procedure (WCP) - 1, "Weld Procedure Preparation and Qualification," requires, in part, that testing of the required specimens shall be in accordance with the "Welding Procedure Qualification Testing Checklist" (WPQTC) prepared by the welding engineer. The WPQTC shall contain the information necessary for the testing laboratory to conduct the required tests.

Contrary to the above, PCI did not provide a WPQTC to their testing laboratory to ensure that test specimens were properly prepared and tested in support of the qualification of PCI's temperbead weld overlay procedures.

This issue has been identified as Nonconformance 99901374/2008-201-02.

- B. Criterion XVII, "Quality Assurance Records," of Appendix B to 10 CFR Part 50, states, in part, sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall include closely-related data such as qualifications of personnel, procedures, and equipment. Records shall be identifiable and retrievable.

Section 17.0, "Quality Assurance Records," of PCI's Quality Assurance Program (QAP) Manual, Revision 16, states, in part, quality procedures require retention and maintenance of quality related records such as, but not limited to: as-built drawings, specifications, procedures, inspection reports, procurement documents, equipment records, receiving reports, storage records, work orders, fabrication records, final inspections, maintenance records, nonconformance reports, corrective action reports, audit plans, audit reports, training records, personnel records, procedures, Project Instructions, special processes, procedures and process qualification records.

Section 5.4, "Test Coupon," of PCI's WCP-1, "Weld Procedure Preparation and Qualification," requires, in part, that any inspection reports, heat-treat records, and applicable welding data shall be forwarded to the welding engineer (e.g. parameter

development, bead placement diagrams, etc.) for inclusion into the applicable procedure qualification record (PQR) testing package.

Contrary to the above, as of May 8, 2008, heat treatment records were not included in the PQR 770 or PQR 781 test packages.

This issue has been identified as Nonconformance 99901374/2008-201-03.

Please provide a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Director, Division of Engineering, Office of Nuclear Reactor Regulation, within 30 days of the date of the letter transmitting this Notice of Nonconformance. This reply should be clearly marked as a "Reply to a Notice of Nonconformance" and should include for each noncompliance: (1) the reason for the noncompliance, or if contested, the basis for disputing the noncompliance; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid non-compliances; and (4) the date when your corrective action will be completed. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agency-wide Documents Access and Management System (ADAMS), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated this 2nd day of June, 2008.

**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF ENGINEERING
VENDOR INSPECTION REPORT**

Docket No.: 99901374

Report No.: 99901374/2008-201

Vendor: PCI Energy Services
One Energy Drive
Lake Bluff, Illinois 60044

Vendor Contact: Kevin Timmons, QA Manager
Phone (847) 680-8100
timmonkj@PCI.westinghouse.com

Nuclear Industry Activity: PCI Energy Services, LLC (PCI) is a wholly owned subsidiary of the Westinghouse Electric Company, LLC (WEC) and provides engineering and welding services to the domestic and foreign nuclear industries. Services include welding, machining, QA/QC services, NDE, and tooling design. PCI holds certificates of authorization from ASME such as NA, NPT, S and U and also National Board Certificates NB, R and NR.

Inspection Dates: May 5-8, 2008

Inspectors: Joseph J. Petrosino, EQVB/DE/NRR, Team Leader
Barry W. Miller, EQVB/DE/NRR
Edward V. Andruszkiewicz, CVIB/DCI/NRR

Approved By: *(/RA by D. F. Thatcher)* *05-30-2008*
Dale F. Thatcher Date
Quality & Vendor Branch
Division of Engineering
Office of Nuclear Reactor Regulation

EXECUTIVE SUMMARY

PCI Energy Services
99901374/2008-201

The purpose of this inspection was to review and evaluate selected portions of PCI Energy Services', LLC (PCI) safety-related 10 CFR Part 50 Appendix B and 10 CFR Part 21 programs at PCI's facility in Lake Bluff, Illinois. The inspectors reviewed portions of PCI's Quality Assurance (QA) program implementation regarding safety-related welding activities, and also reviewed PCI's 10 CFR Part 21 controls that had been established to meet the requirements set forth in Part 21.

The NRC inspection bases were:

- 10 CFR Part 21, "Reporting of Defects and Noncompliance." (Part 21)
- 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." (Appendix B)

There were no previous NRC inspections performed at PCI's facility in Lake Bluff, Illinois prior to this inspection. The results of the inspection are summarized below.

Part 21 Program

During a review of PCI's procedure adopted to implement and control the provisions of Part 21, it was determined that PCI General Quality Procedure (GQP)-16.1, "10 CFR Part 21 Notification," dated May 3, 2003, did not ensure that deviations and failures to comply were evaluated within the time frames specified in Part 21. Additionally, GQP-16.1 did not ensure that if an *evaluation* of an identified *deviation* or *failure to comply* potentially associated with a *substantial safety hazard* cannot be completed within 60 days from *discovery* of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible PCI officer. Notice of Violation (NOV) 99901374/2008-201-01 was identified in this area.

Appendix B Safety-Related Welding Service Activities

The inspectors also identified two Notices of Nonconformance (NON) regarding compliance with 10 CFR Part 50, Appendix B requirements imposed upon PCI by its nuclear utility customers. The inspectors identified that PCI did not provide a Welding Procedure Qualification Testing Checklist (WPQTC) to their testing laboratory in accordance with PCI's procedure to ensure that test specimens were properly prepared and tested. Additionally, it was identified that PCI did not include heat treatment records in two Procedure Qualification Record (PQR) packages and could not subsequently find these records for one of the two PQRs. The inspectors noted that PCI documented both of these nonconformance issues into its GQP-16.0 "Corrective Action Process (CAP) & Stop Work Policy" program, which should evaluate whether the issues could represent a condition adverse to nuclear safety. NON 99901374/2008-201-02 and NON 99901374/2008-201-03 were identified in this area.

REPORT DETAILS

1. Part 21 Program

a. Inspection Scope

The inspectors reviewed PCI's QA policies and procedures that govern the Part 21 program to determine compliance with Part 21. The procedure that PCI established and adopted to implement the provisions of Part 21 was PCI GQP-16.1, "10 CFR Part 21 Notification," dated May 3, 2003.

b. Observations and Findings

The inspectors review included a comparison of the provisions of §21.21 to the requirements contained in GQP-16.1. Section 21.21 requires that each individual, corporation, or other entity subject to Part 21 adopt appropriate procedures to evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable, and, except as provided in paragraph (a)(2) of §21.21, in all cases within 60 days of discovery, in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected, and ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer.

Section 21.21 also requires that the interim report describe the deviation or failure to comply that is being evaluated and should also state when the evaluation will be completed. This interim report must be submitted in writing within 60 days of discovery of the deviation or failure to comply. Further, §21.21 (a)(3) requires entities to ensure that a director or responsible officer subject to Part 21 is informed as soon as practicable, and, in all cases, within the 5 working days after completion of the evaluation described in §21.21 (a)(1) or (a)(2), if a basic component supplied for such facility or activity fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the Commission or standard design approval under 10 CFR Part 52 relating to a substantial safety hazard, or contains a defect.

The inspectors identified that GQP-16.1 was not adequate to ensure that deviations and failures to comply associated with substantial safety hazards were evaluated within the specified time limits in order to identify a reportable defect or failure to comply that could create a substantial safety hazard. For example, even though Part 21 requires entities (subject to Part 21) to evaluate deviations and failures to comply in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, GQP-16.1 did not reflect the §21.21 evaluation and associated requirements.

Additionally, GQP-16.1, also did not contain provisions to ensure that if a deviation or failure to comply is discovered by PCI and PCI determines that it does not have the capability to perform the evaluation to determine if a defect exists, then PCI would be

required to inform its end users or affected licensees within five working days of this determination so that the purchasers or affected licensees may evaluate the deviation or failure to comply. The inspectors identified that GQP-16.1 generally addressed Section 206 notification activities instead of addressing the required §21.21(a)(1), (a)(2) and (a)(3) portions of Part 21.

The stated purpose of GQP-16.1 indicated that the procedure “defines the provisions for invoking authority for reporting noncompliance with 10 CFR 21 or 10 CFR 50.55(e) for quality/safety-related items and basic components and provides for the initiation of notification.” However, the inspectors concluded that the GQP-16.1 procedure was more oriented towards activities associated with “*notification*,” as defined in §21.3, “Definitions” of Part 21, which means the telephonic or written communication to the NRC regarding a defect or failure to comply that, based on an evaluation, could have caused a substantial safety hazard. This is only one piece of Part 21 and does not encompass all of the Part 21 requirements.

The PCI staff QA representatives and NRC inspectors discussed the Part 21 requirements and the inspectors’ concerns regarding updating GQP-16.1 to align it with the provisions of Part 21. PCI understood the need to resolve the GQP-16.1 concerns and stated they would do so within approximately 30 days of receiving this inspection report.

c. Conclusions

The inspectors identified that GQP-16.1 did not adequately describe the salient portions of §21.21 to ensure that deviations and failures to comply associated with substantial safety hazards were evaluated, to determine if they could create a substantial safety hazard, and complied with the specified time limits. As a result, the inspectors concluded that PCI did not adopt a Part 21 procedure that adequately addressed the overall provisions of Part 21, specifically §21.21. NOV 99901374/2008-201-01 was identified in this area.

2. Appendix B Safety-Related Welding Service Activities

a. Inspection Scope

The inspectors reviewed selected portions of PCI’s QA program controls, including welding procedure specifications (WPSs), procedure qualification records (PQRs), test laboratory reports, heat treatment records, welding travelers, test laboratory audit reports, welder qualifications, and other associated documents to determine the adequacy of PCI’s safety-related welding services provided to nuclear power plants. The inspectors focused their review on the temperbead weld overlay technique being used at pressurized water reactors (PWRs) to mitigate crack propagation in pressurizer nozzle dissimilar metal welds.

b. Observations and Findings

The inspectors selected a sample of job packages from a list of all temperbead weld overlays performed at power plants by PCI. This sample included Beaver Valley Unit 1,

Vogtle Unit 1, and Wolf Creek. From this sample, and a discussion with PCI personnel, the inspectors found that one of two WPSs was used for each job, depending on the pressurizer nozzle base material. These were WPS 3-8/52-TB MC-GTAW (for welding to P-3 nozzle base material) and WPS 1-8/52-TB MC-GTAW (for welding to P-1 nozzle base material). Both of these procedures and their associated documents, including qualification documentation, were reviewed. The WPSs were written to the requirements of Section IX of the American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel (B&PV) Code, and ASME Code Case N-638 "Similar and Dissimilar Metal Welding Using Ambient Temperature Machine GTAW Temper Bead Technique Section XI, Division 1." The inspectors noted that the most relevant PQR that supports the P-3 welding procedure is PQR 770, and the most relevant PQR that supports the P-1 welding procedure is PQR 781.

In the case of both procedures, the inspectors noted that the weld joint used for the production welding is a simple overlay design. However, the joint used for the qualification of the procedures is more complex due to the ASME Code requirements to provide tensile, bend, and Charpy V-notch (CVN) testing specimens. PCI made this joint by welding a stainless steel block into a base material plate, thereby creating a dissimilar metal joint which could be utilized to qualify the weld procedure and also harvest specimens for the ASME Code-required qualification tests.

Once PCI welds the test plates, they are sent to a sub-contracted testing laboratory for performance of the required tensile, bend, and CVN testing. In order to perform these tests, the lab is required to cut out and prepare test specimens. The inspectors inquired how PCI instructs the lab to prepare these samples. PCI personnel stated that the test lab is told to follow the requirements of ASME Section IX, Code Case N-638, and applicable American Society for Testing and Materials (ASTM) Standards. However, there were no records to show that PCI provided the test lab with a Welding Procedure Qualification Testing Checklist (WPQTC), as required by PCI procedures.

Specifically, Section 5.5.2, "Specimen," of PCI's Welding Control Procedure (WCP)-1, "Weld Procedure Preparation and Qualification," requires, in part, that testing of the required specimens shall be in accordance with the WPQTC prepared by the welding engineer. The WPQTC shall contain the information necessary for the testing laboratory to conduct the required tests.

Criterion V of Appendix B requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

The inspectors identified that PCI did not provide a WPQTC to their test lab as required by their procedure. Therefore, PCI did not meet the requirements of Criterion V of Appendix B. Meeting these requirements is necessary to ensure that the test lab sample preparation and testing is conducted properly. It was also noted by PCI staff during discussions with the NRC inspectors that WCP-1 did not have any WPQTC form as an exhibit to the procedure. Additionally, PCI could not produce the specimens, post test, to demonstrate they were appropriately prepared in accordance with ASME Code requirements. This issue has been identified as NON 99901374/2008-201-02.

During the inspection, the inspectors requested to review the heat treatment records that show the test plates used for the PQRs received an adequate heat treatment as required by the ASME Code and Code Case N-638.

Criterion XVII of Appendix B requires, in part, that sufficient records shall be maintained to furnish evidence of activities affecting quality... the records shall include closely-related data such as qualifications of personnel, procedures, and equipment... and records shall be identifiable and retrievable.

Furthermore, Section 5.4, "Test Coupon," of WCP-1 states, in part, that any inspection reports, heat-treat records, and applicable welding data shall be forwarded to the welding engineer (e.g. parameter development, bead placement diagrams, etc.) for inclusion into the applicable PQR testing package.

The inspectors identified that the heat treatment records requested by the inspectors were not included in the PQR testing packages. Further, as of May 8, 2008, PCI was unable to locate the heat treatment records supporting PQR 770; however, the records for PQR 781 were retrieved through PCI's sub-contracted test lab. This issue has been identified as NON 99901374/2008-201-03.

The inspectors noted that PCI documented both of these nonconformance issues into its GQP-16.0 "Corrective Action Process (CAP) & Stop Work Policy" program, which should evaluate whether the issues could represent a condition adverse to nuclear safety.

c. Conclusions

The inspectors identified two nonconformances with Appendix B requirements. NON 99901374/2008-201-02 was issued because PCI did not provide a WPQTC to their testing laboratory to ensure that test specimens were properly prepared and tested. NON 99901374/2008-201-03 was issued because PCI did not include heat treatment records in the PQR packages and could not subsequently find the records for one of the PQRs.

3. Entrance and Exit Meeting

On May 5, 2008, the inspectors discussed the scope of the NRC inspection at PCI with Mike Okolita (President of PCI), Jimmy Morgan (President of WEC Welding & Machining), and members of their staffs. During the exit meeting conducted on May 8, 2008, the inspectors discussed their findings with the same PCI and WEC individuals who attended the entrance meeting.

ATTACHMENT

1. PERSONS CONTACTED

M.T. Okolita	President	PCI Energy Services, LLC
J.B. Morgan	President	WEC Welding & Machining, LLC
M.K. Baughn	QA Engineer	PCI Energy Services, LLC
P.R. Evans	Fellow Engineer	PCI Energy Services, LLC
G.G. Hlifka	Mgr. Welding Eng.	WEC Welding & Machining, LLC
B. Newton	GM, Welding & QA	WEC Welding & Machining, LLC
K.J. Timmons	Manager, QA	PCI Energy Services, LLC

2. INSPECTION PROCEDURES USED

NRC Inspection Procedure 43001, "Reactive Inspection of Nuclear Vendors."

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
99901374/2008-201-01	Opened	NOV	Violation of Part 21
99901374/2008-201-02	Opened	NON	Nonconformance of Appendix B
99901374/2008-201-03	Opened	NON	Nonconformance of Appendix B