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May 20, 1983



(202) 893-3500

ABLE ADDRESS: ATOMLAW

Judge Lawrence Brenner  
Atomic Safety and  
Licensing Board  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

Judge Richard F. Cole  
Atomic Safety and  
Licensing Board  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

Judge Peter A. Morris  
Atomic Safety and  
Licensing Board  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

In the Matter of  
Philadelphia Electric Company  
(Limerick Generating Station, Units 1 and 2)  
Docket Nos. 50-352 and 50-353

Gentlemen:

This letter is being submitted in response to the Atomic Safety and Licensing Board's "Order Regarding Quality Assurance Documents" (May 13, 1983). Attachment 1 is a copy of NRC I&E Inspection Report No. 50-353/76-06, including the related Notice of Violation. Attachment 2 is Applicant's response thereto which is a letter from V. S. Boyer to J. P. O'Reilly dated December 15, 1976 with three attachments of which only the first is relevant to the matter raised by Mr. Romano. Attachment 3 is a December 29, 1976 letter from R. T. Carlson to V. S. Boyer acknowledging receipt of Mr. Boyer's December 15, 1976 letter. Counsel for the Staff has reviewed these three documents and agrees that they are accurate copies of the inspection report and letter sent by it and Mr. Boyer's letter received by it.

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The remainder of the attachments hereto (Nos. 4 - 9) are those documents which were made available to Mr. Romano in response to his informal discovery request. In accordance with my conversation with Mr. Romano yesterday, I am sending to him by Federal Express a copy of this letter and attachments such that he may make any presentation to the Board that he desires regarding these documents. The remainder of this letter discusses how the documents made available to Mr. Romano demonstrate that all suspect welds, rather than those which were merely accessible, were re-inspected.

Attachment 4 is a Philadelphia Electric Company Quality Assurance Finding Report No. N-093 which was issued to the Bechtel Power Corporation (October 27, 1976). This Finding Report is the method by which, inter alia, NRC items of noncompliance are entered into the quality assurance system of the Philadelphia Electric Company for followup and disposition. Page 2 of the finding report notes the issuance of Nonconformance Report No. ("NCR") 1980 which was utilized by Bechtel to disposition the specific welds which were found to be deficient by the NRC inspector. Bechtel NCR No. 1980 is provided as Attachment 5.

PECO Quality Assurance Finding Report N-093 also requires a reinspection of all other accessible welds inspected by the particular Bechtel Quality Control Inspector who accepted the deficient welds described in the subject NRC Inspection Report and NCR No. 1980. Bechtel Field Inspection Reports (sometimes referred to as "QCGI-1 Reports" after the form utilized) which have control Nos. C-63-7 through C-63-19, issued from October 26, 1976 through November 8, 1976, (Attachment 6) document the reinspection and disposition of welds examined in 1976 in response to PECO finding report N-093 and which form the basis for Mr. Boyer's letter.

Bechtel Field Inspection Reports Control Nos. C-63-20 and C-63-21, both dated January 17, 1977, (Attachment 7) document additional reinspection of welds which were subsequently determined to have been possibly inspected by the particular Bechtel Quality Control Inspector involved. No unsatisfactory welds were found.

Bechtel Field Inspection Report Control No. C-63-22 dated April 4, 1977 (Attachment 8), documents the comprehensive review conducted to determine which of the welds inspected by the particular Bechtel Quality Control Inspector were not accessible as a result of being embedded in

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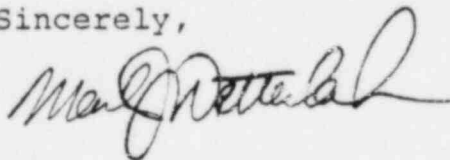
concrete and which of the welds not previously accessible, e.g., due to construction scaffolding, were then sufficiently accessible for inspection.

The results of this review are documented in Bechtel Field Inspection Report No. C-63-22. Page 8 of 8 is a summary correlation between the original Welding Inspection Plans in which the particular Quality Control Inspector participated and the Field Inspection Reports which document the reinspection of the affected welds. Bechtel Field Inspection Reports Control Nos. C-63-24 through C-63-32 and C-41A-493 dated July 1, 1977 through July 6, 1977 (Attachment 9) document reinspections not previously performed because of accessibility problems in 1976.

Field Inspection Reports Control Nos. C-63-30, C-63-31, C-63-32 and C-41A-493 describe reinspections of certain welds which were partially embedded in concrete. NCR-2710 which was generated as a result (not provided) demonstrates the acceptability of these welds. That nonconformance report documents that, for purposes of analysis, it was assumed that only the reinspected portions were sound and that the remaining embedded portion of the weld was nonexistent or failure of the entire weld was assumed. In all cases, the function of the structural member was not impaired.

I would note that Field Inspection Report Control No. C-41A-493 which is similar to the other nine in this category was inadvertently not provided to Mr. Romano during discovery. If the Board has any questions concerning this matter, please let me know.

Sincerely,



Mark J. Wetterhahn  
Counsel for the Applicant

MJW:sdd  
Enclosures

cc: Service List



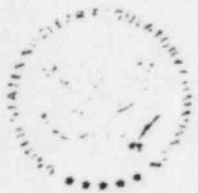
DOCKET NUMBER  
PROD. & UTIL. FAC. 50-352/353

ATTACHMENT 1

Letter from R. T. Carlson to V. S. Boyer, dated 11/10/76,  
transmitting NRC IE Inspection Report No. 50-353/76-06

DS03





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
631 PARK AVENUE  
KING OF PRUSSIA, PENNSYLVANIA 19406

November 10, 1976

Philadelphia Electric Company  
Attention: Mr. V. S. Boyer  
Vice President  
Engineering and Research  
2301 Market Street  
Philadelphia, Pennsylvania 19101

License No. CPPR-107  
Inspection No. 76-06  
Docket No. 50-353

Gentlemen:

This refers to the inspection conducted by Mr. A. Toth of this office on October 16, 19-22, 1976 at the Limerick Generating Station of activities authorized by NRC License No. CPPR-107 and to the discussions of our findings held by Mr. Toth with Mr. J. Corcoran of your staff at the conclusion of the inspection, and to a subsequent telephone discussion between Mr. Toth and Mr. Corcoran on November 2, 1976.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

Based on the results of this inspection, it appears that certain of your activities were not conducted in full compliance with NRC requirements, as set forth in the Notice of Violation, enclosed herewith as Appendix A. These items of noncompliance have been categorized into the levels as described in our correspondence to you dated December 31, 1974. This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office, within twenty (20) days of your receipt of this notice, a written statement or explanation in reply including: (1) corrective steps which have been taken by you and the results achieved; (2) corrective steps which will be taken to avoid further items of noncompliance; and (3) the date when full compliance will be achieved.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 30 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b) (4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,



Robert T. Carlson, Chief  
Reactor Construction and Engineering  
Support Branch

Enclosures:

1. Appendix A, Notice of Violation
2. IE Inspection Report No. 50-353/76-06

License No. CPPR-107

APPENDIX A

NOTICE OF VIOLATION

Based on the results of the NRC inspection conducted on October 16, 19-22, 1976, it appears that certain of your activities were not conducted in full compliance with conditions of your NRC Facility License No. CPPR-107 as indicated below. These items are infractions.

- A. 10 CFR 50, Appendix B, Criterion IX requires in part, "Measures shall be established to assure that special processes, including welding, ...are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria and other special requirements."

Contrary to the above, the established measures were insufficient to assure that welding of structural steel on September 22, 1976 was accomplished in accordance with the applicable AWS-D.1.1. The fillet welds on structural steel beam connections at elevation 253, columns 23-C and A, did not meet the quality requirements of the AWS Structural Welding Code.

Welding electrode holders were used attached to extension sticks which were not "designed or manufactured so as to enable qualified welders...to attain the results prescribed" in the AWS code, nor were procedures alternatively qualified to establish that acceptable weld quality could be attained with such sticks. Quality control surveillance inspections conducted and documented did not identify and effect correction of the condition.

- B. 10 CFR 50, Appendix B, Criterion X requires in part, "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...shall be performed for each work operation where necessary to assure quality."

Contrary to the above, the inspection of activities during October 1976 did not verify conformance with Specification A-26 Revision 2 requirements for protection of machined surfaces during sandblasting and painting operations on the containment dome, and such protection was not maintained and the machined surfaces were inadvertently painted and possibly sandblasted.

- C. 10 CFR 50, Appendix B, Criterion V requires in part, "Activities affecting quality shall be prescribed by documented instructions... and shall be accomplished in accordance with these instructions..."

Contrary to the above, on October 20, 1976 the document control requirements of job rule JR-G-5 were not implemented for design decisions to place holes in the upper flange of structural steel beams at elevation 253 of Area 13 of the reactor building.

U. S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
REGION I

IE Inspection Report No: 50-353/76-06 Docket No: 50-353  
Licensee: Philadelphia Electric Company License No: CPPR-107  
2301 Market Street Priority: --  
Philadelphia, Pennsylvania 19101 Category: A  
Safeguards  
Group: --  
Location: Limerick, Pennsylvania  
Type of Licensee: BWR - 1065 MWe (GE)  
Type of Inspection: Routine, Unannounced  
Dates of Inspection: October 16, 19-22, 1976  
Dates of Previous Inspection: July 26-28, 1976  
Reporting Inspector: A. D. Toth 11-3-76  
A. D. Toth, Reactor Inspector DATE  
Accompanying Inspectors: None DATE  
DATE  
DATE  
DATE  
Other Accompanying Personnel: None DATE  
Reviewed By: R. R. Keimig 11/9/76  
R. R. Keimig, Acting Chief, Construction Projects Section DATE  
Reactor Construction and Engineering Support Branch

## SUMMARY OF FINDINGS

### Enforcement Action

### Items of Noncompliance

#### A. Infractions (Details, Paragraph 3)

- 76-06-01: Failure to Weld Structural Steel Per AWS Code
- 76-06-02: Failure to Inspect Protective Covers of Containment Dome Flange Face During Cleaning/Painting Activities
- 76-06-03: Failure to Implement Job Rule 4-5 Requirements For Control of Design Changes

### Licensee Action on Previously Identified Enforcement Items

Not inspected.

### Design Changes

None identified.

### Unusual Occurrences

None reported.

### Other Significant Findings

#### A. Current Findings

##### 1. Acceptable Items

The following items were inspected with respect to those aspects described in the Details of this report. No departures from regulatory requirements or SAR commitments were identified, subject to any specific exceptions which may be noted elsewhere under Enforcement Action or Current Findings of this report. (Details, Paragraph 5, Subparagraphs as listed below).

- a. Structural Steel Welding Quality Records - Audits
- b. Containment Penetrations Records - Piping
- c. Structural Steel Welding Work Activities
- d. Structural Steel Welding - Records
- e. Safety Related Component Work Activities - Storage, Handling and Protection
- f. Reactor Building Reinforcing Steel Quality Control Inspection
- g. New On Site Vault For Documentation Storage



2. Unresolved Items

The following items have been identified as unresolved.  
(Details, Paragraph 4)

76-06-04: Implement Nonconformance Control System for Concrete Aggregate Material Receiving

76-06-05: Determine Adequacy of Concrete In Reactor Building East Wall

76-06-06: Determine Implementation of the Nonconformance Control System for the Structural Steel Vendor

B. Status of Previously Identified Unresolved Items

None inspected.

C. Deviations

None identified.

Management Interview

At the conclusion of the inspection a meeting was held at the site with representatives of the licensee and contractor organizations. Attendees at this meeting consisted of personnel whose names are highlighted (i.e.\*) in paragraph 1 of the Details Section of this report. The inspector summarized the purpose and the scope of the inspection (Details, Paragraph 2), and the results of the inspection (as listed in the "Summary of Findings").

In a November 2, 1976 telephone conversation, additional information was provided by the licensee management representative and commitments were made which related to the information gathered and conclusions reached as described in the Details of this report. Specifically, with regard to the unresolved item 76-06-06, the licensee advised the inspector that an audit of structural steel nonconformance control has commenced.

## DETAILS

### 1. Persons Contacted

#### Philadelphia Electric Company

- \*J. M. Corcoran, Site Quality Assurance Engineer
- \*D. A. Marascio, Quality Assurance Engineer
- \*J. T. Robb, Quality Assurance Engineer
- \*A. McLean, Construction Engineer - Civil
- W. T. Baxter, Quality Assurance Engineer
- \*J. W. Austin, Construction Engineer

#### Bechtel Corporation

- \*J. R. Reiney, Jr., Project Construction Manager
- \*E. R. Klossin, Lead Site Quality Assurance Engineer
- \*A. G. Weedman, Project Field Engineer
- \*R. G. French, Subcontract Engineer
- \*M. Brown, Project Field Quality Control Engineer
- \*R. Ow, Quality Assurance Engineer
- L. Brown, Concrete Lab Quality Control Supervisor
- \*K. Bishop, Quality Control Welding Engineer
- R. Lanley, Assistant Project Field Quality Control Engineer
- S. Summers, Quality Control Engineer - Cadwelding
- D. Miller, Quality Control Engineer - Cadwelding
- J. Gasparich, Quality Control Engineer - Cadwelding
- V. Ferretti, Quality Control Engineer - Welding
- A. DiPietro, Quality Control Engineer - Civil
- L. Brown, Quality Control Engineer - Civil
- P. Glanski, Quality Control Engineer - Civil
- D. Kaas, Quality Control Engineer - Civil
- R. H. Pauza, Quality Control Engineer - Receiving Inspection
- M. Greenidge, Area #1 Engineer - Construction Supervision
- J. Johanson, Area #1 Structural Engineer
- R. Merdell, Area #1 Rebar Superintendent
- E. Immon, Field Assistant - Area Office Stock Coordinator
- R. DeWitt, Construction Assistant - Weld Rod Room
- J. Windsor, Area #1 Structural Steel & Rigging Superintendent
- R. Beech, Quality Control Documentation Coordinator
- R. Seisle, Foreman - Ironwork
- G. P. Auclair, Welder IU-1
- J. Kier, Welder IH-3
- S. Olson, Cadwelder
- M. Walsh, Cadwelder
- S. Bradburn, Material Supervisor
- R. Carlson, Assistant Material Supervisor
- S. W. Gearhart, Assistant Material Supervisor

O. B. Cannon Company

E. Pokropski, Field Quality Control Inspector

2. General

A pre-inspection meeting was held on site on October 19, 1976, with the senior licensee representative, to discuss the scope of the inspection, and work progress or occurrences which may bear upon the inspection. The status of previously identified unresolved items, corrective actions or other outstanding items was discussed.

The inspector stated that the scope of the inspection would include observation of structural steel work in progress and associated records, review of containment penetration records for control rod drive hydraulic lines, and general observation of work.

The inspector stated that he had also been on site October 16, 1976 in conjunction with an inspection of RPV transport tests for license CPPR-106, and at that time had observed concrete curing activities for the CPPR-107 containment drywell wall.

3. Items of Noncompliance

The following three items appeared to involve noncompliance with regulations of the Nuclear Regulatory Commission or conditions of the applicable NRC license. These items are infractions.

76-06-01:

Failure To Weld Structural Steel Per AWS Code

During observation of welding of structural steel at Area 13 elevation 283, the inspector observed that one steel floor beam passed close to column H at wall line 23. The clearance was such as to limit access to the required fillet welds of angle clips to the beam end and the end on wall No. 23. Interviews with craft and supervision personnel revealed the plan to perform the welding with the electrode holder fastened to the end of a broomstick; the personnel stated, and licensee and contractor QA and QC personnel later confirmed that this approach had been used on the similar limited access weld joints at elevation 253, columns F and H at wall 23.

The inspector determined that the weld procedure PI-A-Lh (Structural) Rev. C had not been qualified using electrode holder extensions, nor had the welder been qualified using such extensions. Although the applicable Code AWS D1-1-72 does not specifically address the use of electrode holder extensions with respect to procedure/welder qualifications, it does in Part 3.1.2 require that equipment be designed and manufactured so as to enable qualified welders to attain the results prescribed in the AWS Code. The inspector considered that an electrode holder attached to a stick did not meet this requirement unless proven satisfactory by qualification test for the six different weld configurations to be welded at the limited access joints. The licensee disagreed, and the inspector requested that provisions be made to permit his visual inspection of the limited access welds performed at elevation 253 on steel beam piece numbers 232B7. An elevator hoist and an inspection mirror and light were made available to the inspector. The welds were found to not comply with the requirements of AWS-D-1-1 Section 3 "Workmanship," in that the welds were of unacceptable profile, contained excessive undercut, and were incomplete at the upper and lower edge of the angle clip (root pass complete, only). For the weld joints designated #3 in the record drawing of the in-process checklist, all inspection items had been checked-off by the Bechtel quality control inspector, including "Final Quality Verification." The QC inspection apparently did not comply with the requirements of AWS-D-1-1 Section 6 "Inspection." The inspector reviewed the following documentation relative to the above item:

QCIR-C-201-W-1-8      Quality Control Inspection Report - E1253  
C-41A-515-3          Vendor Drawing (Record Copy) Elevation 253  
QCIR-C-204-W-1-2      Quality Control Inspection Report - E1253  
C-41A-657-3          Vendor Drawing (Record Copy), Elevation 283  
PI-A-Lh (Structural) Rev. 0 Weld Procedure  
Quality Control In-Process Check-Off Sheet - Welding, C-201-W-1-8.

This item is a noncompliance with regard to 10 CFR 50 Appendix B, Criterion IX requirements that special processes such as welding be controlled in accordance with applicable codes and standards.

76-06-02:

Failure To Inspect Protective Covers of Containment Dome Flange Face During Cleaning/Painting Activities

During observation of storage conditions of the containment dome, the inspector observed workmen finishing the exterior surface of the dome which had recently been painted. The inspector observed and interviewed the painting contractor quality control supervisor at the work.

The inspector observed that, at several locations, several feet of protective tape had come loose from the machined flange face. The protective coating which had been on the face, and covered by the tape, was also missing; phenol base paint had been sprayed on the machined surface. It was not evident that the protective coatings had been removed by sandblasting or other operations. Up to the time of these observations, the dome inner surface had been sandblasted and painted and the outer surface had been sandblasted and painted.

The job specification A-26 Revision 2 for Special Coatings requires in part 9.9 that "Prefinished items and adjacent surfaces not to receive coatings shall be masked and protected prior to surface preparation and during all operations." This had been initially accomplished as evidenced by the existence of the masking tape, but controls during operations had apparently failed to maintain compliance. This is a noncompliance with regard to 10 CFR 50 Appendix B, Criterion X requirements for examination of each work operation to assure quality.

76-06-03

Failure to Implement Job Rule G-5 Requirements For Control of  
Design Changes

During general observation of structural steel erection work in the reactor building exterior to the containment vessel, the inspector observed ironworkers cut and ream holes in the top flange of structural steel beams at elevation 253 in area 18. The workmen described these holes as being for the attachment of temporary steel cross beams as a construction aid to stabilize the floor for use as a laydown area for reinforcing steel. The inspector examined design drawings and found that the holes were not shown, nor were they shown on the record drawings or otherwise identified for the responsible quality control inspectors. The inspector interviewed the ironworkers and foreman, construction engineer, field engineer and quality control engineers and found that the holes were identified in a telephone record in the construction engineers' files. There was no Field Change Request (FCR), Nonconformance Report (NCR), Design Change Notice (DCN), or Field Design Change Notice (FDCN) available.

The site job rule JR-G-5 requires that design change information or clarification in the form of TDM or other correspondence shall be handled in a specific manner, including issuance of a Field Design Change Notice (FDCN), reference of the FDCN on the appropriate drawings, and specific reviews and approvals. Failure to apply this control is a noncompliance with regard to 10 CFR 50 Appendix B Criterion V requirements to implement established measures for the control of issuance of design documents.

The inspector reviewed the following documentation relative to the above item:

C-201 Rev. 4 Structural Steel Drawing  
QCIR-C-210-C63-2 Quality Control Inspection Report  
Telecon Record dated February 6, 1976  
FIM-G-2 Rev. 3, PSP-G-2-1 Rev. 0, JR-G-5 Rev. 12: Project  
Procedures



4. Unresolved Items

The following items were identified by the inspector as unresolved items, subject to future inspection and examination of supplemental information.

76-06-04:

Implement Nonconformance Control System for Concrete Aggregate Material Receiving

During a walk-through inspection at the on-site concrete batch plant, the inspector observed aggregate fines on the surface of the coarse aggregate pile in amounts which would normally be considered excessive. However, this batch plant has provisions to withdraw aggregate from the bottom of the center of the pile, and to rescreen the aggregate as it is transferred to weighing hoppers. The inspector interviewed quality control personnel regarding effectiveness of such rescreening. At this time the inspector determined that on September 27, 1976 the concrete batch plant quality control laboratory staff identified that coarse aggregate received from the supplier contained excess fines to a degree such that even after processing through the batch plant screens the material did not meet gradation specifications. Concrete for safety related structures was not produced in the batch plant that day, and subsequent test records showed that the gradation was corrected. However, no nonconformance report was prepared, and the corrective action taken to segregate and disposition the nonconforming material was not documented.

The inspector observed that the batch plant material receiving inspection control requirements are variable, in that the batch plant is used for production of concrete for both safety related and non-safety related structures at the site. In this particular case safety related structures were not involved and a noncompliance situation was avoided. However, the practice of not implementing the nonconformance control system at the batch plant for safety related work is unresolved pending NRC further inspection of concrete records.

The licensee stated that a meeting is scheduled on site the following week to determine a resolution of this item.

76-06-05:

Determine Adequacy of Concrete In Reactor Building East Wall

During a walk-through inspection at reactor building elevation 253 the inspector observed a nonconformance tag number NCR-1934 at the east wall. The associated back up records showed that concrete placements number RM-4J-23 and 30 involved low 28 day cylinder-break strengths for three consecutive test cylinder pairs. The low strength (4585 psi, 4825 psi, 4770 psi) was identified in NCR-1825 on July 26, 1976. The NCR was dispositioned "use-as-is" on the basis that "the design load is not expected on the above placement for at least 90 days, at which time the concrete will reach the required compressive strength of 5000 psi." However, on September 27, 1976 the field quality control staff found that the required strength had not been reached after 91 days (4720 psi and 4530 psi values for test cylinder pair #1806). The field staff tagged the placement with the observed NCR-1934, which has been referred to the home office engineers for disposition.

This item is unresolved pending review of the final disposition of this item, and the controls to assure follow-up on this type of use-as-is disposition (i.e. predicated on assumed future action or occurrences).

76-06-06:

Determine Implementation of the Nonconformance Control System for the Structural Steel Vendor

During a walk-through inspection of elevation 217 the inspector observed that existing bolt holes had been elongated in a horizontal direction, in the web of structural steel beam W-30 x 132-6, at column line F. The inspector discussed this item with ironworkers in the vicinity, who stated that existing holes, designed for pass-through of reinforcing steel, could be elongated up to 3/4 inches in the longitudinal direction only; this was based upon verbal direction from the construction engineers.

The inspector discussed this item with the responsible construction engineers and reviewed the applicable design drawing (C-198 Rev. 10) and vendor drawing (C46-273-5). The design drawings showed the holes as elongated, but the vendor drawing showed no elongation. The construction engineer stated that the field was correcting the vendor error, as necessary, within limits of the design. There apparently was no nonconformance report applicable for this item. This item is unresolved pending further review of the controls for structural steel vendor nonconformances.

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In a telephone conversation on November 2, 1976, the licensee advised the inspector that his site QA staff is now engaged in a surveillance audit of this item to ascertain whether the contractor's controls require improvement.

5. Acceptable Items

The following items were examined by the inspector to ascertain implementation of the quality assurance program with respect to these items. The inspector did not identify any departures from regulatory requirements or PSAR commitments, except as may be specifically described in other paragraphs of this report and referenced in subparagraphs below.

a. Structural Steel Welding Quality Records - Audits

The inspector examined the Bechtel audit schedule and two audit reports regarding audit of structural steel activities. The inspector also examined three audit reports prepared by the licensee's own quality assurance on-site staff, regarding structural steel work on the reactor building and control room. For the Bechtel audits, the inspector also examined the backup checklists and field notes.

The Bechtel audit records included detailed checklists, including separate weld observation checklists with acceptance criteria and space for data. The records of both Bechtel and the licensee showed cognizance of applicable specifications, drawings, job rules, inspection quality control, and showed that work observation, quality records review, and interview of personnel were included. Audit findings were documented in the prescribed manner and there was evidence of management review. The inspector examined one audit finding and observed that timely corrective action was documented. The inspector examined the following specific records:

PECo Site Audit Reports

C-59 (June 1975)

C-79 (March 1976)

C-82 (June 1976)

Bechtel Project Audit Reports

PFA-55, 18-6-1 (June 1975)

PFA-81, 18-6-2 (December 1975)

Bechtel Finding Report AFR-C-047

b. Containment Penetration Records - Piping

The inspector examined the survey records for the control rod drive hydraulic line penetrations of the reactor containment

drywell wall. The survey records showed that the pipe lines sloped to drain into the containment side of the wall, but did not meet the 1/2 inch per foot slope specified on the CE&I design drawing. However, a nonconformance report had been prepared and had been acceptably dispositioned by the Engineer-Constructor as use-as-is on the basis that each penetration slope exceeded the minimum 1/8 inch per foot specified on the NSSS supplier's design drawing.

The inspector examined the following specific documents:

CE&I Drawing No. 70-7199 - #73 Rev. 6

Dimensional Inspection Reports, File 7-2-1, Contract 70-7199;  
Index #13 dated May 19, 1976

Request for Approval of Deviation: RAD-C-8; RAD-C-12.

Specification 6031-C-2.

c. Structural Steel Welding Work Activities

The inspector observed structural steel welding activities at elevation 283 of area 13 of the reactor building. Welds in progress consisted of fillet welds on angle clips connecting three floor beams to embeds in the west wall of the building. Each connection included two clips, each of which was welded to the web of the beam and to the embed. The inspector observed joint preparation and alignment and welding progress.

The welded connections were identified on quality control inspection record drawings and checklists. The records did not identify each weld, but rather the connection number which included two angle clips and four welds. In-process inspection/surveillance checklists indicated that fit-up, joint cleaning, proper weld material, weather protection, and final quality verification were among the items which were inspected for each connection and were found satisfactory. The inspector observed base metal cleaning and joint preparation to be as required in the applicable specification. The licensee stated that consideration was being given to more specifically identify each weld of each connection, on the in-process checkoff sheets. The inspector observed that completed welds met the final profile, size, length, uniformity and lack of undercut and flaw requirements of the applicable construction code (AWS D1.1) and weld procedure (PI-A-Lh-Structural). He observed that welders removed slag at weld bead tie-in and between weld passes and avoided arc strikes on adjacent base metal.

The inspector interviewed the welding quality control engineer (QCE) and examined his records of welder qualification and in-process inspections. The QCE stated that in addition to other observations, he also randomly checks electrical parameters. The inspector also inspected the weld rod issuance trailer and rod issue records for the days of welding observation. Weld rods were identified and stored in calibrated rod ovens. Attendants interviewed stated that they checked returned rod for defects in flux coating, burnt tips and any general damage. Damaged rod segregated from the oven storage was observed as evidence of this inspection. The inspector checked the weld rod issue record for the observed weld joints and verified that the issued rod was as called for by procedure and was in fact in use by the welder. No uncontrolled filler material was observed in the welding areas.

The inspector also observed various structural steel columns where fit-up for welding or where welding had been complete. Base metal weld grooves were observed where paint had not been applied in order to facilitate joint preparation, and run-off plates were installed to ensure sound groove weld termination. The inspector interviewed a welding foreman, who expressed awareness of pre-heat and weather protection requirements.

d. Structural Steel Welding - Records

The inspector examined the records associated with the welding activities he observed during this inspection. These included records for beam connections numbered 1, 2 and 3 at the reactor building area 13 east wall at elevation 283. Record drawings, inspection reports, in-process surveillance checklists, personnel qualifications, and weld rod issue forms were examined, and no discrepancies from NRC requirements or SAR commitments were identified, other than the item of noncompliance (item 76-06-01 of this report) associated with limited access welding. The following records were examined:

QCIR-C-204-W-1-2	QC Inspection Report
C-204 Rev. 3	Record Drawing (layout)
C-193 Rev. 3	Record Drawing (connection details)
C-41A-657-3	Vendor Print (layout)
C-204-W-1-2	Weld QC In-Process Checkoff Sheet
WR-NC-2 (10-19-76)	Filler Metal Withdrawal Authorization(s)
GWS-Structural, Rev. 1	General Welding Standard
PI-A-Lh (Structural) Rev 0	Welding Procedure Specification



c. Safety Related Component Work Activities - Storage, Handling and Protection

- (1) The storage, handling and protection of safety related components at the ADWIN warehouse were inspected against the applicable manufacturer's specifications. The mechanical components selected were:

Recirculation Pump (B 32-C001)  
Recirculation System Gate Valve (B 32-F023)  
Core Spray Pump (E 21-C001)  
Jet Pump Assemblies (B-11-D233)

The inspector examined the storage and maintenance file for each component and determined the necessary storage requirements. The inspector then examined the storage conditions for each component, verifying such things as space heaters energized and desiccant in place; he also inspected the cleanliness and preservation condition of each component. The "Insulation Resistance Testing Report" for the recirculation system gate valve motor was also reviewed.

The inspector interviewed the Material Supervisor, OC Engineer and other personnel responsible for surveillance during storage. The general program for maintenance during storage was discussed and several outstanding maintenance action cards were reviewed by the inspector. The personnel interviewed appeared knowledgeable of the computer system for controlling maintenance action and were familiar with specific maintenance and surveillance requirements for the components examined. No discrepancies were noted.

- (2) Storage conditions of the following electrical components were also examined:

Recirculation Pump Motor (B 32-C001A)  
Recirculation System MG Set (B 32-S001)  
RHR Pump Motor (E 11-C002A)

The inspector examined the storage and maintenance file for each component and determined the storage requirements. The inspector then verified component storage conditions, examining such things as space heaters being energized and

equipment proper oil levels where applicable. The "Insulation Resistance Testing Report" for each component was reviewed. The megger in use at Adwin had a proper calibration sticker. The calibration record dated June 17, 1976 was also reviewed. No discrepancies were noted.

- (3) The inspector observed general storage conditions of most safety related components at the ADMIN warehouse. During the inspection, the inspector noted warehouse personnel changing the desiccant in the following control rod drive assemblies: Serial #6238, 6547, 7337 and 6761. Handling of the components during desiccant replacement appeared to be with due care to prevent damage.

f. Reactor Building Reinforcing Steel Quality Control Inspection

During a walk-through inspection of elevation 217 of the reactor building, the inspector observed interior wall forming and reinforcing steel erection nearly complete for wall number 51. The inspector observed #9 vertical reinforcing steel bars lapped a distance of 8-feet, with seven bars in a plane across the 13 inch channel in the H-column number F/24.5. Rebar clearance did not appear sufficient to permit flow of the usual 3/4 inch aggregate concrete mix into the channel, and did not meet the minimum 1 inch specified in applicable ACI codes. The inspector discussed this item with the responsible quality control engineers (QCE), and the Field Engineers, noting that concrete voids had previously occurred at a similar column at a lower elevation of the facility. The QCE's stated that they had not yet inspected this area, and normally defer such inspections until work progresses to the point that reinforcing steel is tied-off and generally fixed in place and reviewed by the responsible field engineer. The QCE's subsequently inspected this area and prepared an in-process rework notice for this and other items they found. The QCE's demonstrated awareness of governing ACI requirements and applicable job specifications. The inspector examined the following documents relative to this item:

Drawings: C-701 Rev. 7, C-712 Rev. 5, C-121 Rev. 6, C-601 Rev. 18,  
C-128 Rev. 5, C-127 Rev. 6

In-Process Rework Notice: dated 10/22/76

Field Change Requests: FCR-1834, FCR-817, FCR-834

8. New On Site Vault For Documentation Storage

The inspector performed a walk-through inspection of the newly constructed quality records vault on site. The vault is larger than the previous vault and has shelf space for radiographs and all other QC records. A temperature and humidity control system is provided, and a halon fire protection system is installed with automatic door closure installation in progress. A counter/gate area access is provided and service personnel in attendance. The facility appears to provide many of the features recommended in ANSI N45.2-9, which the records supervisor stated was used by Bechtel as a guide.

ATTACHMENT 2

Letter from V. S. Boyer to J. P. O'Reilly, dated 12/15/76

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET  
PHILADELPHIA, PA 19101

215/847-4500

V. S. BOYER  
VICE PRESIDENT

DEC 15 1976

Mr. James P. O'Reilly, Director  
United States Nuclear Regulatory Commission  
Office of Inspection and Enforcement, Region I  
631 Park Avenue  
King of Prussia, Pa. 19406

Subject: USNRC IE:I letter dated November 10, 1976  
Re: Site Inspection of October 16, 19-22, 1976  
Inspection Report No. 50-353/76-06  
Limerick Generating Station - Unit 2  
File: QUAL 1-2-2-2 (76-06)

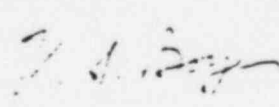
Dear Mr. O'Reilly:

We offer the following responses to the subject letter regarding items identified during the NRC visit to Limerick Generating Station - Unit 2 on October 16, 19-22, 1976 for inspection of construction activities authorized by NRC License No. CPPR-107.

- Attachment I - Response to Item A of Appendix A of subject letter.
- Attachment II - Response to Item B of Appendix A of subject letter.
- Attachment III - Response to Item C of Appendix A of subject letter.

The due date for this response was extended to December 15, 1976 in a telecon with your staff on December 2, 1976. Should you have any questions concerning these items, we would be pleased to discuss them with you.

Sincerely,



Attachments

ATTACHMENT 3

Letter from Robert T. Carlson to V. S. Boyer dated 12/29/76



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
631 PARK AVENUE  
KING OF PRUSSIA, PENNSYLVANIA 19406

December 20, 1976

Philadelphia Electric Company  
Attention: Mr. V. S. Boyer  
Vice President  
Engineering & Research  
2101 Market Street  
Philadelphia, Pennsylvania 19101

License No. CPPR-107  
Inspection No. 76-06  
Docket No. 50-353 -167

Reference: Your letter dated December 15, 1976  
In response to our letter dated November 10, 1976

Gentlemen:

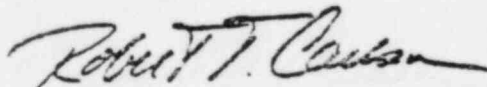
Thank you for informing us of the corrective and preventive actions you documented in response to our correspondence. These actions will be examined during a subsequent inspection of your licensed program.

On December 20, 1976, Mr. A. Teth of this office and Mr. J. Corcoran of your staff discussed other steps taken to avoid further items of noncompliance of the type discussed in Attachment II of your above referenced letter. We understand that, in addition to the steps taken regarding the containment dome, other subcontractor-furnished items are also entered into the project storage maintenance program when these are erected or placed in their designated locations in the plant. Further, we understand that the storage maintenance program provides cleanliness protection and inspection which will assure protection against sandblasting/spray-painting effects.

If our understanding of these additional corrective measures is not correct, please advise us accordingly.

Your cooperation with us is appreciated.

Sincerely,



Robert T. Carlson, Chief  
Reactor Construction and  
Engineering Support Branch



ATTACHMENT I

Response to Item A of Appendix A

Deficiency

"10 CFR 50, Appendix B, Criterion IX requires in part, "Measures shall be established to assure that special processes, including welding, ... are controlled and accomplished by qualified personnel using qualified procedure in accordance with applicable codes, standards, specifications, criteria and other special requirements."

Contrary to the above, the established measures were insufficient to assure that welding of structural steel on September 22, 1976 was accomplished in accordance with the applicable AWS-D.1.1. The fillet welds on structural steel beam connections at elevation 253, columns 23-G and H, did not meet the quality requirements of the AWS Structural Welding Code.

Welding electrode holders were used attached to extension sticks which were not "designed or manufactured so as to enable qualified welders ... to attain the results prescribed" in the AWS code, nor were procedures alternatively qualified to establish that acceptable weld quality could be attained with such sticks. Quality control surveillance inspections conducted and documented did not identify and effect correction of the condition."

"Although the applicable Code AWS D1-1-72 does not specifically address the use of electrode holder extensions with respect to procedure/welder qualifications, it does in Part 3.1.2 require that equipment be designed and manufactured so as to enable qualified welders to attain the results prescribed in the AWS Code."

Response

1. The following corrective measures have been taken:
  - a. The fillet welds on structural steel beam connections at elevation 253, columns 23-G and H, have been repaired.
  - b. The inspector, who originally accepted these two welds, is no longer employed by the contractor and a reinspection of all other work

performed by the welder. The welder, who is  
responsible, is to be held responsible for the  
corrective action taken by the welder.

2. Action taken to prevent recurrence:

- a. A training class was conducted October 23, 1976  
for re-indoctrination and review of the  
various aspects of acceptance of work, the  
reviewing of inspection criteria, and the respon-  
sibilities of welding inspectors. All QC and  
field welding personnel were required to attend  
this training class.
- b. A Project Control Memorandum, PCM-100, was  
issued prohibiting the use of unauthorized  
extensions.
- c. Effective December 16, 1976 all welds that  
require the use of weld extensions shall be  
identified and approved by the lead weld  
engineer.

Attachment II

Response to Item 3 of Appendix B

Reference

10CFR50, Appendix B, Criterion X requires in part, "A program that 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 . . . shall be performed for each work operation where necessary to assure quality".

Contrary to the above, the inspection of activities during October 1976 did not verify conformance with Specification A-26, Revision 2 requirements for protection of machined surfaces during sandblasting and painting operations on the containment dome, and such protection was not maintained and the machined surfaces were inadvertently painted and possibly sandblasted.

Response

1. Corrective steps which have been taken and results achieved:
  - a. The deficiency was documented by Bechtel MCR #1981 dated October 22, 1976.
  - b. The exposed surfaces of both the Unit #1 and Unit #2 drywell heads were inspected by Bechtel Quality Control with the following findings:
    1. No evidence of surface damage due to sandblasting or rust.
    2. Portions of both surfaces show evidence of dry overspray of Amercoat 90.
  - c. As coating of both drywell heads is complete, they will be placed into project storage maintenance program.
2. Corrective steps taken to avoid further items of noncompliance:

A periodic inspection of the machined surfaces of the drywell heads has been incorporated into the project's storage maintenance program. The action card was entered

Attachment III

Response to Item C of Appendix B

Background

As shown, Appendix B, Section 7 requires in part, "Activities and work shall be presented by substantiated instructions . . . and shall be accomplished in accordance with these instructions . . ."

Contrary to the above, on October 10, 1976 the document control technicians on duty while JR-Q-5 were not supplemented for design decisions to place holes in the upper flange of structural steel beams at elevation 253 of Area 10 of the reactor building.

Response

1. Corrective steps which have been taken and results achieved:

- a. DCN No. 2 to Revision 10 of drawing 8031-C-200 issued October 16, 1976 authorizes the drilling of holes in the top flange of beams at elevation 253'-0" in the Reactor Building in order to support temporary beams.
- b. DCN No. 2 to Revision 13 of drawing 8031-C-193 issued November 21, 1976 authorizes, on a generic basis in the Reactor Building and Control Room Area, the drilling of holes in the top flange of beams and girders in order to support temporary beams.
- c. Project Quality Control Instruction 8031/C-2.10, Revision 1 has incorporated a task to inspect for the removal of temporary beams, if installed, and that the permanent beams were not damaged.
- d. This activity was approved by Project Engineering via a telephone discussion with the Resident Engineer, and a telecon memorandum was prepared on February 6. However, contrary to project procedures, no FCR was issued or change to the applicable design document made as required for modification of a Q-listed component.

A review has been made of construction actions which have resulted from telephone conversations (telecons) between the Resident Engineer and Project Engineering, and from Resident Engineer Memoranda. Where necessary, FCRs have been initiated to revise the design documents.

2. Correspondence between the various offices of the Department.

a. The following is a list of the correspondence between the various offices of the Department:

into this program on December 1, 1976. Inspection at three-month intervals is scheduled.

A procedure for application of a new rust preventive material will be incorporated into the program by December 1, 1976. Due to a limited quantity of the new material, it will be applied to the drywell heads in their present state until June 1, 1977. Over this six month period, storage of the drywell heads in their present state will not jeopardize the quality of the machined surfaces.



ATTACHMENT 4

Philadelphia Electric Company Quality Assurance  
Finding Report No. N-093, dated 10/27/76



## FINDING REPORT

2. TYPE: ☐ AUDIT ☐ SURVEILLANCE ☒ NRC  
☐ NCR ☐ CORRECTIVE ACTION REQ'D.  
☒ Item of Noncompliance

6. ISSUED TO C.K. Soppet - Project Manager

7. ORGANIZATION Bechtel Power Corporation

8. THOSE CONTACTED T. Alton - K. Bishop

9. 10 CFR 50, APPENDIX B CRITERIA IX

1. NUMBER N-093

2. Limerick Units 1 & 2

3. Bechtel Power Corp.

PRIME CONTRACTOR

4. REFERENCES

a) AWS D1.1-72 and 72 & 74 editions

DEC 10 1976

R. A. MOLFORD

10. FINDING (USE AND REFERENCE ADDITIONAL SHEETS AS REQUIRED)

Two welds from the beam to the clip on beams 232B7 and 232B9 in unit 2 on Elev. 257 were both incomplete and unacceptable and were made with the aid of a broom stick handle attached to the stinger to reach the joint to be welded; which is contrary to AWS section 3.1.2.

Further, inspection surveillance records indicated that these beam connections were inspected.

11. DISCUSSION (USE AND REFERENCE ADDITIONAL SHEETS AS REQUIRED)

Bechtel issued NCR No. 1980 identifying the non-conforming condition.

12. RECOMMENDATION (USE AND REFERENCE ADDITIONAL SHEETS AS REQUIRED)

IDENTIFIED	<u>A. Both</u>	<u>Inspector</u>	<u>10/27/76</u>	PE QA REFERENCE ONLY	<u>N 033</u>	SCR NO.	VR NO. <u>206</u>
	NAME	TITLE	DATE				
IDENTIFIED				DISTRIBUTION			
	NAME	TITLE	DATE	<u>A. Teller - TLC</u>			
ISSUED BY	<u>J. M. C. [Signature]</u>	<u>Site QA</u>	<u>10/29/76</u>	<u>P.L. Sauk</u>			
	NAME	TITLE	DATE	<u>PLB-6234</u>			



QUALITY ASSURANCE

# FINDING REPORT

13. NUMBER N-093  
 RECEIVED Limerick Units 1 & 2  
 DEC 10 1976 (14) PROJECT

## 15. CORRECTIVE ACTION TAKEN TO SOLVE FINDING

(USE AND REFERENCE, ADDITIONAL SHEETS IF REQUIRED)

1. Issuance of NCR 1980 to acknowledge the nonconforming condition and to acquire dispositioning to correct same.
2. A Reinspection of all other work performed by the particular inspector who accepted the welds in question was accomplished wherever accessible.

1. Disposition on NCR 1980 - 11/17/76.
2. Various QC-GI Reports (C-65-7, C-63-7)
3. Various training, retraining.

ACTION TAKEN BY

KL Bile  
 NAME

11-22-76  
 DATE

ACTION VERIFIED BY

Simon R. Morris  
 NAME  
NOV 30 1976  
 DATE

## 16. CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE

(USE AND REFERENCE, ADDITIONAL SHEETS AS REQUIRED)

A training class was held 10-25-76 for re-indoctrination and re-orientation in the various aspects of acceptance of completed work, reviewing or inspection criteria and ultimate responsibilities for weld inspections with all personnel in attendance from both the QC and field welding groups.

PCM DIRECTIVE - PCM 239 PROHIBITS USE OF  
 BROOMSTICK EXTENSIONS

ACTION TAKEN BY

KL Bile  
 NAME

11-22-76  
 DATE

ACTION VERIFIED BY

Simon R. Morris  
 NAME  
NOV 30 1976  
 DATE

## 17. P.E. ACCEPTANCE OF CORRECTIVE ACTION

- ☐ RESOLVES FINDING
- ☒ UNACCEPTABLE (SEE SHEET 3 OF 3)
- ☐ USE "AS IS"
- ☐ TEMPORARY USE UNTIL RESOLUTION

Robert H. Jones  
 NAME

Se Metallurist  
 TITLE

12-16-76  
 DATE



QUALITY ASSURANCE

# FINDING REPORT

11. NUMBER N-093

Limerick Units 1&2

RECEIVED

APR 28 1977

## 20. REASON UNACCEPTABLE (USE AND REFERENCE ADDITIONAL SHEETS AS REQUIRED)

1. The NCR finding, that generated this NCR, was replied to and bears reference to further commitments by Bechtel Power Corp.
2. This NCR should reflect those further commitments referenced in the above.

Identify the document and contents which indicate all welds that require the use of weld extensions shall be identified and approved by the Lead Weld Engineer. *CH*

ISSUED BY

R.H. Zeng / D.L. Moss

NAME

Sr. Metallurgist

TITLE

12/16/76

DATE

## 21. REVISED CORRECTIVE ACTION (USE AND REFERENCE ADDITIONAL SHEETS AS REQUIRED)

PCM-246 dated 12-17-76 states that any weld that requires the use of weld extension holders will be identified and approved by the Lead Staff Field Welding Engineer prior to use.  
This requirement is being incorporated in the latest revision of Job Rule G-16 "Welding".

ACTION TAKEN BY

*J.R. Reiney, Jr.*  
NAME J.R. Reiney, Jr.

4/11/77

DATE

ACTION VERIFIED BY

NAME

DATE

## 22. P.E. ACCEPTANCE OF REVISED CORRECTIVE ACTION

- ☒ RESOLVES FINDING
- ☐ UNACCEPTABLE (SEE ATTACHED SHEET 3 - OF 3)
- ☐ USE "AS IS"
- ☐ TEMPORARY USE UNTIL RESOLUTION

*R.H. Zeng*  
NAME

*S. H. Eng*  
TITLE

5-5-77  
DATE

ATTACHMENT 5

Bechtel Nonconformance Report No. 1980, dated 10/22/76

# NONCONFORMANCE REPORT

1. DRAWING PART NO. C-201	REV. 4	7. PROJECT NO. 8031	12. REPORTED BY K. B. B. 11/17/76	DATE 11/17/76
2. ITEM DESCRIPTION Beam Angles		8. ITEM LOCATION Area 17, elev. 253'	13. VALIDATED BY K. B. B. 11/17/76	DATE 11/17/76
3. SERIAL NUMBER 23287 + 23289		9. STARTUP SYSTEM NO. N/A	15. REPLACEMENT PART NO. N/A	DATE 11/17/76
4. PURCHASE ORDER NO. N/A		10. QC FIELD INSPECTION PLAN NO. C-201-W-1.7 + C-201-W-1-8	16. REPLACEMENT SERIAL NO. N/A	DATE 11/17/76
5. CONTRACTOR/LOCATION N/A		11. ASME CODE ITEM N/A	17. SOURCE CONSTRUCTION	DATE 11/17/76
18. ROUTING INSTRUCTIONS:	<input checked="" type="checkbox"/> ROUTE TO FIELD ENGINEERING <input type="checkbox"/> ROUTE TO MATERIAL SUPERVISOR			

THE NONCONFORMING CONDITION: Beam # 23289 (6'-9" North of F Between 23+24.5 Line) AND THE North Side of Beam # 23287 (Approximate 6'-5" South of H Line Between 23+24.5 Lines) Were welded to the Beam and to the Embed and a Final Inspection was Accomplished. UPON FURTHER INVESTIGATION OF THESE WELDS THAT WERE MADE IT WAS DISCLOSED THAT THESE WELDS WERE INCOMPLETE.

20. <input type="checkbox"/> FIELD DISPOSITION	21. FIELD DISPOSITION RESULTS:
COPE THE TOP & BOT FLANGE OF THE BEAMS, ON THE SIDE ADJACENT TO COLUMN. REMOVE THE CONN. ANGLE BY GRINDING. REPAIR DAMAGED AREA BY FILING WITH WELD & GRINDING SMOOTH. REWELD CONN ANGLE USING BECHTEL SPEC. P. 1-A-LH, (STRUCT.) ADDITIONAL RECOMMENDATION CONT'D PAGE 3 N/A Jan 11-8-76 S.D. 11/17/76 Submittal 11-9-76. Call 11/17/76	
22. ENGINEERING DISPOSITION	23. ENGINEERING DISPOSITION RESULTS:
REPAIR. Rationale: proposed repair procedure will not impair structural capacity of steel. VOIDED 2-10-76 For Revision 1 of engineering disposition, see p. 4 of 4 N/A Jan 11-8-76 S.D. 11/17/76	

24. IS DESIGN CHANGE REQUIRED?	25. DISPOSITION CONCURRENCE
<input type="checkbox"/> YES, SEE ATTACHED <input checked="" type="checkbox"/> NO	11-22-76 K. B. B. 11/17/76 PROJECT FIELD QC ENGINEER
26. REJECTED MATERIAL DISPOSITION	27. QUALITY ASSURANCE
<input type="checkbox"/> RETURN TO SUPPLIER <input type="checkbox"/> SCRAP	11-22-76 K. B. B. 11/17/76 QC ENGINEER
DRAWING	AUTHORIZED INSPECTOR
SPEC	DATE



NONCONFORMANCE REPORT (CONT'D)

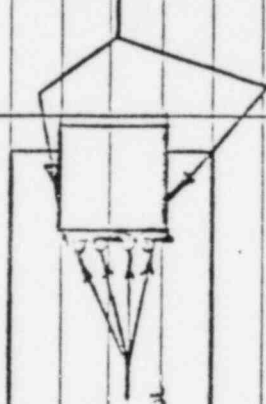
1 PAGE 2 OF 254 Δ 14. NCH NO. 1920

Block #19 Cont: And Unacceptable Due to Excessive Undercutting and Incomplete Welding of the Connection Angle to the Beam Web. This is Contrary to the 1970 Edition of the AISI Code - Part 4 Revised 6-73 and AWS D1.1-73, R1-73 and R2-74 Editions.

Unit #2 Q7A Zoned 1965

APPROX.

AREA OF UNDERCUTTING WHICH IS UNACCEPTABLE (IN EXCESS OF 1/32")



AREAS WHERE WELD IS

INCOMPLETE AND OUT OF

SPEC. AS OUTLINED IN THE

ENGINEERING SUPPLIED DATA

AND THE AISI REQUIREMENTS.

APPROX. 1 PASS (1/8" OF WELD) VS. REQ'D 7/16" WELD.

TYPICAL OF SOUTH SIDE

OF BEAM ZONE AND

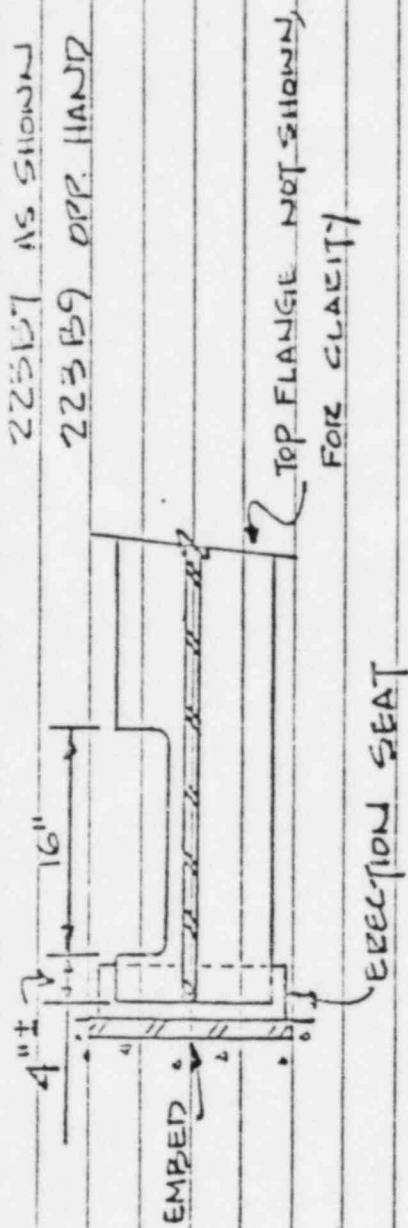
NORTH SIDE OF BEAM

ZONE



Block #20 (Cont)

## FIELD RECOMMENDATION - TO PROJECT ENGINEERING (REVISED)



WHILE REPAIRING THE TWO BEAMS, CORES WERE MADE INTO THE BOTTOM FLANGES AS SHOWN.

FIELD RECOMMENDATION TO LEAVE BEAMS AS IS.

WJ 1/11/77 *[Signature]* 1/11/77  
 Johanson 1/10/77 pd  
*[Signature]* 1/11/77

Block #22 (Cont'd)

Revision Δ to disposition of NCR 1980

REPAIR: rationale: proposed repair procedure will not impair structural capacity of steel. Copies required to make repair may be left as is.

10 Feb 77 APV Ch. B. B. B.  
 WP DER 2.10 " Feb 77 for H. B. B. 2-14-77

Block #25 cont'd

PFE, Ed. H. B. B. 4 Feb 77 P. E. Ch. B. B. B. 3-14-77  
 PFQC Ed. H. B. B. 3-29-77

ATTACHMENT 6

Bechtel Field Inspection Report (QCGI-1 Report)

Control Numbers C-63- 7, dated 10/26/76  
C-63- 8, dated 10/27/76  
C-63- 9, dated 10/28/76  
C-63-10, dated 10/28/76  
C-63-11, dated 10/29/76  
C-63-12, dated 11/1/76  
C-63-13, dated 10/29/76  
C-63-14, dated 11/2/76  
C-63-15, dated 11/1/76  
C-63-16, dated 11/1/76  
C-63-17, dated 11/2/76  
C-63-18, dated 11/8/76  
C-63-19, dated 11/4/76

BECHTEL

FIELD INSPECTION REPORT

3. RECORD CONTROL  
CONTROL NO. C-63-7  
FILE NO. 10-1-45-5

1. PROJECT NO. 8031 2. DATE 10/26/76 PAGE 1 OF 1

4. ITEM INSPECTED TOTAL RE-INSPECTION OF WELDS ACCOMPLISHED ON  
THE FOLLOWING Q.C.I. INSPECTION PLANS. C199 W1-4  
C192 W1-9 C201 W1-7 C201 W1-10

5. LOCATION REACTOR #2 ELV 253' AREA 13+17

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1.1 72 R1-23 R2-74  
10-26-76  
C91-56 W Q 210 C63-1 ADAT 1-5 FA12 C199 W1-4  
C192 W1-9 C201 W1-7 C201 W1-10  
NCR 1990

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE-INSPECTIONS ACCOMPLISHED. ALSO SEE  
QCC1-1 REPORT NOS. C-63-8 DATED 10-27-76 AND  
C-63-14 DATED 11-2-76. W. J. D. J. D.  
ALSO FOR RE-INSPECTION - SEE REPORT C-63-22 DATED 4-5-77  
W. J. D. J. D.

Distribution:  
White - QC Files  
Canary - Originator

K. B. B.

11. ENGINEER

W. J. D. J. D.

RECHTEL

# FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. C-63-8

FILE NO. JR-1-624

1. PROJECT NO. 8031

2. DATE 10/27/76

PAGE        OF       

4. ITEM INSPECTED TOTAL RE-INSPECTION OF WELDS ACCOMPLISHED ON  
THE FOLLOWING Q.C.I. INSPECTION PLANS. C192 W1-8  
C199 W1-4 C201 W1-7 C201 W1-9 C201 W1-10

5. LOCATION REACTOR #2 ELV 253 AREA 17 19 + 14

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1-172 R-1-73 R2-74  
CG3-1 ADDT 1-5 <sup>5-4-10-21-76</sup> FA2 WQ 212 C91/46 10-27-76 J.H.

C192 W1-8 C199 W1-4 C201 W1-7 C201 W1-9 C201 W1-10  
NCR 1980

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY       

NOTE: FOR PREVIOUS INSPECTIONS AND RE-INSPECTIONS  
ACCOMPLISHED ALSO SEE QCGI-1 REPORT NOS. C-63-7  
DATED 10-26-76 AND C-63-14 DATED 11-2-76. CHODURA  
ALSO FOR RE-INSPECTION - SEE REPORT C-63-22 DATED 4-5-77 7-28-77  
CHODURA 7-28-77

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K. B. Smith

11. ENGINEER

J. J. W. Smith



FILED C-63-9

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# FIELD INSPECTION REPORT

3 RECORD CONTROL  
CONTROL NO. C-63-9  
FILE NO. ITC-1-C-63-7

1. PROJECT NO. 8031 2. DATE 10/25/76 PAGE 1 OF 1

4. ITEM INSPECTED TOTAL RE-INSPECTION OF WELDS ACCOMPLISHED ON  
THE FOLLOWING Q.C.I. INSPECTION PLANS C199 W1-12  
C199 W1-13 C195 W1-17

5. LOCATION REACTOR #2 ELV 217 AREA 17, 18

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D-1-1-72 R1-73 R2-74  
C91/46 WQ 2/0 C63-1 ADAT 1-4 R1/2  
C199 W1-13 C195 W1-17 C199 W1-17  
NCR #1980

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☐ UNSATISFACTORY ☒

10. ACTION TAKEN IF UNSATISFACTORY NCR 1998 WAS GENERATED DUE TO  
UNACCEPTABLE WELDS COVERED ON Q.C.I.R. C199 W1-12

NOTE - FOR REINSPECTIONS ACCOMPLISHED ALSO  
SEE QCGI-1 REPORT # C-63-22 dated 4-5-77. (7-28-77)

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K.B. Lp

11. ENGINEER 4/11/76

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## FIELD INSPECTION REPORT

3 RECORD CONTROL

CONTROL NO C-63-10

FILE NO 063-10

1 PROJECT NO. 5031 2 DATE 10/29/76 PAGE OF

4. ITEM INSPECTED TOTAL RE-INSPECTION OF WELDS ACCOMPLISHED ON  
 THE FOLLOWING Q.C.I INSPECTION PLANS. C 197 W 1-10  
 C 197 W 1-9A C 197 W 1-11

5. LOCATION REACTOR #1 ELV 217 AREA 11 15 + 16

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1-1.72 R-1.73 R2-74  
 C 9117 W 9 2/0 C 63-1 ADDT 1-4 FPR  
 C 197 W 1-10 C 197 W 1-9A C 197 W 1-11 NCR 1980

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE-INSPECTIONS ACCOMPLISHED ALSO  
 SEE REPORT # 063-22 dated 4-5-77 (10/29/76 7-28-7)

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LeBible

11. ENGINEER

11/10/76



FILE C-63  
QC-G1's



# FIELD INSPECTION REPORT

3. RECORD CONTROL  
CONTROL NO. C-63-11  
FILE NO. 10-1-63-27

1. PROJECT NO. 9031 2. DATE 10/29/76 PAGE \_\_\_\_ OF \_\_\_\_

4. ITEM INSPECTED TOTAL RE-INSPECTION OF WELDS ACCOMPLISHED ON  
THE FOLLOWING QCI INSPECTION PLANS.  
C195 W1-11 C194 W1-16 C194 W1-17 C194 W1-18

5. LOCATION REACTOR #2 ELV 201 AREA 11-15+16

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1-1-72 R1-73 R2-74  
C91/G WQ-2/0 C63/11 AADT 1-5 FA#2 C195 W1-11  
C194 W1-16 C194 W1-17 C194 W1-18 NCR#1980

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☐ UNSATISFACTORY ☒

10. ACTION TAKEN IF UNSATISFACTORY NCR-2000 WAS GENERATED DUE  
TO UNACCEPTABLE WELDS COVERED ON  
Q.C.I.R. C195 W1-11

NOTE - FOR RE-INSPECTIONS ACCOMPLISHED ALSO SEE  
O.C.I. REPORT # C63-22 dated 4-5-77  
7-28-77

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K. Bily 11-1-76

11. ENGINEER *[Signature]*



# FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. C-63-12

FILE NO. EPC-63-13

1. PROJECT NO. 8031 2. DATE 11/1/76 PAGE OF

4. ITEM INSPECTED PARTIAL RE-INSPECTION OF WELDS ACCOMPLISHED ON THE FOLLOWING Q.C.T. INSPECTION PLANS.

C201 W1-5 C204 W1-2

5. LOCATION REACTOR #2 ELV 253 + 293 AREA 13 + 14

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1-1-72 REV 1-73 REV 2-74  
C91 REV 6 UQ 2/0 C63 REV 1 ADDIT 1-5, FA<sup>2</sup>  
C201 W1-5 C204 W1-2 NCR 1980

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE-INSPECTIONS ACCOMPLISHED ALSO SEE QC61-1 REPORT NOS. C-63-28 DATED 7-1-77 AND C-63-29 DATED 7-1-77. CLOSURE 7-28-77. ALSO SEE REPORT # C-63-22 DATED 4-5-77

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LL Bishop 11-1-76

11. ENGINEER

VJ Waters



# FIELD INSPECTION REPORT

3 RECORD CONTROL

CONTROL NO. C-63-13

FILE NO. EFC-1-63-12

1. PROJECT NO. 5031 2. DATE 10/29/76 PAGE 1 OF 14. ITEM INSPECTED PARTIAL RE-INSPECTION OF WELDS ACCOMPLISHED ON THE FOLLOWING Q.C.T. INSPECTION PLANS.C195 W1-6 C194 W1-5 C193 W1-105. LOCATION REACTOR #1 ELV 201 AREA 11, 12 + 166. TYPE OF INSPECTION VISUAL + DIMENSIONAL7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION: AKS D1-1-72 REV 1-73  
REV 2-74 C91 REV 6 WQ 2/0 C63 REV1 ADDIT 1-5, FA"2  
C195 W1-6 C194 W1-5 C193 W1-10 NCR 19808. INSPECTION EQUIPMENT USED FILLET WELD GAGE9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE INSPECTIONS ACCOMPLISHED ALSO  
SEE QCGI-1 REPORT NOS. C-63-24 DATED 7-5-77  
AND C-63-27 DATED 7-5-77, SPANLINE 7-28-77  
ALSO RE INSPECTION REPORT C-63-26 DATED 7-5-77 SPANLINE 7-28-77  
ALSO RE INSPECTION REPORT C-63-22 DATED 4-2-77 SPANLINE 7-28-77

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11. ENGINEER

4/11/80



# FIELD INSPECTION REPORT

3. RECORD CONTROL  
CONTROL NO. C-63-14  
FILE NO. FPC-1-C63-11

1. PROJECT NO. 8031 2. DATE 11/2/76 PAGE OF

4. ITEM INSPECTED TOTAL RE. INSPECTION OF WELD ACCOMPLISHED  
ON THE FOLLOWING Q.C.T. INSPECTION PLAN

C201 W1-10

5. LOCATION REACTOR #2 ELV 253 AREA 17

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1-1.72 REV 1-73  
REV 2-74 C91 REV G W Q 2/0 C63 REV 1 ADDIT 1-G, FA\*2  
C201 W1-10 NCR 1990

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR PREVIOUS INSPECTIONS ACCOMPLISHED  
ALSO SEE Q631-1 REPORT NOS. C63-7 dated 10-26-76  
AND C-63-8 dated 10-27-76. Machine 7-28-77.  
ALSO FOR RE-INSPECTIONS - SEE REPORT # C-63-22 dated  
4-5-77 Machine 7-28-77

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11. ENGINEER

h/ Watson





# FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. C-63-15

FILE NO. PC 1-03-101. PROJECT NO. 80312. DATE 11/1/76

PAGE

OF

4. ITEM INSPECTED TOTAL RE-INSPECTION OF WELDS ACCOMPLISHED ON THE FOLLOWING Q.C.I. INSPECTION PLANSC199 W1-145. LOCATION REACTOR #2 ELV 217 AREA 13+176. TYPE OF INSPECTION VISUAL + DIMENSIONAL7. STANDARD/CODE/PROCEDURE/DRAWING/SPECIFICATION AWG D1-1-72 REV 2-73  
REV 2-74 C91/G WQ 2/0 CG3 REV1 ADIT 1-5, FA#2  
C 199 W1-14 NCR 19908. INSPECTION EQUIPMENT USED FILLET WELD GAGE9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE- FOR RE-INSPECTIONS ACCOMPLISHED SEE  
ALSO QCGI-1 REPORT # C-63-22 DATED 4-5-77  
7-28-77

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11. ENGINEER

W. J. Waters

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## FIELD INSPECTION REPORT

 3 RECORD CONTROL  
 CONTROL NO C-63-16  
 FILE NO IFC-163-9

 1. PROJECT NO. 5031 2. DATE 11/1/76 PAGE        OF       

 4. ITEM INSPECTED PARTIAL RE-INSPECTION OF WELDS ACCOMPLISHED  
ON THE FOLLOWING Q.C.I. INSPECTION PLANS
C 41A 11G W1-1 C 197 W1-6 C 197 W1-4

 5. LOCATION REACTOR #2 ELV 190 + 217 AREA 15, 16 + 22

 6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

 7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1.1.72 REV 1-73  
REV 2-74 C91 REV G WQ 2/0 - C63 REV 1 ADDIT 1-5, PA 2  
C 41A 11G W1-1 C 197 W1-6 C 197 W1-4 NCR 1990

 8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

 9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

 10. ACTION TAKEN IF UNSATISFACTORY       

NOTE: FOR RE-INSPECTIONS ACCOMPLISHED - ALSO SEE  
 QCGI-1 REPORT # C 41A-493 dated 7-6-77, C 63-31  
 dated 7-5-77, AND C-63-32 dated 7-5-77, written 7-28-77  
 AND REPORT # C 63-22 dated 4-5-77.

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KL Bishop 11-1-76

11. ENGINEER

[Signature]

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QC-G1-5

## FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. C-63-17

FILE NO. IPC-1-C-63-8

1. PROJECT NO. 8031 2. DATE 11/2/76 PAGE OF

4. ITEM INSPECTED PARTIAL RE INSPECTION OF WELDS ACCOMPLISHED  
ON THE FOLLOWING Q.C.I. INSPECTION PLAN.

C 543 W 1-5

5. LOCATION RADWASTE ENCLOSURE ELV 191 AREA 20122

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS' D1-1-72 REV 1-73  
REV 2-74 C 91 REV 6 W 9-2/0 C 63 REV 1 ADDIT 1-6, FA-2

C 543 W 1-5 NCR 1990

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE-INSPECTIONS ACCOMPLISHED - ALSO  
SEE QCGI-1 REPORT # C63-30 DATED 7-6-77, CADDIN 7-28  
ALSO SEE REPORT # C-63-22 DATED 4-5-77Distribution  
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L. B. Bily 11-2-76

11. ENGINEER

H. J. Waters





# FIELD INSPECTION REPORT

3 RECORD CONTROL

CONTROL NO C-63-18

FILE NO IFC-1-C-63-15

1. PROJECT NO. 5031

2. DATE 11/8/76

PAGE 1 OF 1

4. ITEM INSPECTED PARTIAL REINSPECTION OF WELDS ACCOMPLISHED ON THE FOLLOWING QCI INSPECTION PLAN.

C 465 W 1-3

5. LOCATION CONTROL ROOM ELV 217 AREA 8

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD/CODE/PROCEDURE/DRAWING/SPECIFICATION AWS D1-1-72 REV 1-73 REV 2-74  
C91 REV G W Q 2/0 C63 REV 1 ADDIT 1-C FA"2

C 465 W 1-3 NCR 1990

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE INSPECTIONS ACCOMPLISHED ALSO  
SEE REPORT # C-63-22 DATED 4-5-77. M. G. Driner  
7-28-77

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M. G. Driner 11-9-76

11. ENGINEER

L. J. Waters



## FIELD INSPECTION REPORT

RECORD COPY

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QC-61's

RECORD CONTROL

CONTROL NO. C-63-19

FILE NO. ER-1-C-63-16

1. PROJECT NO. 3031 2. DATE 11/4/76 PAGE 1 OF 1

4. ITEM INSPECTED TOTAL RE-INSPECTION OF WELDS ACCOMPLISHED  
ON THE FOLLOWING QCI INSPECTION PLAN

C200 W1-1

5. LOCATION REACTOR #1 ELV 239 AREA 11

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD/CODE/PROCEDURE/DRAWING/SPECIFICATION AWS D1-1 72 REV 1-73 REV 2-74  
Q91 REV 6 WQ 2/0 C63 REV 1 ADDIT 1-C FA"2

C200 W1-1 NCH 1990

8. INSPECTION EQUIPMENT USED FILLET WELD GAGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE-INSPECTION ACCOMPLISHED -  
ALSO SEE QCGI-1 REPORT # C-63-25 DATED  
7-5-77. (Kadpin 7-28-77)  
ALSO SEE REPORT # C-63-22 DATED 4-5-77

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K. L. Bishop 11-5-76

11. ENGINEER

J. J. Waters

ATTACHMENT 7

Bechtel Field Inspection Report (QCGI-1 Report)

Control Numbers C-63-20, dated 1/17/77  
C-63-21, dated 1/17/77



## FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO

C-63-20

FILE NO

ZPC-1-63-17

1. PROJECT NO.

5031

2. DATE

1-17-77

PAGE

1

OF 1

4. ITEM INSPECTED TOTAL REINSPECTION OF WELDS ACCOMPLISHED  
ON THE FOLLOWING Q.C.T. INSPECTION PLANS.

C478 W-1-1

C473 W-1-3

5. LOCATION

CONTROL ROOM ELV 269' AND 259'  
AREA 8

6. TYPE OF INSPECTION

VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION

AWS D-1-1-72 REVI-73

REV 2-74

C91 REV 7 WQ 40

C63 REV1 ADDIT 1-7

FA #2

1-17-77 1/1

8. INSPECTION EQUIPMENT USED

FILLET WELD GAUGE

9. RESULTS OF INSPECTION:

SATISFACTORY

UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE INSPECTIONS ACCOMPLISHED ALSO  
SEE QCGI-1 REPORT # C-63-22 DATED 4-5-77.J. H. Jones  
4-28-77Distribution:  
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11. ENGINEER

J. H. Jones

1-17-77



# FIELD INSPECTION REPORT

C-63 GCGE

3. RECORD CONTROL

CONTROL NO. C-63-21

FILE NO. C-63-18

1. PROJECT NO. 8031

2. DATE 1-17-77

PAGE 1 OF 1

4. ITEM INSPECTED TOTAL REINSPECTION OF WELDS ACCOMPLISHED ON THE FOLLOWING Q.C.I. INSPECTION PLAN

C 954-W-1-3

5. LOCATION REACTOR BUILDING UNIT #2 ELEV 257' TO 264

6. TYPE OF INSPECTION VISUAL + DIMENSIONAL

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1-1-72 REVI-73 REV 2  
24 C 91 REV 47W 9210 C 63 REV 1 ADD 1-7 FACT  
1-77 HW

8. INSPECTION EQUIPMENT USED FILLET WELD GAUGE

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR RE INSPECTIONS ACCOMPLISHED - ALSO SEE  
QCGI-1 REPORTS NOS. C-954-6 DATED 7-21-77 AND  
C-63-22 DATED 4-5-77. CHAIRMAN 7-28-77.

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11. ENGINEER *W. G. Quinn* *Waters*

1-17-77

ATTACHMENT 8

Bechtel Field Inspection Report (QCGI-1 Report)  
Control Number C-63-22, dated 4/5/77





## FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. C-63-22FILE NO IPC-10-63-171. PROJECT NO. 80312. DATE 4-5-77PAGE 1 OF 784. ITEM INSPECTED Inspection of installed structural steel, beams & columns, to determine its accessibility for inspectionSee attached sheets for Plan Numbers.

5. LOCATION Control Room Elev. 269', 299', 217'  
Roadway Elev. 190'-180', 191'  
Unit #1 Elev. 217', 201', 239'  
Unit #2 Elev. 253', 220', 217', 201', 264', 283'

6. TYPE OF INSPECTION Visual7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION C-63 Rev 2 Add'l 1 & FA#28. INSPECTION EQUIPMENT USED VISUAL9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR PREVIOUS INSPECTIONS OR RE-  
 INSPECTIONS ACCOMPLISHED, AS APPLICABLE, SEE  
 ATTACHED LIST FOR WELDING INSPECTION PLAN  
 AND QCGI-1 REPORT NUMBER. Maxim 7-28-77

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K. Bill 4-5-77  
 11. ENGINEER Carl H. Turley



Results: A= acc., C. Cont. 63-22  
 7-22

C-201-W-1-9 Elev. 253 Area 18 Unit #2

230B3 to Col 114C1

232B2 to Col 116C1

206B2 to Col 116C1

233B2 to Col 111C1

A



C-192-W-1-8 Elev. 220' Area 13, 14, 17, & 18 Unit #2

109C2

A

111C1

A

112C1

A

112C2

A

114C1

A

114C2

A

115C1

A

C-198-W-1-12 Elev. 217' Area 17 & 18 Unit #2

4C184L

A

4C184R

A

C-197-W-1-10 Elev. 217' Area 16 Unit #1

W21x68-6 (3636-9)

A

A

C-195-W-1-17 Elev. 201 Area 17 & 18 Unit #2

C8x11.5-2

A

C8x11.5-2

A

W14x43-3 (3634x39)

A

C8x11.5-2

A

Results: A-Corr., C-Concrete  
Residue

543-W-1-5 Elev. 190'-108' Area 20/22  
127B11 + 118B2

A

NO. 1221

54-240-11-28-77

945-W-1-3 Elev. 257'-204'

Unit #2 C&D Housing

Concrete

REFERENCE COPY

198-W-1-4 Elev. 217' Area 14' Unit #2

(J.H.)

197-W-1-11 Elev. 217' Area 11 Unit #1

2044 to Col. 1A24

A

197-W-1-8A Elev. 217' Area 15 Unit #1

2A13 to Col. 1B34

A

197-W-1-5 Elev. 217' Area 11/15 Unit #1

(W.A.O.)

(L.M.)

195-W-1-11 Elev. 201' Area 15 Unit #1

1C16 to Col. 1B34

A

195-W-1-6 Elev. 201' Area 11 Unit #1

Beam  
W27x145-6 to Col.

A

194-W-1-18 Elev. 201' Area 13 Unit #2

1B38

A

194-W-1-17 Elev. 201' Area 16 Unit #1

No print

1B16 to Col. 1D34

A

Results: A=Acc, C=Concrete

C-194-W-1-16 Elev. 201 Area 11 Unit #1

Beam  
W21x44-6 (3636-16) to Col.

Acc.

1A29 to Col.

Acc.

REFERENCE COPY

C-198-W-1-17 Elev. 217' Area 14 Unit #2

L.M.

C-194-W-1-5 Elev. 201' Area 16 Unit #1 no print

C-193-W-1-10 Elev. 201' Area 11+12 Unit #1

1A36 to Col.

Acc.

1A29 to Col.

Acc.

1A13 to Col.

Acc.

Beam  
W21-44-6 (3636-16) to Col.

Acc.

C-192-W-1-4 Elev. 217' Area 12+16 Unit #1

J.H.

3-473-W-1-3 Elev. 269' Area B Control Room

5B4 S. Acc. 363 N.S. Acc.

5B7 S. Acc. 363 N.S. Acc.

5B2 S. Acc. 462 N.S. Acc.

361 N.S. Acc. 364 N.S. Acc.

362 N.S. Acc. 362 N.S. Acc.

364 N.S. Acc. 362 N.S. Acc.

461 N.S. Acc. 462 S. Acc.

363 N.S. Acc. 461 N. Acc.

363 N.S. Acc. 464 N. Acc.

365 N.S. Acc. 861 N. Acc.

C-63-22

Results: A=Acc, C=Concrete

SHE 5 OF 7

Beam #

Area Elev.

Results A=acc, C=concrete

239 LHE

8 239'

A

585 LHE

C-478-10-1-1

586 LHE

583 LHE

1810 LHE + RHE

183 LHE + RHE

231 LHE

234 LHE

REFERENCE COPY

184 LHE + RHE

184 LHE

262 LHE

188 LHE

137 LHE

1813 LHE

1813 LHE

1813 LHE

2310 LHE

A189L 1 17/18 217'

C-198F13

B189L

A

C-189R

A-189R

A-189L

A-189R

# REFERENCE COPY

SHT 6 of 28

Results: A=acc, C=concrete

C-63-22

W-1  
C-1977-6

Elev. 217'

Area 16

Unit #1

245B

A

SECOND COPY

W-1  
1977-4

Elev. 217'

Area 15

Unit #1

226B

A

W8X17-2

A

W-1-

C-2049-2

Elev. 223'

Area 13

Unit #2

138B7

A

146B3

136B4

138B2

140B6

C-41A-116-W-1-1

Radwaste

20/22

191'

all Acc.

104C2

106C1

105C2

105C1

103C1

103C2

128B11

117B1

136B8

117B2

118B2

118B5

117B1

136B8

116B2

C-465-W-1-3

Elev. 217'

Area 8

Control Room

No print

Weld Beam diffuser - monrail



# REFERENCE COPY SHE 7 OF 78

Results: A=acc., C=Concrete C-63-22

C-201-W-1-7 Elev. 253' Area 17 Unit #2 all  
A

235B3

231B3

231B2

222B6

222B5

222B4

232B5

232B9

230B4 to Col. 113C1

230B2 to Col. 115C1

228B5 to Col. 114C2

C-201-W-1-10 Elev. 253' Area 17 Unit #2

232B5 to Col. 112C2 A

C-200-W-1-1 Elev. 238' Area 11 Unit #1

234B9 A

C-198-W-1-14 Elev. 217' Area 13 Unit #2

W27x102-7 3634-22 A

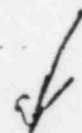
W33x118-7

C-201-W-1-5 Elev. 253' Area 14 Unit #2

229B4 to Col. 115C2 A

230B1 to Col. 109C1

233B1 to Col. 109C2



# CONTINUATION SHEET

3. RECORD CONTROL

CONTROL NO. C63-22

FILE NO. \_\_\_\_\_

1. PROJECT NO. 8031

2. DATE 7-28-77

4. PAGE 8 OF 8

LOCK  
CONT'D

6. FORM NO.

7. REPORT NAME

ATTACHMENT SHEET TO C-63-22 FOR

QC-61-1

RE INSPECTION OF INSTALLED STRUCTURAL STEEL

WELDING INSPECTION

QC-61-1

C-201-W-1-9	C-63-8 (10-27-76)
C-192-W-1-8	C-63-7 (10-26-76) C-63-8 (10-27-76)
C-198-W-1-12	C-63-9 (10-28-76)
C-197-W-1-10	C-63-10 (10-28-76)
C-195-W-1-17	C-63-9 (10-28-76)
C-543-W-1-5	C-63-30 (1-4-77) C-63-17 (11-2-76)
C-954-W-1-3	C-63-21 (11-17-77) C-954-6 (7-21-77)
C-198-W-1-4	C-63-8 (10-27-76) C-63-7 (10-26-76)
C-197-W-1-11	C-63-10 (10-28-76)
C-197-W-1-8A	C-63-10 (10-28-76)
C-197-W-1-5	NO OTHER QC-61-1s GENERATED
C-195-W-1-11	C-63-11 (10-29-76)
C-195-W-1-6	C-63-13 (10-29-76) C-63-27 (7-5-77)
C-194-W-1-18	C-63-11 (10-29-76)
C-194-W-1-17	C-63-11 (10-29-76)
C-194-W-1-16	C-63-11 (10-29-76)
C-198-W-1-17	NO OTHER QC-61-1s GENERATED
C-194-W-1-5	C-63-13 (10-29-76) C-63-26 (7-5-77)
C-193-W-1-10	C-63-13 (10-29-76) C-63-24 (7-5-77)
C-192-W-1-4	NO OTHER QC-61-1s GENERATED.
C-473-W-1-3	C-63-20 (11-17-77)
C-478-W-1-1	C-63-20 (11-17-77)
C-198-W-1-13	C-63-9 (10-28-76)
C-197-W-1-6	C-63-16 (11-1-76) C-63-32 (7-5-77)
C-197-W-1-4	C-63-16 (11-1-76) C-63-31 (7-5-77)
C-204-W-1-2	C-63-28 (7-1-77) C-63-12 (11-1-76)
C-41A-116-W-1-1	C-63-16 (11-1-76) C-41A-493 (7-6-77)
C-465-W-1-3	C-63-18 (11-8-76)
C-201-W-1-7	C-63-8 (10-28-76) C-63-7 (10-26-76)
C-201-W-1-10	C-63-14 (11-2-76) C-63-8 (10-27-76) C-63-7 (10-26-76)
C-200-W-1-1	C-63-19 (11-4-76) C-63-25 (7-5-77)
C-198-W-1-14	C-63-15 (11-1-76)
C-201-W-1-5	C-63-17 (11-1-76) C-63-29 (7-1-77)

DATES IN PARENTHESIS REFLECT  
DATES INSPECTION WAS PERFORMED.

tribution:  
e - QC Files  
ry - Originator

9 ENGINEER

*Handwritten signature* 7-28-77

QC-61-2



ATTACHMENT 9

Bechtel Field Inspection Report (QCG1-1 Report)

Control Numbers C-63-24, dated 7/5/77  
C-63-25, dated 7/5/77  
C-63-26, dated 7/5/77  
C-63-27, dated 7/5/77  
C-63-28, dated 7/1/77  
C-63-29, dated 7/1/77  
C-63-30, dated 7/6/77  
C-63-31, dated 7/5/77  
C-63-32, dated 7/5/77  
C41A-493, dated 7/6/77



# FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. C-63-24FILE NO. IP-1-63-231. PROJECT NO. E0312. DATE 7/5/77PAGE 1 OF 1

4. ITEM INSPECTED Re-inspection of welds in question in Quality Control inspection plan C-193-W-1-10. Angles to beams and Angles to emitters fillet welds, beams 1A29 and 1A36 and weld 1A21x44-B.

5. LOCATION Reactor Unit #1 Elev. 701'

NCR-1980

6. TYPE OF INSPECTION Visual & Dimensional

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1.1-72, D1-73, E2-74  
QCI Inspection Plan C-193-W-1-10 C-63/2 Add. 1-3 FA2  
Dwg. C-193/14

8. INSPECTION EQUIPMENT USED Fillet weld gage & wire brush

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR INSPECTIONS PREVIOUSLY ACCOMPLISHED -  
ALSO SEE QCGI-1 REPORT # C-63-13 DATED 12-29-70.  
ALSO FOR PREVIOUS INSPECTIONS SEE REPORT DATE 7-28-77  
# C-63-22 DATED 4-5-77

Distribution  
White - QC Files  
Canary - Originator

11. ENGINEER

K. B. B. B.Paul H. Tushy7-11-77



# FIELD INSPECTION REPORT RECORD COPY

3. RECORD CONTROL  
CONTROL NO. C63-25  
FILE NO. IPC-1-63-24

1. PROJECT NO. 8031 2. DATE 7/5/77 PAGE 1 OF 1

4. ITEM INSPECTED Re-inspection of welds in question in Quality Control inspection plan C-200-W-1-1. Angles to beams and angles to embeds. Fillet welds, beam 234B9

ACE-1980

5. LOCATION Reactor Unit #1 Elev. 232'

6. TYPE OF INSPECTION Visual & Dimensional

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION ENR D1.1-72, R1-73, R2-74  
OCT Inspection Plan C-200-W-1-1 C-63/2 Add 1-3 FAR  
Aug. 200/14

8. INSPECTION EQUIPMENT USED Fillet weld gage, wire brush

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR INSPECTIONS PREVIOUSLY ACCOMPLISHED  
ALSO SEE Q661-1 REPORT # C63-19 DATED 11-4-76  
ALSO SEE REPORT C-63-22 DATED 4-5-77 Handwritten  
7-28-77

file C-63 spec.  
GEN CCGE



# FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. C-63-26

FILE NO. IP-13-63-21

1. PROJECT NO. 8031

2. DATE 7/5/77

PAGE 1 OF 1

4. ITEM INSPECTED Reinspection of welds in question in Equality Control inspection plan C-194-W-1-5. Angles to beams and angles to embeds fillet welds, beams 1A17, 1B10, 1B11 3rd, 1E13, 1B10 placed North & South and 1C15 2nd.

5. LOCATION Reactor Unit #1 Elev. 201'

NCR-1980

6. TYPE OF INSPECTION Visual & Dimensional

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION ANIS DL-1-72, EE-73, EE-74  
QCT Inspection Plan C-194-W-1-5 C-63/2 Add. 1-3 1A12  
Dwg. C-194/17

8. INSPECTION EQUIPMENT USED Fillet Weld gage, Wire Brush

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

Note: FOR PREVIOUS INSPECTIONS ACCOMPLISHED - SEE ALSO  
CCG-1-1 REPORT # C-63-13 DATED 10-29-76. (CRO-1111 7-28-77)  
ALSO REPORT C-63-22 DATED 4-5-77

Distribution:  
White - CC Files  
Canary - Originator

11. ENGINEER

KE Bialup

Carl H. Tushy



# FIELD INSPECTION REPORT

3. RECORD CONTROL

CONTROL NO. C6327FILE NO. IPC163-221. PROJECT NO. 80312. DATE 7/5/77PAGE 1 OF 14. ITEM INSPECTED Re-inspection of welds in question in Quality Control inspection plan C-145-W-1-6. Beam to Column Fillet Weld.5. LOCATION Reactor Unit #1 Elev. 201'NCR-19806. TYPE OF INSPECTION Visual & dimensional7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION ASME D11-72, R1-73, R2-74  
QCI Inspection Plan C-145-W-1-6  
Dwg. C-145/12 Rev 1.2  
C-63/2 Add. 1.3 R228. INSPECTION EQUIPMENT USED Fillet Weld gage, wire brush9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR INSPECTIONS PREVIOUSLY ACCOMPLISHED  
ALSO SEE QCGI-1 REPORT # C-63-15 dated 10-29-76.  
ALSO REPORT # C-63-22 dated 4-5-77

Distribution  
White - QC Files  
Canary - Original

11. ENGINEER

K. B. BilyCarl H. Tuley





# FIELD INSPECTION REPORT

3 RECORD CONTROL

CONTROL NO. C-63-28FILE NO. EP-1-63-251. PROJECT NO. 80312. DATE 7/1/77PAGE 1 OF 1

4. ITEM INSPECTED Re-inspection of welds in question in Quality Control inspection plan C-204-W-1-2. Angles to beams and angles to embed fillet welds, beam numbers 136B4, 136B7, 146B3, 136B2 and 146B6.

5. LOCATION Reactor Unit #2 Elev. 283'

NCR-1980

6. TYPE OF INSPECTION Visual & Dimensional

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS. D1.1-72, RL-73, R2-74

AST Inspection Plan C-204-W-1-2C-63/2 Add 1.3 HAZOrg. C-204/5 DCU 4.5 FDCU 3.4

8. INSPECTION EQUIPMENT USED Fillet weld gage, wire brush

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

NOTE: FOR INSPECTIONS PREVIOUSLY ACCOMPLISHED -  
ALSO SEE DCGI-1 REPORT # C-63-12 DATED 11-1-76,  
ALSO SEE REPORT # C-63-22 DATED 4-5-77.

7-28-77

Distribution:  
White - CC Files  
Green - Originator

K. B. B.

11. ENGINEER

Carl H. Turley7-11-77



# FIELD INSPECTION REPORT

3 RECORD CONTROL  
CONTROL NO. C-63-29  
FILE NO. EC 165 26

1. PROJECT NO. E031 2. DATE 7/1/77 PAGE 1 OF 1

4. ITEM INSPECTED Re-inspection of welds in question in Quality Control inspection from C-201-W-1-5. Applies to beams and angles to columns Fillet welds, beam 1W 233B1 to column 109C2

5. LOCATION Reactor Unit #2 Elev. 253' NCL-1980

6. TYPE OF INSPECTION Visual & Dimensional

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D11-72, D1-72, D2-74  
DCI Inspection Plan C-201-W-1-5 C-63/2 Add. 1-3 PA2  
Aug 7-76/5

8. INSPECTION EQUIPMENT USED Fillet weld gage, wire brush & Inspection mirror

9. RESULTS OF INSPECTION: SATISFACTORY ☒ UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

Note: For Inspections Previously Accomplished -  
ALSO SEE 0061-1 REPORT # C-63-12 dated 11-1-76.  
ALSO SEE REPORT # C-63-22 dated 4-5-77 SP-11-77  
7-28-77

Distribution:  
White - CC Files  
Canary - Original

11. ENGINEER Carl H. Turley  
7-11-77





FIELD INSPECTION REPORT  
RECORD COPY

3 RECORD CONTROL

CONTROL NO. 063-30

FILE NO. \_\_\_\_\_

1 PROJECT NO. 8031

2 DATE 7/6/77

PAGE 2 OF 2

4 ITEM INSPECTED Re-inspection of welds in question in Quality Control inspection plan C-543-W-1-5. Angles to beams fillet welds, beam 127B11 Right hand end, For side to beam 118B2, only could inspect 13" of weld remainder in concrete. Beam 127B11 Right hand end, For side to beam 118B2, only could inspect 12" of weld remainder in concrete.

1980-1980

5 LOCATION Roadway Elev. 191'

6 TYPE OF INSPECTION Visual & dimensional

7 STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AAS D1.1-72, R1-73, R2-74  
C-543/3 C-63/2 Add. 1-3 FA2  
QIT Inspection Plan C-543-W-1-5

8 INSPECTION EQUIPMENT USED Fillet weld gage, wire brush

9 RESULTS OF INSPECTION:

SATISFACTORY ☒

UNSATISFACTORY ☐

10 ACTION TAKEN IF UNSATISFACTORY 1980-2710

NOTE - FOR INSPECTIONS PREVIOUSLY ACCOMPLISHED ALSO  
SEE DCGI-1 C-63-17 dated - 11-2-76 Shadwin 7-28-77  
ALSO SEE REPORT # C-63-22 dated 4-5-77

Distribution:  
White - QC Files  
Canary - Originator

KE Bishop 7/12/77

11. ENGINEER

Carl H. Tinsley

F101 SM2 AT { 112C2, 113C2  
 114C2, 115C2  
 F101 SM3 AT { 121C2, 108C2  
 104C2, 124C2  
 F101 SM4 AT 103C2  
 F101 SM5 AT 103C2, 110C1  
 F101 SM6 AT 103C1, 106C2  
 F101 SM7 AT 109C2

RECORD COPY

TYPICAL BEAMS TO COL. WEBS.  
(BOLTED CONNECTION)

Control No. C-41A-443 & C-63-30

BECHTEL DESIGN C-54<sup>th</sup>-0

LIVERICK GENERATING STATION  
UNIT 1 & 2 CONTINUED  
PENNSYLVANIA ELECTRIC COMPANY  
RAHWAYE DIVISION

DETAILS ON THIS DRAWING SHOW  
THE FINAL AS-BUILT STRUCTURAL  
STEEL, CERTIFIED TO BE CORRECT  
FOR MICROFILMING BY THE OWNER

412-116-7



American Bridge  
Division of United States Steel Corporation

FABRICATION ASSIGNED TO... FLMICA

DRAWING MADE BY *AMBRIDGE*

MADE BY: WJM - 1175-75 CHECKED BY: WJM DATE: 4-14-74

WE LEARNED OF GMR

● 2004 年 12 月 1 日起

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

K5944

53

2025-11-14

F		
E		
D		
C		
B	4/23/74	D
A	3-21-74	C

REVERSE SIDE

## REVISION

PASE ABC WALL BEARING BEAMS)



## FIELD INSPECTION REPORT

## RECORD COPY

3 RECORD CONTROL

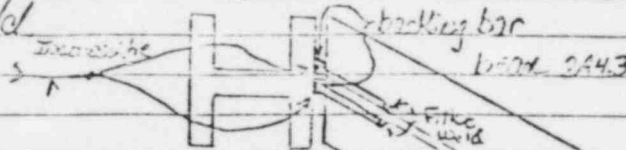
CONTROL NO. C-63-31

FILE NO. \_\_\_\_\_

1. PROJECT NO. E0312. DATE 7/5/77PAGE 1 OF 4

## 4. ITEM INSPECTED

Re-inspection of welds in question in Quality Control inspection plan C-197-W-1-4. Angles to beam and angles to girthed fillet welds on beam 3290 and full Penetration weld and Fillet weld on plate to beam and plate to column, beam 2443 to column. 15 1/2" of weld inaccessible, 15 1/2" of weld.



NCR-1980

5. LOCATION Reactor Unit #1 Elev. 217'

## 6. TYPE OF INSPECTION

Visual & Dimensional

## 7. STANDARD/CODE/PROCEDURE/DRAWING/SPECIFICATION

AWIS D1.1-72, R1-73, R2-74  
OC Inspection Plan C-197-W-1-4  
DWG C-197/16  
C-63/1-3 FAR

## 8. INSPECTION EQUIPMENT USED

Fillet weld gage, wire brush

## 9. RESULTS OF INSPECTION:

SATISFACTORY ☒UNSATISFACTORY ☒

## 10. ACTION TAKEN IF UNSATISFACTORY

NCR-2710

NOTE: FOR INSPECTIONS PREVIOUSLY ACCOMPLISHED -  
ALSO SEE OC-61-1 REPORT # C-63-16 DATED 11-1-76. 7-28-77  
ALSO SEE REPORT # C-63-22 DATED 4-5-77

K. B. B. 7/12/77

TO ENGINEER

Carl H. Tinsley

Control No. 0.63-314C-63-32

# RECORD COPY

SAN FRANCISCO

LIMERICK GENERATING STATION UNITS 1 & 2  
PHILADELPHIA ELECTRIC COMPANY

REACTOR BUILDING UNIT 1  
STRUCTURAL STEEL  
FRAMING PLAN ELEV. 217'-0"

JOB No.		DRAWING No.	
8031		REF: C-197	
BECHTEL DWG		3031-C-197	

No.	DATE	REVISIONS	BY	CHKD.
5	3-2-72	FOR REVISIONS AS NOTED RESULTING FROM VERIFICATION	NGP	NGP
6	7-11-72	APPROVED FOR REVISION BASED ON REVISIONS REMARKS: REVISIONS REMARKS: REVISIONS	NGP	NGP
7	3-24-72	GEN REV. ISSUED FOR VER. 2.000	NGP	NGP
8	11-11-72	FOR FRAMING PLAN ELEV. REVISIONS FOR FRAMING PLAN REVISIONS FOR FRAMING PLAN	NGP	NGP
9	7-13-72	FINAL REV. FOR REVISIONS ISSUED FOR FRAMING PLAN	NGP	NGP
10	6-13-72	ISSUED FOR MILL ORDER	NGP	NGP
11	3-24-72	ISSUED FOR BIDS	NGP	NGP

SCALE: 1/4" = 1'-0"	DESIGNED: C. W. J. F. T.	DRAWN: J. RAYMOND
---------------------	--------------------------	-------------------

HILL CORP.  
1/20 RCH  
1/20 RCH





FIELD INSPECTION REPORT  
RECORD COPY

3 RECORD CONTROL

CONTROL NO. C63-32

FILE NO. \_\_\_\_\_

1. PROJECT NO. 8031

2. DATE 7/5/77

PAGE 2 OF 4

4. ITEM INSPECTED: Re-inspection of welds in question in Quality control inspection plan C-197-W-1-6. Angles to beam and angles to end of fillet welds, beams W21-21-2 and beam W21-63-6. On beam W21-63-6 south angle to beam & angle to end of weld inaccessible due to concrete, 1 1/2" of weld visible

W21-1980

5. LOCATION Reactor Unit #1 Elevation 217'

6. TYPE OF INSPECTION Visual & Dimensional

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION

AWS-D11-72, R1-73, R2-74  
DCI Inspection Plan C-197-W-1-6  
Div. C-197/16  
C-63 field 1-3 H2

8. INSPECTION EQUIPMENT USED

Fillet weld gage, wire brush

9. RESULTS OF INSPECTION:

SATISFACTORY ☒

UNSATISFACTORY ☐

10. ACTION TAKEN IF UNSATISFACTORY

W21-2710

NOTE: FOR INSPECTIONS PREVIOUSLY ACCOMPLISHED -  
ALSO SEE DCGI-1 REPORT # C63-16 dated 11-1-76. Standard  
ALSO SEE REPORT # C-63-22 dated 4-5-77  
7-28

W Bishop

7/12/77  
11. ENGINEER

Carl H. Turley

File No. 1

RECORD COPY

John Smith

27. 10. 1900

SCALE	NOSED	DESIGNED	COUNT	FIT	DRAWING	REVISIONS	DATE	NO.
1/4"	6-1-72	MILK REVOLUTION						
1/4"	3-2-72	MAJOR REVISIONS AS NO RESULTING FROM V						
1/4"	7-11-72	ADDED SECT A AND B NOTE 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1048, 1049, 1050, 1051, 1052, 1053, 1054, 1055, 1056, 1057, 1058, 1059, 1060, 1061, 1062, 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1114, 1115, 1116, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130, 1131, 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1172, 1173, 1174, 1175, 1176, 1177, 1178, 1179, 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1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 22						

DEPT. OF THE ARMY  
SAN FRANCISCO

LIMERICK GENERATING STATION, LIMITED  
PHILADELPHIA ELECTRIC COMPANY

REACTOR BUILDING UNIT  
STRUCTURAL STEEL  
FRAMING PLAN ELEV. 217

For

DRAWING NO. 2

8087 REF - 919

BECHTEL DWG. 3031-04038





# FIELD INSPECTION REPORT RECORD COPY

3 RECORD CONTROL

CONTROL NO C-41A-493

FILE NO \_\_\_\_\_

1. PROJECT NO E0312 DATE 7/6/77PAGE 1OF 2

4. ITEM INSPECTED Re-inspection of welds in question in Quality Control inspection plans C-41A-116-W-1-L. Angles to columns fillet welds, beam 129AB left hand end, near side to column 103C2, beam 129AB right hand end near side to column 105C1, beam 129B1 right hand end, near & far side to column 105C2, beam 127B7 right hand end near side to column 103C1 - 13" only remainder in concrete, beam 134B2 left hand end near & far side to column 103C1 - 9" only on both sides remainder in concrete, beam 119B11 right hand end, near & far side to column 104C2 - 14 1/2" only on near side remainder in concrete. (cont)

5. LOCATION Roadway Elev. 191'6. TYPE OF INSPECTION Visual & dimensional

7. STANDARD / CODE / PROCEDURE / DRAWING / SPECIFICATION AWS D1.1-72, R1-73, R2-74  
OCT Inspection Plans C-41A-116-W-1-L C-41A/5 Add. 1-4  
Spec. C-543/3

8. INSPECTION EQUIPMENT USED Fillet weld gage & wire brush

9. RESULTS OF INSPECTION:

SATISFACTORY ☒UNSATISFACTORY ☐10. ACTION TAKEN IF UNSATISFACTORY NCR-2710

NOTE: FOR INSPECTIONS PREVIOUSLY ACCOMPLISHED ALSO  
SEE DCGI-1 REPORT # C-63-16 dated 11-1-76 Wardine  
ALSO SEE REPORT # C-63-72 dated 4-5-77 7-28-77

K. B. Budge 7/12/77  
11. ENGINEER

Carl N. Turlay



CONTINUATION SHEET  
RECORD COPY

3 RECORD CONTROL

CONTROL NO. C-41A-110-11

FILE NO. \_\_\_\_\_

1. PROJECT NO. 8031

2. DATE 7/6/77

4. PAGE 2 OF 5

5. BLOCK  
CONT'D

6. FORM NO.

7. REPORT NAME

4

OC-G1-1

Re-inspection of welds in Quality Control Plan-C71A-110-11-1

8. ord beam 129B6 Right hand end, North side to column 104C2,

NCL-1980

Distribution:  
White - OC Files  
Cenary - Originator

K. B. L. C.

7/12/77

9. ENGINEER

Carl H. Twilley

(Ah)

7

THESE SHIMS ARE TO BE USED  
IN ALIGNING STRUCTURE  
(USE AS REQUIRED)

RECORD COPY

- F101 SM2 AT { 112C1, 113C2  
114C2, 115C2
- F101 SM3 AT { 121C2, 108C2  
109C2, 126C2
- F101 SM4 AT 103C2
- F101 SM5 AT 103C2, 110C1
- F101 SM6 AT 103C1, 106C2
- F101 SM7 AT 109C2

TYPICAL BEAMS TO COL. WEBS.  
(BOLTED CONNECTION)

Control. No. C-47A-493 & C-63-30  
File No.

BECHTEL DESIGN C-542-0

LIMERICK GENERATING STATION  
UNIT 1 & 2 CONTRACT UG01  
PHILADELPHIA ELECTRIC COMPANY  
RADWASTE BUILDING

DETAILS ON THIS DRAWING SHOW  
THE FINAL AS-BUILT STRUCTURAL  
STEEL, CERTIFIED TO BE CORRECT  
FOR MICROFILMING BY THE OWNER

*Signature*



47A-116-4



American Bridge  
Division of United States Steel Corporation

FABRICATION ASSIGNED TO ELMIRA

DRAWING MADE BY AMBRIDGE

MADE BY RTM DATE 11-15-73 CHECKED BY LJH DATE 1-24-74

IN CHARGE OF G.A.R.

F		
E		
D		
C		
B	4/23/74	D
A	3-22-74	C
REVISIONS		

ORDER NO

SHEET NO.

K5944

E3

BASE A&C WALL BEARING BEAMS